THE

NEW ENGLAND FARMER;

DEVOTED TO

AGRICULTURE, HORTICULTURE,

AND THEIR KINDRED

ARTS AND SCIENCES.

ILLUSTRATED WITH ENGRAVINGS OF COUNTRY RESIDENCES, FARM BUILDINGS, ANIMALS, FRUITS, IMPLEMENTS, &c.

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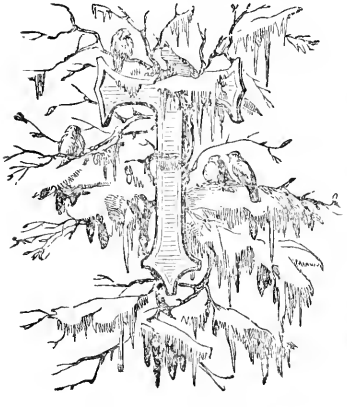
THE NEW YEAR.



THE year of our Lord, 1868, is now opening upon us. We have turned a new page in the history of our lives. What shall be inscribed upon it? Shall it be written over like the copy books of the years that have gone by, with the mottoes and proverbs that have come down to us from past generations,—the heir-looms that we have inherited from our fathers,—the stereotyped maxims, the crystalized thoughts of other times?

These embodied the wisdom that pervaded the mind of humanity when the limits of knowledge were much narrower than they are now; when the fields of science were undeveloped, and the true principles of their cultivation were unknown; when superstition occupied the place of living faith, resting on reason and proof. Many of these maxims serve only to fetter the mind and obstruct its progress in the pathway of improvement. The present is an age of progress. New light is breaking in upon the human mind. Research and investigation are revealing new facts and new principles. What was obscure and doubtful is becoming clear and distinct. The empirical practices and beliefs of the past, are giving way to the teachings of science, and the demonstrations of reason. The applications of science and art are revolutionizing the thoughts, the works, and the manners of men, are opening new channels for commerce and new fields for human industry, and subjecting the forces of nature to the service of humanity. Daily calls are made upon the thinker, the inventor, and the manufacturer, for new means, new combinations, new applications of science, and new implements of art.

The cultivator of the soil is called upon for new materials, and better methods, and more efficient instruments of culture, and this indicates the necessity of a more thorough knowledge of the nature and capacity of the soil, and all the agencies concerned in the growth and perfection of vegetable and animal life, and of the means by which it may be protected from injurious and destructive influences. Many things are yet to be learned with respect to all these subjects. New revelations are yet to be made. It may be we are attempting too much in certain directions, and hence find our labor unprofitable. Perhaps we are trying to cultivate plants and varieties of animals that are not suited to our soil, and

especially to our climate, and hence find the cost of labor and material increased beyond the limits of remuneration.

The advocates of free trade found their doctrines upon the idea that it is better for the people of different countries and climates to cultivate and manufacture such things as are best suited to their capacities and circumstances, and obtain such other commodities as they need, by a free exchange with those who can easily and conveniently produce them, and that the attempt to enforce the production of everything that the wants and comforts of man require, in every country and climate, is doing violence to the laws of nature. It may be that there is a certain amount of truth underlying these doctrines, and that a more comprehensive knowledge would teach us that the highest success is to be attained when our action and our efforts are in accordance with the laws of nature. We may overcome the power of gravitation by the application of sufficient force; but when we move the resisting body in the direction in which gravitation acts, we certainly find our labor greatly facilitated. So in every other case. When we act in accordance with the laws of nature, or can bring the forces of nature to aid us, our success is higher and more certain. There needs, then, a proper adjustment between our operations and the natural laws, and as the laws of nature are unalterable, our arrangements must be conformed to them. Hence the necessity of a thorough knowledge of natural laws, and especially of those that more directly affect the operations in which we are engaged.

Shall we, then, during the year which has now commenced, turn our attention in this direction, and carefully observe the phenomena which occur around us? Shall we note the state of the weather and the meteorological changes that occur, and their effects upon our crops and our hearths? Shall we note the effects of different manures, and different methods of cultivation?

Shall we keep more accurate account with our help, with our stock and our fields, that, at the close of the year, we may be able to strike the balance between profit and loss? Shall we have the enterprise necessary to try rational and prudent experiments in whatever bids fair to promote the advantage of our families and our fellow men? Shall we be more public spirited, and join cheerfully in all efforts to promote the good of the communities in which we dwell? Shall we lend our countenance and aid to the cause of education, and seek to elevate the standard and improve the methods and furnish liberally the means of instruction? In this matter our children, our second selves, have claims upon us which we cannot refuse to recognize. The world is moved by mental, not muscular force. Mental power works by means of animal and mechanical force, and higher degrees of mental cultivation are required to use to the best advantage the irrational forces that are brought within our control. Let us not forget the demands of the age in this respect. Shall we cultivate purer morals and strive to do, under all circumstances, not what is expedient, but what is right? Shall we seek to attain to a higher spiritual life, and a larger development of the religious element within us, remembering that the future is but a continuation of the present life, and that the greater attainments we make here in spirituality and purity, the higher we shall stand when we leave the body and step forth into a wider and freer life? Shall we, then, inscribe upon the newly turned page of 1868 the motto—Excelsior?

GREAT STOCK SALE.

The *Prairie Farmer* gives a detailed account of the auction sale by the administrator of the estate of the late James M. Hill, "Highland Farm," near Harristown, Macon Co., Illinois, of the live stock and standing corn on that farm. The fact that these two items of personal property were sold for over twenty-five thousand dollars, shows that farming is not necessarily a small business in Illinois, whatever may be thought of it by the Young America of New England.

The reputation of Mr. Hill as a breeder of Short Horns was such as to draw a large concourse of cattle men not only from all parts of his State, but from other States and the Canadas. Fifty-two Durham bulls, cows and heifers, averaged $279.90 per head, amounting to $14,513. One Cotswold Buck, $65; nine Cotswold Ewes at from $31 to $60. Eighty different lots of hogs were sold, ranging from $4 to $60 for single pigs, and for single lots from $10 to $100; yearling mules were sold for $127.50 each. Nine horses and colts were sold from $50 for sucking colts, up to $250

each. Working oxen, from $169 to 213. Yearling steers, at $42.50 per head. Fifty-eight feeding steers, at $75.25 each; and standing corn in the field, from $9 to $17.25 per acre.

AGRICULTURAL TEACHERS.

I don't think anybody takes more interest in an agricultural paper than I do. I am about sick of political newspapers, although they may be well enough in their place. But a paper which tells us how to get out of the earth (the great store house of wealth), the abundance that lies hidden therein, should always find constant readers. Your "Extracts and Replies" I consider the best part of your paper and I always turn to those columns first. They contain the practical wisdom of individual experience. I hope you will urge liberal communications from the farmers for those columns, and will not be timid about giving the "replies." Whenever any one has obtained any information from his own observation, let him jot it down whether in season or out, but perhaps better out of season, and then the reader can ponder on it and lay out his plans for another year. No cultivator of the land can learn everything as he goes along, but must first make many of his plans and then be ready to carry them out as the proper season comes. It is a good time in the winter to give the experiences of the past year, and then the cultivator of the soil can gather his information and lay out his plans for another summer therefrom. If he does not get his new ideas till the proper season for applying them arrives, ten chances to one that the season does not escape him before he is ready to act on them. I don't know that I shall bother you much more, although I have many things I should like to say. If your correspondents will adopt the suggestions hereof, I shall continue to be their constant reader, and shall without doubt profit much thereby. INQUIRER.

Sometime since, one of our contemporaries saw fit to criticise good-naturedly, but pretty sharply, a remark we incidently made in the course of a brief article, to the effect that we regarded it as a mistake for agricultural editors to assume to teach farmers their business. The rebuke of our worthy friend was pointed by an enumeration of the number of columns of editorial *teaching* that he found in the very paper in which we expressed the aforesaid opinion. Feeling that our critical friend "rather had us there," we deferred an explanation and defence of our remark to a more convenient season. The foregoing sensible remarks of "Inquirer," remind us of our long deferred purpose, and seem to afford an opportunity to define our position.

The thought that underlaid our remark is the same as that which prompted the article of our correspondent, which is adopted as the text of our present discourse. "I hope you will urge liberal contributions from the farmers," says he, because "they contain the practical wisdom of individual experience." "Whenever any one has obtained any information from his own observation let him jot it down, whether in season or out; but perhaps better out of season," &c. These are words fitly spoken, and we commend them to the careful consideration of every thoughtful tiller of the soil. Has any practical farmer passed through the year now drawing to a close without thoughts suggested either by what he has read or seen, which, if "jotted down, whether in season or out," would have proved beneficial to some other farmer? If he has been instructed or pleased by the thoughts and hints that others have jotted down, is he not in strict justice under the same obligations to pay therefor as he is to pay the subscription price of his paper?

With these thoughts in our mind we expressed the opinion which was criticised by our contemporary, that the editor who assumed to teach farmers their business mistook his vocation. We believe that his object and aim should rather be to induce them to teach each other. Instead of assuming for himself the position of teacher or professor, and of looking upon his "patrons" or readers as his pupils or scholars, he may regard himself as chairman, *pro tem.*, of a preternaturally extended debating club, and his subscribers as participators in the grand harangue; each one and all being entitled to the floor on the observance of well known parliamentary rules.

In addition to our duties as presiding officers of the great assembly of over seventeen thousand weekly, and a rapidly increasing class of monthly attendants, we claim as practical farmers all the rights and privileges of membership. In consequence of the extreme modesty of the great majority of our brother debaters, we find it necessary to "speak in meeting" oftener and more at length than we should otherwise be glad to do.

Brother farmers, we are not your teachers. We are willing to act as your engineers in running the machine for our mutual benefit; but, in the words of Brother Boardman, conductor of the *Maine Farmer*, we must remind you that "the severe labor of the season is drawing to a close, and the long evenings, the golden opportunity for working men to improve their minds and also to aid in improving the minds of others, is at hand. We desire at this juncture to call the attention of our readers to the

excellent opportunity afforded by this time of comparative leisure to write out for us the experiences of the past season's operations. Much has no doubt been learned by every farmer; some have succeeded with certain experiments, others, doubtless, have failed—let our readers have the knowledge of those failures or successes, and thus confer a benefit upon the large family of our subscribers. Every reader of the FARMER, who is himself a practical man, has without doubt learned something new about the action of manures, the culture of crops, the feeding and fattening of cattle, the care of bees, the grafting of trees, the growing of grapes or some one of the almost numberless operations of the farm, garden, orchard and general rural economy, and we invite all such to contribute for our columns any article, fact, suggestion or result of experiment, upon any or all of the above topics, or others having relation to farm matters, for the entertainment and instruction of our readers. Send along the documents, kind friends, and thus help us in our endeavors to make our paper of greater value, of more practical worth, and having more direct interest to all farmers and working men. We will cheerfully do any necessary pruning upon your letters, and put them in proper shape for publication. Shall we not have a ready and generous response to this direct call upon our readers and correspondents for the information wanted, and which none beside can so well furnish?"

For the New England Farmer.

MILK PRODUCERS' CONVENTION.

A large and enthusiastic meeting of those engaged in the production of milk—delegates from Farmer's Clubs, and representatives of the various milk routes in the counties of Middlesex, Essex, Norfolk and Worcester, and from New Hampshire, also,—was held at the New England House, in Boston, on Tuesday, December 3, in pursuance of a call of a committee of the North Wrentham Farmers' Club, "*for the purpose of protecting their interests, and arranging a uniform scale of prices dependent upon the supply and price of feed, &c.*"

The Convention was called to order by D. Rounds, Esq., of North Wrentham, who, subsequently, was appointed permanent chairman of the Convention. Samuel Osgood, of Sterling, was chosen secretary.

On assuming the duties of the chair, Mr. Rounds addressed the Convention in appropriate remarks, setting forth at considerable length, the origin and objects of the meeting.

On motion, a committee on credentials was appointed.

An animated discussion now followed, in which a large number of gentlemen participated, after which, a committee of twelve was appointed to prepare and present to the meeting, as far as practicable, a plan of organization; and also, to nominate a list of officers.

After an adjournment of an hour, the Convention was again called to order, and the committee on organization submitted the following report:—

The committee recommended the formation of a permanent association, to be called "The Milk Producers' Association."

That the officers of the Association consist of a President; three Vice Presidents; Secretary; Treasurer; and a board of six Directors.

The committee recommend that another public meeting of milk producers and delegates from Farmer's Clubs, be held in Boston, on the 26th inst., at 10 o'clock, A. M., at some place to be designated hereafter, for the purpose of perfecting the organization, and for the transaction of any other needful business.

The committee nominated the following gentlemen as officers of the Association:—

For President—Mr. Belknap, of Westboro'.
For Vice Presidents—J. Robertson, of Quincy; L. Crosby, of Billerica; Dea. Geo. Shute, of ——.
For Secretary—D. Rounds, of North Wrentham.
For Treasurer—S. H. M. Hurd, of Wayland.
For Directors—W. S. Pillsbury, of Londonderry, N. H.; C. A. Hubbard, Concord, Mass.; Hammon Reed, Lexington, Mass.; Elias Colburn, Temple, N. H.; C. H. Haskell, Harvard, Mass; Gen. —— Nason, Hampton Falls, N. H.; Samuel Osgood, Sterling, Mass.

The committee also recommended that the President, Secretary, and W. S. Pillsbury, be a committee to prepare a Constitution and suitable By-Laws for the government of the Association.

The report of the committee was accepted, and adopted unanimously.

It was voted that the Secretary prepare and offer for publication, a copy of the proceedings of the convention in *The Massachusetts Ploughman* and NEW ENGLAND FARMER.

A vote of thanks was tendered to the chairman of the convention for the courteous and able manner in which his duties had been performed, to which he appropriately responded, after which the convention adjourned.

SAMUEL OSGOOD, *Secretary.*

For the New England Farmer.

"CANNING FRUIT."

An article with the above heading, taken from the *Farm and Fireside*, has been going the rounds of the papers, and it seems to have taken well with the editorial fraternity, if not with the people. The writer says "Like many others, I tried again and again to seal fruit cans so as to keep the fruit without moulding on the top, but did not succeed."

Now I would ask the writer whether he used

glass or *tin* cans? If *tin*, failure ought to succeed every effort, as it is *wholly unsuitable* for the purpose. If glass was used, I hardly see why he did not succeed, if, as the writer says, he or she was "particular to follow printed directions in general use."

Having canned a large quantity of fruit, for use in my own family, within the last five years, and having been so fortunate as to have had hardly any bottles or cans spoil, or even mould upon the top, and this, too, without anything like the amount of labor which the writer aforesaid says was expended, I thought a word from me might be acceptable to that person, and also to "many others."

I began bottling fruit in quart bottles of all descriptions; but as glass jars came into the market, I used those. I now use the glass jar—Lyman's—with tin cap and rubber ring, using no sealing wax whatever. I have used them three years, and have never lost a berry, either by souring or moulding.

With the bottles, I used corks and sealing wax. When the bottle was filled, I pressed the cork below the top of the neck, filled in with wax, made of resin and tallow; took a strip of strong cloth, tied it over the neck, and then coated that with the wax. In this way I prevented the cork being drawn in by the great pressure of air on the outside, and consequently the admission of any air to the berries. The corks were previously boiled in water, which, rendering them soft and pliable, a much larger cork could be driven into the bottle than if dry, and of course it fitted tighter.

I have blackberries, blueberries, raspberries, currants, peaches, pears, &c., &c., every bottle of which is "keeping," perfectly.

It may be well to add that, in heating my jars, I just dash them into a pan of hot water, and giving them a quick rolling motion, the water comes in contact with all parts of the jar at nearly the same instant, thereby obviating the danger of breaking it, as is liable to be done by the unequal heating and expansion of the glass. B.

New Hampshire, 1867.

For the New England Farmer.

CULTIVATION OF THE PEACH.

Being desirous of obtaining, from some *reliable* source, the best method of treatment in all particulars of the *peach*, I applied, through a friend, to a very reliable gentleman, of Philadelphia, who has a very large orchard, and has been very successful in its cultivation, for such information. I send you, herewith, the important extracts from his communication. They may, or may not be of any use to us in this section of country, but it seems to me that any course of treatment that will tend to restore to us the peach orchards of twenty years ago, should not remain untried. I am inclined to believe, however, that one great, and I fear irremediable trouble with both the peach and apple is the ruthless way in which we destroy our *forest trees*, which heretofore have acted as a shelter from our extreme cold in winter and our blighting winds.

"The best plan is to get from a reliable nursery one or two-year old choice *grafted* peach trees, and transplant them early in the spring. Dig the holes for the trees in the fall, say a yard in diameter and eighteen inches deep—mix a little well rotted manure and leaf mould with the dirt taken from the holes *this* fall, and let it lie exposed to the atmosphere at the side of the holes during the winter, ready to use when planting the trees in the spring. A northern slope of a hill is best for peach trees, as it prevents the *too early swelling* of the fruit buds, in the spring, and subsequent liability to being destroyed by later frost.

"After the trees are three or four years old, it is best every fall to remove the soil for a distance of eight or ten inches around the trunk down to the *top of the main roots*, thus forming a bowl for snow and ice to form in during the winter, destroying the worms or germs of worms. In the spring, fill these holes or bowls with ashes. If during the summer the leaves curl or turn yellow, it will be caused by worms attacking the tree where the roots join the trunk. Remove the ashes, and wherever gum is found oozing out, apply the knife until the worm is destroyed, then fill in with ashes again—*there is no danger of hurting the tree by thus cutting.*

"Peach trees should only be trimmed of dead wood, and shortening of long horizontal limbs, to keep them from breaking by the weight of the fruit.

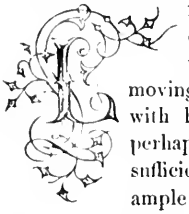
"I have as fine peaches and in as great abundance as are produced in the State of Delaware on river bottom lands, notwithstanding my land is six hundred feet above tide water in Chester County, Penn."

I am, gentlemen, very truly, yours,

F. COPELAND.

BUILDING ON A TEXAN RANCHO.—In describing a house fifteen feet square, and another small building for a cook room, which a Northern man, Mr. B. F. Dane, has recently erected, on a rancho he visited in Texas, Dr. Boynton says in a letter to the *Mirror and Farmer*, that this undertaking which may look as but a small job to a New England man, becomes very formidable and expensive, where a man who can handle carpenter's tools can be had only a day or two in a week at best, and where you must wait for boards to be hauled seventy or eighty miles, with ox teams that move at the rate of eight miles a day, when the oxen are not lost—and then a mile in eight days is not an uncommon rate of motion.

ASTRONOMY AND AGRICULTURE.



ET us look into the heavens on one of these clear, cold nights. We see the moon moving on in her grand course, with her horns half filled, or, perhaps, with borrowed light sufficient to round her up into ample fullness; or the Aurora Borealis, streaming up from the arctic regions and spanning the arch of heaven; or the countless stars, twinkling at each other, and sparkling, as if to outdo their neighbors in brilliancy and glory; and the stars, some of whose light, though travelling with almost incomprehensible velocity, was years in reaching our earth,—and we are lost in wonder, admiration and gratitude and led to exclaim with the Psalmist, "Many, O Lord my God, are thy wonderful works which thou hast done, and thy thoughts which are to us-ward: they cannot be reckoned up in order unto thee: if I would declare and speak of them, they are more than can be numbered."

We are not left, however, without some *certain* knowledge in relation to them. If we know that beings, created as we are, could not live in the moon, which is without an atmosphere, we do not know but He who created all things has fitted them—if they are there—for such a condition of things.

We have much undoubted knowledge in relation to the *movements* of the heavenly bodies, as the appearance and disappearance of very many of them are foretold with unerring accuracy for a great number of years in advance. The appearance of the vast number of meteors which have recently burst upon our world, was foretold a great many years ago, and so of obscurations of the sun, moon and other bodies. "The heavens declare the glory of God; and the firmament sheweth his handiwork. "Day unto day uttereth speech, and night unto night showeth knowledge. "There is no speech nor language where their voice is not heard."

> The spacious firmament on high,
> With all the blue ethereal sky,
> And spangled heavens, a shining frame,
> Their great Original proclaim.
> The unwearied sun, from day to day,
> Doth his Creator's power display;
> And publishes to every land
> The work of an Almighty hand.

We find by the books that astronomy is among the most ancient of the sciences, as it can be traced back as far as authentic history reaches, and its origin seems lost in the night of time. The periods of the heavenly bodies were made use of to measure the parts of the year. Almanacs, and calendars of all kinds, are founded on this science, and without it we should be destitute of the means of safe navigation, be incapable of making a correct geography of our planet, and should have but a very imperfect knowledge of the seasons of the year, and the appropriate occupations of the husbandman in each. "Astronomy, too, extends our knowledge of mundane existence; by it we find that the whole of our magnificent solar system is but an immeasurably small part of the whole that we can see of the universe; and we are led to the discovery of worlds, placed at a distance beyond all human computation, which compels us to admire the great harmony of nature that prevails in the stupendous mechanism of the heavens."

But it is chiefly to the practical utility of the science to the farmer that we wish to allude. Agricultural observations in ancient times were regulated by the rising and setting of the signs of the Zodiac, and other constellations, and then, accurately compared with the flowering of plants, the arrival of birds, and other natural phenomena, became the basis of the earliest rustic calendars.

The familiar acquaintance with the time of rising and setting of the stars, must have been a source of great amusement, as well as profit to shepherds, mariners and husbandmen of old, who, being constantly abroad in a fine climate, and beneath a sky almost perpetually serene, must have had an abundant opportunity of observing the heavenly phenomena.

Steering by the stars is as old as any recorded instance of navigation. Planting, sowing and ingathering by the stars, is as ancient as any record we possess of agriculture, and pastoral life has left no traces behind it unconnected with accounts of the celestial warnings of the heavenly spheres.

The ancient mariner had his "Tyrian Cynosure," the steadfast index of the northern pole. He knew the hour of the day by the sun, and kept the night watches by the bear. The husbandman, likewise, marked the seasons by the stars; he waited for the annual overflowing of the Nile till admonished of its approach by Sirius; he marked the return of spring in the

setting of Pisces, and he compared it with the coming of the swallow; in short, all rustic operations had their admonitory signs, and the operations of agriculture began with the science of the Zodiac. While the shepherd in his turn, no less dependent than others on the heavenly movements, had his star of Arcady, and his Pascal Aries; he drove afield with the morning ray of Phosphorus, and at eventide watched for the *star that bid the shepherd fold.*

No science is dwelt upon with more fervor in some of the old books than that of astronomy. Writers well versed in it, seem to catch an inspiration that is not common to writers on other subjects. And well they may, for what else can so rivet attention and expand the mind as the contemplation of the stupendous and wonderful works of an Almighty hand, as seen in the arrangement and movements of the heavenly bodies? And yet, how few give any attention to astronomy as a study. In recently visiting several schools of a high order, we heard no recitation in this delightful science.

The old traditions, however, are not all lost upon our people, for some of them still continue to sow and reap, slaughter animals, and do many other things in certain phases of the moon. That a better knowledge of the science, would subserve the interests of the farmer, we have no doubt. A single winter's study, during the long evenings, will open a new world to every inquiring mind.

COOKING FOOD FOR ANIMALS.

Commencing with the able article of our correspondent "N. S. T.," the subject of cooking food for cattle has occupied considerable space in our paper for a few weeks past. Still we think the following remarks by a practical farmer in New York, who has had some eleven years' experience, will prove interesting, inasmuch as he touches on some points alluded to in the discussion by the Royal Agricultural Society of England, which we published last week, and also on the inquiry of a correspondent in another column.

What is the effect of cooking food? Starch, as found in the cells of vegetables, consists of globules or grains, contained in a kind of sac, and in order to burst these grains it must be subjected to heat. Payen, on examination with the microscope, found that when starch was mixed with water and heated to 140°, some of the smaller grains absorbed water and burst, but many still remained unaffected, and only burst between 162° and 212° of heat. This shows, conclusively, that the heat of the animal stomach is not sufficient to utilize starchy food; and when we reflect that about sixty per cent. of the cereal grains consist of starch, we see the great loss which must occur from the want of cooking. And if the cereal grains require cooking, how much more must the dry fibre of hay, straw and corn fodder require it! The woody fibre of hay, straw, &c., consists, chemically, of the same elements as starch. Starch may be turned into gum and sugar; so may woody fibre, after being dried and ground, and by the same means—heat and dilute sulphuric acid.

All woody fibre will yield to steam pressure, and when thus reduced to a pulpy mass, most of it is digestible, and can be assimilated by the animal stomach. Grass, the natural food of domestic animals, in its succulent state is soluble, and needs but the natural heat and acid of the stomach to convert it into nutriment. Hay, straw, &c., by thorough steaming are reconverted into grass, and thus the animal may be furnished with its natural food through the winter.

We can say, after eleven years' experience in cooking the winter food of our animals, that the advantages are all that theory would indicate. Steaming renders mouldy hay, straw and corn-stalks sweet and palatable, thus restoring their value; renders peas and beans agreeable food for horses, as well as other stock, and thus enables the feeder to combine more nitrogenous food in the diet of his animals.

We have found half hay and half straw mixed and steamed more than equal to hay unsteamed. Pea straw, when cooked, is readily eaten, and, if cut early, nearly as nutritious as hay. Bean straw, which, when dry, is generally left untouched by cattle, will be all eaten if steamed with hay, and, as analysis shows, is more than equal in flesh-forming matter to hay. Corn-stalks, when cut short and steamed, will be eaten clean by cattle, horses and sheep. By cutting and cooking, all the straw and coarse fodder raised on the farm may be turned into milk, flesh and wool, besides adding largely to the manure heap.

In cities, where cows are kept to supply milk, and are milked through the winter, cooking their food will greatly increase the yield of milk, improve the condition of the cow, and reduce the expense of keeping at least one-third. The saving in food for each cow in milk will be, at least, eight dollars per season. This item may be worth looking after by city feeders. The mixture of oil and pea meal and bran, as we have indicated, makes an excellent food to produce milk and keep up the condition of the cow. One and a half pounds each of oil and pea meal, and three pounds of bran, mixed with ten pounds of hay and steamed, per day, for each cow weighing 800 pounds, will generally be sufficient. This may be thought a small quantity from which a cow of

that size, at her best season, could produce four gallons of milk and keep up her condition, but it must be remembered that four gallons of milk contain only about four pounds of dry matter, which will leave a supply for the thrift of the cows. Yet it is always the best economy to give a cow in milk all she will eat with a good appetite; for it takes a certain quantity to keep the cow in condition without gaining any milk, and what she will eat above this should be added to the milk. Thirty-three to forty per cent. would require to be added if uncooked. But with the estimate given, it will be seen what a splendid margin there is in producing milk in cities at ten cents per quart!

This combination of food recommended for milch cows is also well adapted to growing the young animal, as it contains a full supply of bone and muscle nutriment. For fattening, let the pea meal be replaced with six pounds of corn meal. Corn meal may also be used in small quantities for milk where butter is to be made.

Effect of Cooked Food upon Animals.

It has sometimes been urged, that, although the animal eats less and for a time thrives better upon cooked food, yet its tendency is to weaken the stamina of the system and produce premature decay. We have been able to test this theory fairly, and can now show, as the result, cows and horses, which have been fed every winter upon cooked food for eleven years, and so far from showing any ill effects of this way of feeding, the cows have never been sick, and are now in fine condition and heart, and the horses able to do good work, although sixteen and seventeen years old. We have raised many colts from weaning age to five years, and never saw any want of stamina. The effect of cooked food upon horses with a cough or a sudden cold is very remarkable, almost uniformly producing a cure in a few days. It will cure incipient heaves, correct costiveness, and materially improve a founder. In fact, our animals have been more uniformly healthy since feeding them upon cooked food. But, it is true that sheep and other animals fattened rapidly upon steamed food, will be softer in flesh than if fattened more slowly upon uncooked food. Yet this would naturally be expected. Grass grown rapidly upon very rich land is not so solid as that grown slowly upon poorer land; but who would prefer the poorer land in consequence? Just before animals are ready for the butchers it is well to feed them a few days upon dry, uncooked food, which will correct this softness of flesh.

Preparing Food for Steaming.

The cut hay, straw and hay, or other cut feed, is moistened with a large watering pot (if done by hand,) at the rate, of at least, two gallons of water to five bushels of feed, while it is being stirred up with a fork, then if bran, meal or other feed is used with it, it should be sifted on and mixed evenly. Two quarts of bran to the bushel of straw will render wheat, barley, oat and pea straw equal to good timothy hay. A little salt should be added, which will be perfectly diffused through the mass. The feed must always be moistened before steaming, for steam will not cook dry hay or straw, but only dry it more. Moisture is required to absorb the steam.—*E. W. S., in Rural New Yorker.*

SMOKE IN WINTER.

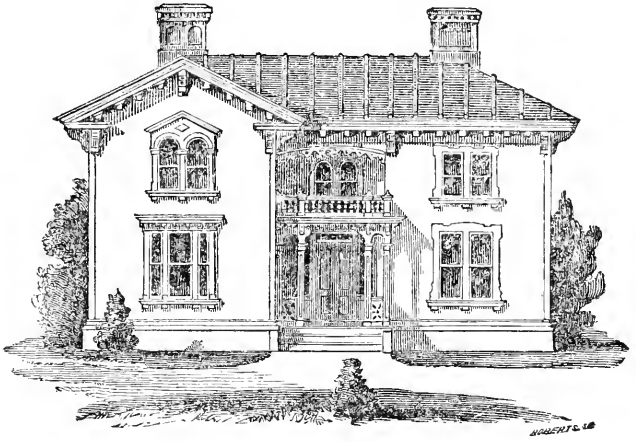
BY THOREAU.

The sluggish smoke curls up from some deep dell,
The stiffened air exploring in the dawn,
And making slow acquaintance with the day,
Delaying now upon its heavenward course,
In wreathed loiterings dallying with itself,
With as uncertain purpose and slow deed
As its half-wakened master by the hearth,
Whose mind, still slumbering, and sluggish thoughts
Have not yet swept into the onward current
Of the new day; and now it streams afar,
The while the chopper goes with step direct,
And mind intent to wield the early axe.

First in the dusky dawn he sends abroad
His early scout, his emissary smoke,
The earliest, latest pilgrim from his roof,
To feel the frosty air, inform the day;
And while he crouches still beside the hearth,
Nor musters courage to unbar the door,
It has gone down the glen with the light wind,
And o'er the plain unfurled its venturous wreath,
Draped the tree-tops, loitered upon the hill,
And warmed the pinions of the early bird;
And now, perchance, high in the crispy air,
Has caught sight of the day o'er the earth's edge,
And greets its master's eye at his low door,
As some refulgent cloud in the upper sky.

BUTTER MAKING.

A correspondent of the *St. Albans Messenger* remarks on his process of making butter as follows:—I keep twenty-three cows of the native stock, with a slight mixture of Durham; their feed was the fall feed in my mow fields, with pumpkins in the morning; the cream was gathered in three days from milk that set thirty-six hours after milking; the cream then set twenty-four hours, and was churned; when the butter came it was put in a wooden bowl and washed with spring water until the milk was all washed out and the water ceased to be colored and remained clear, then the Ashton salt is worked in by hand, at the rate of one oz. to a pound of butter; the butter is then set away to stand twenty-four hours, then it is worked over by hand, taking a small quantity at a time and working out all the brine, then it is pounded down in the tub; the tub is filled within a half-inch of the top, when it is covered with a cloth, over which is spread a thin layer of salt. This tub was packed the 4th of October. Cream is not churned the same day it is skimmed, as it will sometimes have a peculiar taste which it does not have after standing twenty-four hours. In the fall, the pans are filled two-thirds full and the cream rises as well, but in summer it should be more shallow."



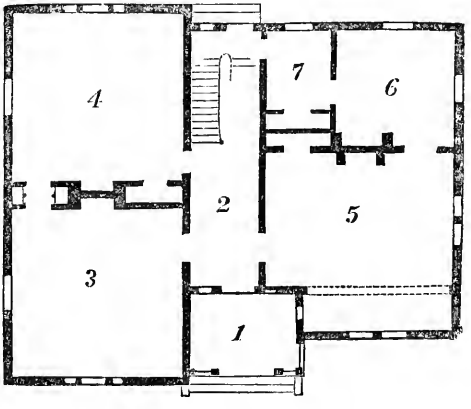
A PLEASANT AND CONVENIENT COUNTRY HOUSE.

We copy the annexed illustrations from an architectural work entitled "Homes for the People," by G. Wheeler, of New York, which was published before the late rise in the cost of building materials, and when such a cottage could be erected for from thirteen to fourteen hundred dollars. As we publish plans of houses, &c., for the purpose of affording hints and suggestions to those who are considering the subject of building, rather than as models for exact imitation, we condense the detailed descriptions and directions of the artist.

No. 1, of the plan, is a porch 10 by 6 feet; No. 2 is the hall, 6 feet wide; No. 3, parlor, 14 feet square; No. 4, bedroom of the same size; No. 5, the living room, with fire place and closet, 16 feet square, with the exception of the corner taken out by the recess, and adjoining it is a summer kitchen, No. 6, and a pantry, No 7.

The floor above is divided in a similar manner to the one that has been described, excepting that the partition above that between the hall and family living room, No. 5, is moved further in the room, and is upon the same line as the wall of the recess. By this means a pleasant sleeping-room for a child is added to the plan, and the chamber by its side still remains a large apartment. The space above 7, is appropriated to closets for stores and for linen, and an open area for boxes; over 6, is another small bedroom, and the remainder of the house has three large sleeping-rooms, over 3, 4, and 5.

The finish of the exterior, as represented in the cut, is what the artist calls "the Italian style," and the roof is represented as covered with boarding, over which roofing paper, cloth or tin, is laid, with raised rolls. These features may be adopted or rejected as the circumstances, materials and taste of the builder may suggest.



Plan of the First Floor.

TANNER'S BARK.

In many portions of New England, large quantities of the bark of trees, especially that of white oak and hemlock, are used for the purpose of tanning the skins of oxen, cows, and perhaps some other animals.

Until recently, most, and at the present time, much of this bark, after having been ground into quite small pieces and used for tanning purposes, has been thrown into streams and washed away, converted into paths about houses or gardens, and sometimes spread upon long reaches of the highways, as being the most convenient mode of getting rid of it.

Within twenty or thirty years, however, some thoughtful persons have supposed that the bark contained valuable properties as a manurial agent, and in sufficient quantity to justify experiments with it. Upon investigation, they found that it had long been considered worth saving in England, and that every bushel of it was carefully preserved and formed a principal ingredient in the compost heaps, wherever it could be conveniently obtained.

Several kinds of bark have been analyzed by various chemists, and have been found to consist chiefly of carbon, oxygen and hydrogen, with various saline and earthy substances. *M. Saussure* found in 100 parts of the ashes of the bark of the

	White Oak.	Poplar.
Soluble salts,	7.	6.
Earthy phosphates,	3	5.3
Earthy carbonates,	66.	60.
Silica,	1.5	4.
Metallic oxides,	2.	1.5

"From this analysis the farmer will see that the earthy and saline ingredients of the bark of forest trees must be valuable as fertilizers; it is only to the slowness with which refuse tanner's bark undergoes putrefaction that its neglect by the cultivator must be attributed." It is undoubtedly best made available for the soil by bringing it into a moderate degree of heat, and thereby inducing fermentation, in connection with peat, or other coarse vegetable matters. In this way, a most valuable compost heap may be formed, that will be found active and efficient on most crops.

Alone, however, we have known it to produce wonderful results. The experiment was made upon a piece of pine plain land. On the west border of the field a brook flowed along which separated the field from the high land, and near the brook a tanning had been in operation for some fifty years. At length the tanning was discontinued, and a gentleman purchased the premises—including the sandy field—as much with a view of *experimenting with the bark* as for the convenience of owning more land near him.

The pits were filled, the yard leveled, and large quantities of the remaining bark hauled upon the sand, and ploughed under only two or three inches; just deep enough to cover it, with a view of keeping it moist, and so near the surface that it should be kept warm by the solar rays. A single horse would plough it, and this was done two or three times in the course of the season, adding at each time more bark, but in less quantity than at first, and gradually ploughing deeper.

The second year more bark was added, the ground thoroughly ploughed, potatoes were planted and yielded a fair crop.

When we saw the field, it had been yielding clover, at the rate of about two tons to the acre for several years, and *without any other dressing* but the bark, added annually and ploughed under. How much fertilizing matter the bark contained, in the form of scrapings from the skins, bits of horn, hoof, or other substances, and the lime used in tanning, the experimenter could not tell,—but not more than is usual in similar yards. He thought the percentage quite small.

These statements were made by the owner of the land, who appealed to the citizens of the village who were present and had seen all his experiments, and who verified them.

The process of fertilization was a slow one, but the cost was trifling, and came from the force of the farm, not from *cash* which had been earned in some other way.

PULVERIZATION OF THE SOIL.

It was the opinion of the celebrated JETHRO TULL, that very superior crops might be produced indefinitely from the same soil, simply by maintaining it in a finely pulverized state, in order to allow the roots of the growing plants to expand freely in quest of their appropriate food.

Notwithstanding the fallacy of this theory, which, however, at one time was quite popular, it is obvious that the finer a soil is made by working, the better will it be capacified to sustain the crops it is required to support.

No inconsiderable portion of the actual fertility of every soil is derived from the atmosphere—principally through the economy of aeration or airing, which imbues or impregnates it with the fructifying gases, and gives energy to its particles, and to the mass in proportion to its lightness and permeability to their effects.

Of the numerous aerified and volatile substances imbibed by the soil, the most important, perhaps, so far as regards its effects upon the vegetable system, is ammoniacal gas. This substance is copiously evolved wherever animal manures are used, or permitted to ferment in a free atmosphere. It is absorbed by the earths, and acts as a most powerful stimulant, both to the plant and soil. The finer the earth is made, the greater is its capacity to absorb this gas; consequently, any process calculated minutely to pulverize or disintegrate its granules, will increase this power of absorption, and the more copious will be the supply of fertilizing matters from the air.

Heavy lands are, therefore, ameliorated by ploughing, spading, &c., which destroys their ponderosity, and exposes them to atmospheric action. It also secures a more immediate and efficient development of the fructifying principles of all such matters as may be applied as manure.

As to ammoniacal gas, it was long supposed to be an injury rather than a benefit to plants. This idea arose, no doubt, in part, from the pungency of its odor. It is evolved by a mixture of sal-ammoniac and quicklime, and is the principle which causes the smell noticeable in stables. Pure ammoniacal gas has been called "*The Awakener of the Dead*," as persons have sometimes been brought to life and consciousness after having fainted, by inhaling it, and even after animation has been suspended by other and more fearful causes.

To prevent the escape of ammonia from manure heaps, it is necessary to sprinkle them with a strong solution of copperas in water. The sprinkling should be repeated often, if the decomposition or fermentation is vigorous, and a small quantity of gypsum may be added, with good effect.

—Alden Adams, of Leverett, Mass., has this season gathered a goodly crop of hops off from the same vine that his grandfather gathered from *ninety years ago.*

For the New England Farmer.

FARM HELP.

Messrs. Editors:—As far as my experience goes, the difficulty of supplying the farm with good help seems steadily increasing.

There have been a good many men along the past season, but most of them have not been the steady, reasonable, faithful "help" so much needed by the hard-working farmer. I don't believe I am alone in often shrinking from undertaking a big job of farm improvement, for the reason that the men cannot be depended upon to put it through.

The number of men who work out their regular eight months from April to December, has grown less of late years. I see men pack up their things, and ask for their wages and leave, without an hour's notice, not caring a copper for the bargain made at the beginning of their service. Now the farmer is grievously wronged by such treatment. He has employed a new man, awkward and ignorant at everything, and after much pains-taking and considerable loss, gets him "broken in" to his business. Just as he is beginning to earn his wages, he learns of some cousin who brags of the big pay he is getting, becomes uneasy and leaves.

A neighbor, well known to you, whose large farm—lately mentioned so favorably in the Farmer—is somewhat retired, had one of his men leave, complaining that the place was too lonesome. His employer told him he couldn't very well move his farm into the middle of the town to accommodate him with society!

I hardly feel it right to detail personal experiences with hired men. Your columns could easily be filled with cases that have severely exercised many homes where the New England Farmer is read

What will benefit your readers more is suggestions to remedy the evil to which I have alluded. I live, as you are well aware, in a manufacturing village. The owners of the mill have suffered from unsteady help in times past. They now employ a better class of families, furnishing them with comfortable tenements at reasonable rents. Such help can be depended upon. They keep the machinery always going.

Now are there not many farms where married men might be employed to great advantage, and furnished with cottages and gardens which would fix them to the place, and make them mutually interested in its prosperity?

Will you be kind enough to enlarge a little on the above suggestions?

Yours truly, Wm. D. Brown.

Concord, Mass., Oct., 1867.

Remarks.—The remark is often made that farming, as an occupation, is unpopular; that young people, especially, dislike it, and that they will engage in almost any other calling, sooner than to work on a farm. If such con

plaints are true,—and they certainly are, in some measure,—there must be reasons for them. Some of the reasons could be easily cited, but only one will be alluded to at present,—and that is the great want of intelligent, industrious and *conscientious*, farm-laborers.

Farming, as a vocation, has been greatly changed within thirty years. While important improvements have been introduced in the modes of cultivating the soil, and much hard and wearing labor has been transferred from man to beast, other things have taken place, which have actually *changed the condition* of most New England homes, by the introduction of an element at once uninstructed and unmanageable.

There is scarcely a farm now in three of the New England States without one or more Irish persons upon it as "help," and frequently two or three indoors and as many without. In the other three States, Maine, New Hampshire and Vermont, there are not so many, but still may be counted by thousands in these.

Nearly all this "help" comes to us without education of any kind, ignorant alike of our modes of farming, housekeeping, and the laws and customs of the land. All this, however, we could overcome, and by patience, kindness and careful training, could, in most cases, get an equivalent in their labor for the cost which they incur, if they only brought along with their labor *an educated conscience*. But such is not the case. The remark of our correspondent on this point is true, and may be verified in hundreds of cases.

This is a deplorable state of things, and the introduction of this element to our farms, and the necessity which seems to exist for it, are among the leading causes why so many persons decline tomake farming a business.

Thirty years ago, the "help" on the farm was the proprietor and his healthy, educated and intelligent children around him, each feeling an individual responsibility for the maintenance of order, economy and industry in everything pertaining to the prosperity and general welfare of the family. When they came around the table at their meals it was a perfect love-feast, where thought, feeling and expression were harmonious, where the language used was common to all, and where a single interest animated every member of the family.

The entire management, or engineering of the farm, did not then fall upon a single person,—but some of the sons and daughters took an active lead in certain departments of duty, and claimed a responsibility which greatly relieved those oppressed, perhaps, with the burden of years. There was a system, and an economy of time and means practiced in everything, and an animus that needed no morning calls or the master's eye.

How is it now in the family of the farmer? His sons are in Idaho or Japan, and his daughters among the turpentine trees of North Carolina, or somewhere else, lifting the ignorant and debased out of the darkness in which a cruel custom had long enslaved them. Around his table and evening fireside, there are *two sets* of people, two languages, and scarcely an interest or custom in common among them. But this is not all; there is an antagonistic feeling, a common sentiment among them that runs counter to our customs, modes of life, labor and thought, which is added to an idea of *competency* which often runs into the ridiculous. The uneducated are usually the best taught—in their own judgment—and are the most tenacious of their opinions.

These persons have come among us to establish homes in our fertile and beautiful land, and there is "scope and verge enough" for all. We welcome them to it as one of the choicest portions of God's heritage. Here they can settle upon the land, protected and encouraged by wise and humane laws, and multiply and replenish the earth. Why should they stand apart from us, and cultivate a clanship which builds up a partition wall between us? Why should they not fulfil all their contracts, and act in good faith in every respect; discharge all their duties with fidelity, send their children into the common schools, and all become Americanized as fast as possible? It certainly is for their best interest so to do.

If any one of these persons supposes that an American does not perform his part of a contract, their instant resort is to the law, and many harrassing and expensive cases of litigation grow out of such suits.

Ought we not, then, to protect ourselves? Ought not the farmers of a town to meet, establish some rules of proceeding, collect a fund to defray expenses, and appoint certain persons to prosecute every case of *violation of*

contract which occurs among the subscribers to the fund? Let this be done in a few cases—no matter which party violates—and the outrageous practice of leaving employers without good cause, would soon cease. These violations take place among the help in the house more frequently than they do among the workers in the field, and they are sometimes vexatious and perplexing in the highest degree.

And now, brother farmers, what shall we do? Deplore this condition of things, or use the means we possess for improving it, and come to the conclusion that we must labor for all that is good and beautiful, here and hereafter? The educating and establishing this long oppressed people *is a part of our destiny*, and as wise and faithful stewards, we must accept it cheerfully and labor in it with fidelity. We must not only teach them the arts of peace, but by precept and example, must teach them the moral law,—that *truth* and *justice* must be regarded in all the concerns of life, and that *conscience* is the spirit of God within us, ever directing us to that rule which requires us to do to others as we would have others do to us.

WOOL MANUFACTURERS.

The third annual meeting of the National Association of Wool Manufacturers was held in New York, October 2d. Hon. Erastus Bigelow, of Massachusetts, was re-elected President; T. S. Faxton, of New York, Theodore Pomeroy of Massachusetts, and Archibald Campbell of Pennsylvania, Vice Presidents; and John L. Hayes of Boston, Secretary.

The connection of this society with the National Wool Growers' Association, and the fact that this connection is looked upon by some wool growers with distrust and suspicion, give no little interest to the proceedings of this influential body of manufacturers. While we admit that manufacturers of wool, like the manufacturers of other articles, may be influenced by the general principle of buying the raw material where they can buy it the cheapest, we cannot believe they are so short-sighted as to adopt a policy which must destroy or greatly impair the value of their home-market. We fully believe in the substantial identity of the interests of the Wool Growers and the Wool Manufacturers of the country. And we are pleased to see in the report of the secretary, and in the resolutions adopted by the association, a recognition of this principle so open and apparently hearty as to confirm our hope that the fears of wool growers about being "sold" in their late agreement with the manufacturers are entirely groundless. Manufacturers, mechanics and merchants are beginning to understand that they cannot long prosper unless farmers prosper.

The Secretary's Report, though written in the first person, was unanimously adopted by the association. We need not ask the attention of our readers to the following extract from this report, or to the resolutions which follow, for which we are indebted to the *Rural New Yorker*, as we have not as yet received a copy of the printed Report:—

A result of the recent tariff on wool and woolens, which cannot fail to be encouraging to the wool-producing interests of the country, is the apppreciation which it has tended to produce of our domestic wools. The effect of the recent tariff, in directing attention to American wools, is greater than ever anticipated by manufacturers. In all establishments where foreign wool was formerly largely used, manufacturers have been induced to make new applications of domestic fleece which they would never have dreamed of but for the change in the wool duty. Some indication of the extent to which American wool has been substituted, is shown by importations at the port of New York, given from official sources. For the first six months of 1866, the clothing wool entered at New York amounted to 23,692,043 pounds; and for the first six months of 1867, 4,366,183 pounds.* To come to more direct illustrations: I am informed by a manufacturer of worsted yarns, consuming 10,000 pounds of wool per week, that before the imposition of the duty on Canada wool, he made use of that material exclusively for his fabrics, as it was supposed to be indispensable. After the imposition of the duty, he experimented with American wools, selecting from lots brought principally from Kentucky; and for months he has made use of no other wool, which he finds perfectly adapted for yarns of numbers not exceeding 35. For the higher numbers, the admixture of wools of pure English blood is found necessary. The manufacturer and introducer of the admirable cloakings, of which I shall speak elsewhere, informs me, that, upon commencing this new fabric, it was supposed that the most expensive Silesian wools would be required to equal the Austrian fabrics, which first suggested these styles. In the early stages of his manufacture, he made use of Silesian wools, costing, washed, two dollars per pound. These fabrics are now all made of American wool, without the slightest admix-

ture of foreign material, and exhibit probably the most beautiful textures that have ever been produced from American flocks and looms. In many mills producing fine-face goods, foreign wools were formerly used for both warp and filling. Since the change of duty, American wool, in all these establishments, is substituted for the warp, even of the finest broadcloths, constituting two-fifths of the texture. The testimony which I have from manufacturers is universal—that by careful selection, the economical application of American wools may be greatly extended. Instances are not wanting in other countries of a distinctly marked national manufacture being developed in consequence of the necessity of resorting to the products of domestic flocks The high duty in France upon foreign wools, which was fixed at 30 per cent. in 1826, compelled the French manufacturers of woolen dress goods to resort to the fleeces produced on their own soil. The protection given to the agriculturists of France encouraged them to develop the merino races supplied by the flocks of the Rambouillet, until they produced sheep of extraordinary size, and with a length and fineness and fibre hitherto unattained. To the exclusive possession of these fleeces do the French manufacturers ascribe the unparalleled excellence of their merino-dress fabrics,—the most perfect of all known textures of wool. So high became the excellence, and so great the appreciation of this wool, that it no longer required protection, as it was without a foreign competitor: hence the abolition of the duty on wool which took place in 1860, was assented to freely by the French agriculturists. It was in memory of this boon, which the flock of Rambouillet had conferred upon France, that, upon its threatened dispersion, the Empress Eugenie, in 1854, pledged herself to preserve the flock under her august protection.

Let me by no means be understood to say, that our flocks can at present supply us with all the requisite material for our manufactures. The wools of the third class, or carpet wools, the coarse product of barbarous flocks, can never be produced here, for we might as well undertake to breed buffaloes for their robes. We are still greatly deficient in very fine short-fibred wool, adapted for filling for broadcloth or face goods, as well as in combing wool of English blood for worsteds. Both of these varieties can be advantageously grown in this country, and their production will be greatly favored by the existing duties. These wools should be produced, not in place of, but as additions to, the wools now mainly grown, and which will be always chiefly in demand. The principal means of encouraging the growth of the required fine wools, is for the manufacturers to *discriminate* in their prices; and to be willing to follow the example of one of the most eminent manufacturers of fine opera flannels, who informs me that he has paid from 75 cents to a dollar per pound, while ordinary wools were worth but 50 cents, for brook-washed fleeces of this character of wool grown in Ohio. There are localities, particularly in the Middle States, where this wool can be grown to great advantage. With adequate prices, the peculiar passion for fine wool will be developed in this country, as it is in Silesia and Hungary, where the culture of noble wools, as they are denominated, is prosecuted as the most fascinating of agricultural pursuits. We notice with pleasure, that eminent flock-masters, like Mr. Chamberlain of New York, have been within the last few months adding to their importations of Silesian sheep. The diffusion of this admirable race—possessing equal fineness and shortness of fibre, but of greater size, yield, and stronger constitution, than the delicate Saxons—would be an invaluable addition to our agricultural resources. The value of sheep of English blood producing the combing wool for worsteds, is being rapidly appreciated. They are exhibited in all our agricultural fairs. Their fitness for the neighborhood of large markets,—as in such situations profit is furnished from three sources: wool, mutton and lambs,—and their adaptation for dairy and wheat farms, where small flocks can be advantageously kept, render the necessary supply of this variety of wool only a question of time. There is no question that this wool, long claimed by the English as the exclusive product of their island, can be equally well produced here. The specimens of the Leicestershire wool exhibited by Dr. Townsend of Ohio, during the recent examination of the wool samples, were pronounced by English wool-sorters to be equal to the choicest locks of England. In regard to these wools, Dr. Townsend says, in a recently published essay, "Should the demand for combing wool continue or increase, it can be produced in this State (Ohio), and other States on the Northern border, as cheaply and as good in every respect as it can be produced in Canada; and it cannot be good policy to import our combing wools when they may be so readily grown at home."

Resolved, By the National Association of Wool Manufacturers, at its third annual meeting, held in the city of New York, on the 2d of October, 1867:—

1. The present tariff on wool and woolens is as well adapted, as any legislation which can now be devised, to promote the growth and development of wool manufacturing and wool growing, and the interests of consumers and the public revenue.

2. Confidence in the stability of legislation being essential to induce the investment of capital by which agricultural and manufacturing wealth is to be developed, it is of the highest importance that the tariff policy deliberately adopted at the suggestion of those most affected by it should be persisted in, and that the business arrangements which have been made to conform to it should not be disturbed.

3. Experience having demonstrated the difficulty of adjusting the complicated relations of manufacturers with each other, and with the producers of wool, it is desirable that no change, however trivial, should be made in the present tariff, unless

sanctioned jointly by the National Wool Growers' and Wool Manufacturers' Associations.

4. The interests of wool manufacturers and wool growers being recognized as identical, further measures should be adopted to make each class familiar with the respective wants and necessities of the other.

5. Manufacturers have suffered from overproduction of particular kinds of goods. Wool growers have equally suffered from overproduction of certain kinds of wool. The wisest course for each class to adopt is to increase the variety of its products.

6. It would greatly benefit many branches of the woolen manufacture if, in addition to the ordinary wools now produced, there should be an increase in fine wools corresponding to the best Silesian wools, and in combing wools of English blood.

7. It is for the interest of the whole country that production should be increased by extending protection to all branches of industry whose representatives can show that they are not in a position to successfully compete with foreign producers.

For the New England Farmer.

CHEMICAL TERMS---No. VI.

Silica, or as more generally called silex or flint, is very abundant in nature. In chemical language it is silicic acid. It is found in quartz, flint, and in rock crystal, often beautifully crystalized, and is a principal ingredient in many of the precious stones. Feldspar, which is a leading ingredient in granite, contains 66 per cent. of silica.

Silica consists of about 48 per cent. of silicon and 52 of oxygen. It is found in the water of most springs, especially warm springs. If we evaporate spring water, we find it in the residuum. If we burn a plant we find it in the ashes. Grasses and the stalks of most kinds of grains, yield silica on combustion; and, in fact, to its presence they owe their firmness. When the soil is wanting in it, or in alkalies to render it soluble, they will bend or fall to the ground. The shells of numerous small insects consist chiefly of silica. Silica is the principal ingredient in sand. Yellow sand is colored by oxide of iron. By chemical processes silica may be obtained pure, when it will be found to weigh in comparison with water as 2.66 to 1. It combines with the bases, alumina, potash, soda, magnesia, lime, &c., and forms silicates, which constitute the largest number of the hard minerals on the crust of the earth. It sometimes combines with one base and sometimes with two. Thus we have feldspar, which is silicate of alumina and potash; hornblende, which is silicate of lime and magnesia; steatite, which is silicate of magnesia with a slight addition of alumina and iron. Silica is insoluble in every acid except the fluoric acid. It is quite insoluble in water in its natural state.

We should little expect flint to be an acid, but as it exhibits the properties of an acid, and behaves like an acid, it must be so considered.

Clay.—Clay is a compound of two simple earths, silica and alumina, generally tinged with iron. Lime, magnesia, and the coloring oxides of some other metals besides iron, are found in small quantities in natural clays. There are many varieties of clay, arising from the different proportions in which the ingredients composing them are combined, and from the presence of ingredients in one variety that are not found in another. When tolerably pure clay is mixed with water, as every one knows, it forms a compact mass, flexible or plastic, capable of being formed into every shape. Common clay contains more sand than plastic clay, and has a yellowish color, owing to the presence of iron ochre.

Water does not pass through clay as it does through sand, or through limestone earths. When a layer of clay exists beneath the soil, the rain, being unable to penetrate readily through it, accumulates above it, forming bogs and marshes. When such a layer approaches the surface near the edge of a lower level, the accumulated water bursts out giving rise to springs.

Clay has the power of drinking in and retaining a large quantity of water. This property when skilfully used gives it great agricultural value.

Thoroughly dried clay, on exposure to the air, increases in weight. This increase arises from substances absorbed from the air. These are water, carbonic acid and ammonia. Now as these are the most important elements of plant food, and as clay absorbs these from the air, it is clear that it must enhance the fertility of the soil. Loam consists of clay and sand. We speak of a clayey loam or sandy loam, as either of these ingredients predominates. A soil consisting of either sand or clay only, is without fertility. If there is too much clay, the soil is too compact and heavy, and so dense as not to allow a free circulation of air. After long rains it becomes muddy, and not allowing the water to evaporate freely, remains wet and cold for a long time. A soil containing too much sand suffers from the opposite disadvantages. Hence it becomes obvious that the physical condition of a clayey soil may be ameliorated by the addition of sand, and that of a sandy soil by the addition of clay. The properties that especially adapt clay for the manufacture of earthen ware are its plasticity and its hardening under the action of heat. Clay is a silicate of alumina, containing variable quantities of silicates of potash, lime, &c.

Alum is what is called a double salt, consisting of one part of sulphate of potassa, and two parts of sulphate of alumina, chemically united. R.

Concord, Mass., Nov., 1867.

—In Canada, flax is so profitable that some large flouring mills have been turned into linen works. Near Preston, this year, 12,000 acres were in flax. It looks a little as though cotton would be flaxed out.

For the New England Farmer.

AN AUTUMN RAMBLE.

Carrot Crop—Deep Ploughing—Is there loss of Vegetable Force in penetrating hard sub-soil?

The last day of October came to us in a pleasant interval of sunshine amid many cheerless days of autumn cloud and rain. A warm west wind blew over the brown fields, and chased the maple leaves into the shelter of old walls, or rustled among them until some protecting hedge of briar, or thorn, or barberry, interposed and turned the baffled winds away into country lanes, or down slopes of mowing land, thickly matted with luxuriant aftermath, or along pleasant valleys hazy with an afternoon of dreamy Indian summer time.

The aspect of the roads, and fields, and farms, had induced us to withdraw for a single half day from the toil and tumult of the town, and spend its hours among the scenes and haunts of quiet country life.

So far as our observation goes, it is not a difficult matter to engage a New England farmer in conversation, whether the subject be agriculture, religion, or politics.

But for this half day, your correspondent had eschewed the meanness of the one, had turned aside from the sectarianism of the other, and had determined to acquaint himself somewhat with the ways of the farmer.

The harvesters were in the fields, finishing the season's labor by reaping a plenteous reward for all the season's toil. In one lot men were at work digging carrots, with the expectation of getting at the rate of twenty-five tons to the acre. The land on which the crop was grown, had been twice ploughed in the spring, making it exceedingly light and mellow; and although the plough had not gone below a depth of eight or ten inches, there were carrots that would measure from fifteen to twenty inches in length. It was claimed that the land upon which this vegetable had grown, would, next year, be even better adapted to the production of a crop of onions than land upon which onions had this year been successfully raised; and yet the statement is frequently made by the growers of this vegetable, that onions do best when planted upon the same land during consecutive years.

It occurs to the writer whether the policy of shallow ploughing for carrots, as practiced by some agriculturists, may not be detrimental to the interests of the husbandman. Here were carrots, some of which had thrust their roots at least five or ten inches into the hard ground below the lowest point attained by the plough. Now it is a question with us whether vegetables, during their growing season, do not *labor*. The roots of these long carrots went tapering away to a very slender point. Had the ground upon which this crop was planted, been turned up by a plough running twenty inches deep, would not the force of growth, inherent in vegetables, instead of partially wasting itself in an effort to penetrate a stiff sub-soil, been reserved for the development of the size and quality of carrots? Or is it possible that shallow ploughing is really a better method of procedure; and by leaving a hard subsoil from five to ten inches below the surface to impede and thwart the penetrative propensities of the carrot, is the work which the root performs turned in another direction, and finding itself in its early stages arrested in the effort to penetrate far into the earth, does development manifest itself more quickly in a circumference, and meeting less resistance amidst the loose upper soil, does that development result in an increase of weight as the product of a given area of land?

But whether the leaving a subsoil near the surface of the soil to check the deepening of the plant, with a view to reaping an increased harvest, be policy or otherwise, the result in this field was certainly very satisfactory.

But we will not tire the reader with any farther reference to the carrot crop. There were other vegetables remaining in the fields. Plots of purple cabbage made a fine show in the lowlands; and, scattered about in the different fields, the large, red skinned, flat turnip had been assigned a place on higher and mellower soil; while, farther away, on the western slope of a hillside, the cereals were represented by a field of yellow corn—or what had been such. And the yellow leaves of the maize stalk, rustling in the light autumn wind and glowing in the sunlight, imparted a feeling of warmth to the landscape, and added another item to the pleasures of an afternoon spent in the autumn fields. XX.

Salem, Mass., Nov. 4, 1867.

For the New England Farmer.

A PLEASANT WORD FROM MAINE.

Crops, Buildings, Real Estate, &c., in Lincoln, Kennebec and Sagadahoc counties.

NEW ENGLAND FARMER:—We are happy to greet you on your weekly trip, laden with so much information from our agricultural brethren. How much information can be gained by communicating with each other. We down here in Maine hear from those in the old "Bay State," as well as in all other States in our agricultural section.

With us autumn has robbed the orchards of their fruit and the forests of their green foliage. As we drove through Lincoln, Kennebec and Sagadahoc counties not long since, we were led to exclaim, "God sees all things and does all things for the benefit of all his creatures. Surely He has given us a bountiful harvest. As we passed one field the owner had just gathered an immense load of cabbages as nice as we ever saw. Corn, as a general thing, has done well except on low land, some of which has, this season, been too moist for that crop. One man informed me that he harvested nine-

ty-four bushels of corn on the cob from one and one-half acres. All along our route, people were pressing hay for market, but were not anxious to sell at present prices, which range from sixteen and one-half to eighteen dollars. They say prices will range at twenty and upwards.

At Gardiner we learned that potatoes were selling at one dollar per bushel, but we think they will sell for at least one dollar and fifty cents before planting time, as the yield was about six bushels from one, as a general thing. Through the southwestern part of Lincoln and Southwestern part of Kennebec counties, it appeared to us that farmers generally, simply tried to live, and nothing more. After crossing the Kennebec river, farming appeared to present a different aspect. Barn cellars and manure sheds frequently presented themselves to our view. Dwellings neatly painted and fences in good repair, gave evidence of thrifty and enterprising occupants. After passing through West Gardiner and Litchfield, we ascended "Oak Hill," which is composed of a sandy, gravelly soil, too dry for profitable farming in all its departments. While it is a good soil for corn and "just the thing" for an orchard, it is not profitable for potatoes or hay. But just beyond, occupying a part of the towns of Monmouth and Wales, lies the most fertile valley in this section of our State. One farmer told us that he broke up a piece of land that had been lying waste for a long time, and without manure of any kind, raised potatoes to which were awarded the first premium at the county fair. We were informed that real estate in this valley was rapidly advancing in price. One farm which was sold for $3500, in two years afterwards was purchased by its former owner for $4550. Through the whole of our drive we saw no reason why people should cry out "hard times," for on the whole God has blessed us with an abundant harvest. If we have less of one kind we have more of another, to make good the deficiency.

Wiscasset, Me., Nov. 11, 1867. C. H. W.

MANURE.—We like barn cellars to protect the manure from rain and sunshine, but there is something else to do with manure besides housing it. If you keep it housed and protected from the frost, there is an acid in it which is deleterious to the growing crops. My mode is to clean out the shed and barn cellars in the fall and pile it up closely, cover it over with loam, which protects it from the rain. Then the frost has free access to neutralize the acidity, to penetrate through all the parts, and then when it is pitched over in the spring, it falls apart and becomes fine and adapted to the growing crops. In the spring, instead of manuring five acres sparingly, we manure what can sumptuously, do not scant a hill, and the result is that we harvest good crops.—*S. P. Maberry, in Maine Farmer.*

IN NUTTING TIME.

With lingering glints of gold and red
The waning autumn woods are gay;
And in the deep blue overhead
The sun shines clear and soft to-day.

The late October winds are bland,
Their voices whisper low and sweet;
While far away the blue hills stand
With valley vapors round their feet.

Across the azure of the sky
The milky cloud-shapes, wandering, sail;
Southward the roving song-birds fly,
And from the stubble pipe the quail.

Along the winding path we go,
Through fields in which the aster nods;
And over breezy slopes where grow
The yellow-painted golden rods—

Along the path by field and hill,
With many a lightly-spoken jest,
Past golden orchard rows where still
The robin shows his crimson breast—

Until at last the woods we gain,
And there, with shout and crashing sound,
We beat the boughs till downward rain
The ripened nuts upon the ground.

All other sounds around are hushed,
There is no note of any bird;
But through these aisles with autumn flushed
Our voices far and wide are heard.

With lingering glints of gold and red
The waning autumn woods are gay,
And though the summer months are fled
Our hearts make summer of to-day.

HINTS FOR THE GARDEN.

We copy the following from the New York *Horticulturist*:—

HYACINTHS for winter blooming should now be potted.

VINEYARDS should all have the earth ploughed up toward the vines late in autumn, leaving a centre furrow for the surface drainage.

CHRYSANTHEMUMS in bloom require abundant fo d, which is best supplied by watering them with liquid manure.

ROSES for window blooming should be potted in good rich soil, cut back freely, then kept in cool frames for a time before bringing into the room for winter.

CUTTINGS of geraniums, verbenas, &c., that were made some time since and placed in a cold frame, should now be potted off, brought into the house, and placed in a cool, shady place for a time before giving them a position for growth.

PITS OR FRAMES for winter stowing of plants should be ready. Make them two to three feet deep, and when they are well drained, place the pots in leaf-mold from the woods, give air freely and shade from hot sun; when severe weather sets in, have ready a quantity of straw, old hay, &c., for spreading over the sash.

STRAWBERRY beds planted this autumn should during this month be lightly mulched with coarse straw, leaves, cornstalks, or other

litter that will serve to shield them from sun and prevent the ground from freezing and thawing rapidly; but at the same time the mulch should not pack down on the plants to smother them.

EVERGREEN branches taken from the forest and planted in the ground among the shrubbery and grouped low over the flower-beds, serve to give life and cheerfulness to the grounds, and at the same time are a protection and shade to the plants, bulbs, &c., &c.

CELERY for winter use should be stored in trenches made the exact depth of the plant, and ten to twelve inches wide. Take up the plants on dry days only, and pack closely in the trenches. On the approach of severe frosts, cover with two or three inches of straw litter, increasing the quantity as the weather grows colder, until the covering is at least one foot in thickness.

PLOUGH or dig all ground intended for planting next season, leaving it as light and loose as possible for the action of air and frost. If clay ground, plough or dig it only when comparatively dry—the drier the better; if too wet, it will at once pack down and no benefit arise from the labor. If dry when the work is performed, the action of the winter's frosts will be almost or quite equal to a coat of manure.

UNFRUITFULNESS OF GRAPE VINES.

Overbearing, at first or second producing, is one of the great causes of early exhaustion of our vineyards. The land used for a vineyard is generally impoverished by previous croppings. The vine finds in it a few remaining constituents requisite to its growth and production of fruit; being a *voracious* feeder, it absorbs these readily and in a short time. A year or two of heavy producing of fruit exhausts the soil of nutritive elements; and the vine, finding no supply of nourishment, begins to decline in vigor and fertility; and, once stunted in growth, it seldom recuperates, even if after-treatment is such as to return a new supply of nourishment to the soil. The tendency to overbear should be checked; but how few persons have sufficient courage to cut off a portion of the branches in early spring? It is essential to remove one-half of the bunches as soon as they appear; the remaining half will be more developed, the berries larger, the quality improved, the weight of the fruit as large in the end, as if all the bunches were left, and the vine will not exhaust itself so much. By over-straining, nature fails; and it is easier for a vine to perfect a dozen bunches than to attempt to do so for double that number. Our finest specimens of fruits, such as pears, peaches, apples, &c., are the consequence of a moderate crop of fruit upon the trees, caused either naturally or artificially, by the removing a proper proportion of the flowers, or, better still, the flower buds, as soon as they appear.—*P. J. Berkmans, Augusta, Geo., in Southern Cultivator.*

ROAD SAND AND WASH.

We have frequently witnessed the beneficial effects of the wash of the highway when properly directed upon grass fields, and have supposed that its virtue consisted chiefly in the droppings of animals that passed over it. The following article by Dr. J. S. Houghton, in the *Gardeners' Monthly*, indicates another cause of the fertility of such irrigation:—

The sand obtained from turnpikes, or roads macadamized with any sort of stones, very difficult to break or pulverize, has a peculiar value. The grinding of such rocks or stones under the iron-rimmed wheels of wagons, the wear of horse-shoes, and the mixture of this ground rock with the manure scattered along the road, produces a compound which is found to be highly acceptable to trees and plants. The granite rock, we know, is rich in potash and silica; but it is not these elements alone which give this road sand its peculiar value. By the process of grinding and triturating inert substances, such as oyster-shells, charcoal, quicksilver, we develope medicinal and other virtues which these substances do not possess in their crude form. And so it is supposed to be with road sand. By the constant grinding and triturating of the iron-bound wheels and horses' shoes, the comminuted granite becomes prepared for the use of plants; and when this road sand is mixed with the compost heap and saturated with liquid manure, it is found to help the efficacy of the compost in a remarkable manner. Under the influence of road sand of this kind alone, it is said that when applied to lawns, white clover is sure to spring up in the greatest abundance and luxuriance where it had never been seen before.

SORRY HE SOLD HIS FARM.

The Doctor says, he "never knew a man to sell his farm who did not regret it." This is perhaps stating it a little too strong. But being one of the oldest pastors in Western New York, he has had good opportunities for observation. I think men engaged in other pursuits, who buy farms, expecting to find nothing but pleasure and profit in agriculture, are generally very glad of an opportunity to dispose of them. Such men seldom regret selling. But with a farmer the case is very different. He either sells because he thinks he can buy a better or cheaper farm, or because he is tired of farming, and proposes to live in the city. In the latter case he is almost certain to wish himself back again on the farm. I heard of such a case the other day. A farmer was offered last spring what he thought a high

price for his farm, and accepted the offer, thinking he could live comfortably in the city on the interest of the money. After trying it six or eight months, he offered the purchaser $1000 to let him have the farm back again, giving him the summer crops and the wheat into the bargain. A farmer who sells, expecting to buy another farm, finds it not so easy to suit himself as he expected. If you must sell, the better plan is to know beforehand where you are going.—*J. Harris, in Am. Ag.*

TRAINING THE MULE.

We copy from Mr. Riley's Treatise on the Mule, a new work recently published in New York by Dick & Fitzgerald, the following remarks on training this proverbially stupid and contrary animal:—

Probably no animal has been the subject of more cruel and brutal treatment than the mule, and it is safe to say that no animal ever performed his part better, not even the horse. In breaking the mule, most persons are apt to get out of patience with him. I have got out of patience with him myself. But patience is the great essential in breaking; and in the use of it you will find that you get along much better The mule is an unnatural animal, and hence more timid of man than the horse; and yet he is tractable, and capable of being taught to understand what you want him to do. And when he understands what you want, and has gained your confidence, you will, if you treat him kindly, have little trouble in making him perform his duty.

In commencing to break the mule, take hold of him gently, and talk to him kindly. Don't spring at him, as if he were a tiger you were in dread of. Don't yell at him; don't jerk him; don't strike him with a club, as is too often done; don't get excited at his jumping and kicking. Approach and handle him the same as you would an animal already broken, and through kindness you will, in less than a week, have your mule more tractable, better broken, and kinder than you would in a month, had you used the whip. Mules, with very few exceptions, are born kickers. Breed them as carefully as you will, the moment they are able to stand up, and you put your hand on them, they will kick. It is, indeed, their natural means of defence, and they resort to it through the force of instinct. In commencing to break them, then, kicking is the first thing to guard against and overcome. The young mule kicks because he is afraid of a man. He has seen those intrusted with their care beat and abuse the older ones, and he very naturally fears the same treatment as soon as a man approaches him. Most persons intrusted with the care of these young and green mules have not had experience enough with them to know that this defect of kicking is soonest remedied by kind treatment. Careful study of the animal's nature, and long experience with the animal have taught me that, in breaking the mule, whipping and harsh treatment almost invariably make him a worse kicker. They certainly make him more timid and afraid of you. And just as long as you fight a young mule and keep him afraid of you, just so long will you be in danger of his kicking you. You must convince him through kindness that you are not going to hurt or punish him. And the sooner you do this, the sooner you are out of danger from his feet.

IMPORTED NORMAN HORSES.

In 1851, Dr. M. Brown, of Pickaway county, O., imported a Norman stallion from France, whose produce became so popular that, shortly after, other parties in Union and Madison counties made several importations of the same stock, which has become largely infused among the horse stock of that region. This season Dr. Brown and Mr. T. C. Bigelow have made another importation, of which the reporter of the Ohio *Statesman*, (Columbus.) makes the following mention:—

We rode out to the Four Mile House yesterday afternoon, to take a good look at the great monsters of horses imported by Dr. M. Brown of Circleville, and Mr. Bigelow, from Normandy, France. There are four of them, and they are beauties. The first in order is the premium horse, Napoleon. He is a dapple gray, five years old, is 16¼ hands high, and will exceed 1,600 pounds in weight. This horse was designed for the stables of the French Government, but through the influence of Americans of high standing in Paris, the Emperor gave permission for the horse to be brought to this country. The next is a bay, the Duke of France, six years old, 16 hands high and weighing nearly 1,600 pounds. Vigorous is the third. He is a dapple gray, four years old, 16 hands high, and of about 1,400 pounds weight. This is a larger bodied horse than either of the others, and, when full grown, will be the most symmetrical of the lot. Black Robert, the fourth, is four years old, 15½ hands high, and will weigh 1,300 lbs.

Our Receipt for Curing Meat.—To one gallon of water, take 1½ lbs. of salt, ½ lb. of sugar, ½ oz. of saltpetre. ½ oz. of potash. In this ratio the pickle to be increased to any quantity desired. Let these be boiled together until all the dirt from the sugar rises to the top and is skimmed off. Then throw it into a tub to cool, and when *cold*, pour it over your beef or pork, to remain the usual time, say four or five weeks. The meat must be well covered with pickle. and should not be put down for at least two days after killing, during which time it should be slightly sprinkled with powdered saltpetre, which removes all the surface blood, &c., leaving the meat fresh and clean. —*Germantown Telegraph.*

AMERICAN DURHAMS IN PUNCH.

The sale of American cattle in England, in connection with a herd belonging to the Royal family, when "Bulls brought their weight in bullion," was an event rather too funny to escape the notice of the London *Punch*. In his poetic flight, however, Mr. Punch takes large license with American geography; but then the location of Geneva, N. Y., in *Illinore*, helps out the rhyme, and being a removal of not over one thousand miles, is no greater liberty than is often taken with our latitude and longitude by more prosaic Englishmen. Here are *Punch's* verses:—

The Golden Short-Horns.

"Eight out of the nine Short-Horns of English blood, which 'Our American Cousins' and Mr. STRAFFORD have just sold back to us in a Windsor hotel, averaged nearly £410 a-piece."—*Morning Paper.*

Mr. STRAFFORD raised his time-glass,
And THORNTON held the pen,
When to a Windsor coffee-room
Flocked scores of Short-Horn men.

They crowded round the table,
They fairly blocked the door;—
He stood Champaigne, did SHELDON,
Of Geneva, Illinois.

They talked of Oxford heifers,
Duchess bulls, and how the States
Had come into the market
With another "Bit of Bates."*

Their expression is so solemn,
And so earnest is their tone,
That nought would seem worth living for
But "Red and White and Roan."

All ready for the contest,
I view a dauntless three
The MACINTOSH from Essex,
A canny chiel is he.

There's I ENEY from the hop yards;
'Twill be strange if he knocks under,
When once the chords are wakened
Of that Kentish "Son of Thunder"

The Talleyrand of "trainers"
Is their cute but modest foe,
Him whom the Gods call "CULSHAW,"
And men on earth call "JOE."

He loves them "points all over,"
With bright dew on the nose;
And in his heart of hearts is writ,
"*A touch of Barmpton Rose.*"

And sure it well might puzzle
"The Gentlemen in Black,"
When the three nod on "by twenties,"
To know which you should back.

And sure the laws of Nature
Must have burst each ancient bound,
When a yearling heifer fetches
More than seven hundred pound!

Bulls bring their weight in bullion,
And I guess we'll hear of more,
Arriving from the pastures
Of Geneva, Illinois.

*The American stock was originally from the celebrated herd of Mr. Bates, of England.

The following are the names and prices of the American cattle whose sale near the Queen's farm at Windsor, is thus immortalized in song. The boys will remember that the English Pound is about five dollars.

		£	s.
1.	Third Duke of Geneva,	577	10
2.	Twelfth Duke of Thorndale,	194	5
3.	Seventh Duchess of Geneva,	735	00
4.	Fourth Maid of Oxford,	315	00
5.	Fifth Maid of Oxford,	210	00
6.	Countess of Oxford,	2 2	10
7.	Sixth Maid of Oxford,	420	00
8.	Seventh Maid of Oxford,	273	00
9.	Eighth Lady of Oxford,	472	10

UNDER-DRAINING VINEYARDS.

After expressing the opinion that a thoroughly well-drained spot, where the water will pass away as fast as it falls, is the one thing needful in vine growing,—more important, in fact, than location near large bodies of water, shelter from winds, exposure to sun, peculiarities of soil, mineral elements, and systems of pruning, the Editor of the *Gardener's Monthly* says: "We do not believe that the usual way of proceeding with tiles will pay the vineyardist, because there are so many localities where the soil is naturally adapted to vine growing without this, that he who has to endure the additional expense before he can grow grapes, cannot compete with the other." Instead of great expense and labor in trenching, subsoiling and underdraining, *beneath* the ground, to encourage the roots down to be rotted, Mr. Meehan recommends that efforts be made to "prepare the earth all *above the natural surface*, where the roots will be dry and warm, and near the oxydizing agencies so necessary to the proper preparation of plant food."

For the New England Farmer.

KEEP YOUR STOCK CLEAN.

While much is said about the food, its proper quantity and quality, shelter, ventilation, and treatment in disease of stock, too little is said about cleanliness. It is regarded by many as a minor point in stock management, and a laborious and expensive task withal. They associate it with the constant use of cards and brushes, buckets of water and swabs, hoes and brooms—altogether consuming a large part of every day in a dull routine of dirty work of seemingly little use. Hence some farmers let their cows go all winter more thickly coated with manure than ever were their pastures.

What can be more disagreeable and discouraging than to turn out of a warm bed some cold morning, and grope your way to the old tie-up, and take your place at the head of a long row of cows, with flanks and bags well covered with fresh dung, and tails satu-

rated with the same, all ready to leave their impression about your head; then to come to your breakfast with boots and clothes bedaubed, and hands strongly perfumed,—not with Cologne water, or Lubin's Extracts,—and talk of your fresh and nicely drawn milk, and the sweets of farming. 'Tis too bad,—'tis enough to send a thrill of disgust through one's whole body against farming. It is no wonder farmer's sons and daughters are early prejudiced against their occupations. Boys usually have to do a large share of the barn-work, and if they are compelled to work hard to accomplish a little, and wear clothes that thus bespeak their employment, they are soon down upon farming, rather than upon the manner in which it is conducted.

Now keeping stock clean is like keeping one's self clean; there is no particular merit in it, while there is much disgrace in the neglect of it. The want of cleanliness is wholly the fault of the owner, for it cannot be said that any of our domestic animals are uncleanly from choice; they all have a natural aversion to their own excrements, and if left to themselves will choose a clean, dry place to lie upon; although, from a wrong way of bringing up, some animals seem to have lost this sense of cleanliness. I have seen hogs which made no distinction between their trough, bedding, and the farthest corner of the pen. These, when young, were kept in little boxes of pens, scarcely large enough to turn round in, and never had the privilege of a yard. Others are exemplary as possible, keeping their beds, especially, very clean.

In nothing is the progress of agriculture more evident than in the construction of farm buildings. The arrangements for the comfort and convenience of our animals are beginning to receive the attention they deserve; the days of old, dark, low, narrow, damp and unhealthy hovels are passing away. Perhaps all cannot possess a model barn, but something can be done at once and by every one, at small expense, towards the improvement of stables. If any one who has for years tended cattle by elbowing, crawling, and crowding about in these old barns, could have for one winter the comfort of working in a well constructed stable, he would never consent to return to the old arrangements.

The secret of keeping cattle clean with little labor, consists in preventing their lying down in their ordure, and this depends upon the proper construction of their stablings. Their platform should be just long enough for them to stand upon, and there should be a trench or pit behind this, at least six inches deep and two feet wide. The walk behind this should be wide enough for two cows to pass each other, and a few inches higher than the platform upon which the cows stand. Stanchions are now generally preferred to halters, ropes or chains, for the simple reason that they keep cattle in their place better. In one of the model barns in this State, in which fifty head of cattle are kept, the dimensions of the stable are: length of cows' platform, four feet six inches; that for oxen is one foot longer; dung pit is seven inches deep, and two feet wide; walk or passage behind, five feet wide, and is raised two inches above the platform where the cows stand. With oxen the urine is the great trouble. To carry this off, construct the platform in two parts,—the lower half being made of strips of plank about five inches wide, and laid about half an inch apart. In this way the urine will run off into the manure trench. Thus arranged, with a moderate supply of bedding, and cleaning out twice a day, it is not much trouble to keep cattle clean. Fifteen minutes spent with the card is as good as an hour in the old hovel. It is not necessary to put on thick boots to go behind or between the cows. Some may think they are too closely confined by this method. If it keeps them clean, it is better by far than all the exercise they get in stepping forward and backward two or three feet, and in lying in their own droppings every night.

In these days of horse admiration, it is hardly supposed the noble animals will be allowed to go uncared for. Would that every man calling himself a farmer, kept his horse during winter half as clean and slick as he can keep himself while at pasture. Here, too, a little care in the construction of stalls saves labor in grooming. Make the stall floor no longer than the horse, and raise it a few inches above the main floor, and conduct the urine away by contrivances similar to those described for ox stalls.

As for poor piggy, though doomed to do very dirty work, he expresses more thankfulness for a clean dry bed, than many a biped possessing more dignity. The idea that any hole will answer for a pig pen is intolerable. Temporary and hastily built pens are the dearest in the end. If any part is inclined to give way, piggy is sure to assist it. In fact he likes to try the strength of every part, and if the trough is placed upon the ground, he will fill it with dirt to your continual annoyance, and always takes occasion for his mischief when you are in a hurry. No place is fit to be called a piggery, which does not contain well-sheltered, dry and warm sleeping apartments, and a firmly secured trough, conveniently placed for feeding, apart from and above the yard.

The cow yard is another important place to be kept clean, whether the cows are tied up during summer nights or not. Some are little better than sloughs; they receive no other care than carting dirt into them in spring and out in the fall; there is no way of getting about them except by leaping from stone to stone, or wading ankle deep in filth. No inconsiderable amount of shouting and angry words are expended, as well as heavy blows given, over the mishaps that constantly occur in milking and yoking in such places. In looking upon

such yards I have often wondered if there could be arrangements contrived for making the work harder or more disagreeable. And could the dumb animals speak, they would emphatically declare the change from the green and sweet pastures, to a bedding for the night on a manure heap or in a mud hole, was anything but pleasant for them. Whenever I pass a yard whose owner has dry walks from gate to doors, and from door to door, and who daily throws into a heap all the droppings, I conclude that man has an eye to his own comfort as well as that of his cattle and also knows how to make manure. If any one doubts the benefit of cleaning the yards daily, let him try the plan for one season. With an extra large sized shovel it takes but a few moments each day. The increase of manure, the comfort in milking and getting about the yard, far exceeds the additional labor.

Thus it will be seen that with properly constructed stalls, keeping cattle clean is not an onerous task, neither is it a subject of minor importance; for no part of farm work requires during the year so much time as tending the stock. A small sum of money expended in securing the most approved constructions for stallings, pays a large interest in the comfort, health and cleanliness of the animals, in saving labor, and in your own convenience and satisfaction—aye, and in every way that you can estimate profit. N. S. T.

Lawrence, Mass., Nov., 1867.

For the New England Farmer.

THE GARDEN IN DECEMBER.

December usually brings to us, New Englanders, such weather as to preclude active labors in the garden; but even in this month there are some things that the observing gardener will look after. If the weather be mild there are some neglected November labors that should be attended to—all that can yet be done to advance spring work, should be done when an opportunity presents. Cleaning up, which is often delayed till spring, can as well be done now, and thus lighten the labors of a more busy season. Should the ground remain open, it may be deeply ploughed, adding a coat of manure, which will disseminate itself through the soil; while the soil if a heavy, close one, will be greatly ameliorated by the action of the frosts and winter weather. Pruning of currants, gooseberries, and grape vines may be done when not frozen, if not before attended to; the cuttings may be saved by burying them in sand in the cellar bottom, or packing in damp moss for spring planting; but cuttings made previous to freezing, are rather more sure to strike root and start quick than those that have been frozen. Now is a good time to review the labors, successes, and nonsuccesses of the season past, and to form plans for improvement in the future.

Shall I tell you some experience in improving currant bushes, or their product? In our garden we have a row of currant bushes some eight rods long, which have stood there some fifteen to twenty years. The bushes had got to be quite large and close together. Up to two years ago, they had done very well, when they partially failed. They set quite full and a large crop was promised; but the currants were very small and when ripening withered on the bushes, so that little was realized from them. I should have said that the bushes had not been cultivated as they should have been by pruning and cultivation. Some grass had got in among them, though but little directly among the bunches. In April, 1866, I felt bound to try what virtue there was in better culture. So every other bunch was dug out, and the remainder pretty thoroughly pruned. The ground was cleaned, and new soil hauled around them. When this was done, Faint Heart said, "We shall have no currants—might as well dig up and throw away the rest." But I determined to "wait and see." A late frost caused a failure to get many currants—scarcely any that season. Not discouraged, the cultivation was kept up the past season, and now for the result: we never had larger and better currants. From the bushes left after thinning, we had nearly as many currants as we had in their best days from the whole. We had them green, for pies and stews; ripe, all we wanted to eat with sugar with our meals; made ten gallons wine; and what we cared to preserve, besides quite a quantity for the birds, &c. Faint Heart was then ready to acknowledge there was some virtue in better culture with pruning. Reader, have you a lot of currant bushes that have nearly run out? If so, you can rejuvenate them in a similar way, or by division and transplanting into better soil at the proper season. We have but few special directions to give, at this time, for the garden, and these are comprised in the general one, to do everything possible to forward operations in spring.

BEAN POLES, HOP POLES, AND PEA BRUSH, may be made to perform some years' extra service by storing them under cover. See that a supply is laid in, if needed, before the spring work advances.

PLANNING.—This is the proper season to begin to plot out the garden for the next season, and to see that a supply of seeds for each plot is provided. Are there not some one or two new vegetables you would like to add to the old routine next season? If so, now is the time to secure the seed.

SEED.—"Good seeds are cheaper at any price than poor ones free of expense." All good home grown seeds should be carefully saved and protected from any influence detrimental to their vitality. Sort, and store in paper bags, or boxes, and throw away all refuse or poor ones, or those there is any doubt about. Exchange choice kinds with your friends and neighbors. Lay aside a few of the

choicest beets, turnips, carrots, cabbages, &c., to raise seed from next summer.

WM. H. WHITE.

South Windsor, Conn , Nov. 20, 1867.

For the New England Farmer.

DOMESTIC TRAINING.---NO. 2.

Perhaps, Mr. Editor, you would not have wished the former essay "to be continued," had you known that it was written under the influence of sad experience. But I am not in the confessional, and as the subject is far from being exhausted, I am quite willing to proceed.

Mothers, are you giving your daughters a domestic education as thorough and systematic as the instruction which they are receiving at school? Are you leading them step by step from the simplest to the most difficult tasks, even as they are trained in mathematics or music? If not, then you so far fall short of your duty. It is not enough, to permit them occasionally to fabricate delicate pies and puddings, or perform some light labor which will not compromise their gentility. They should understand the duties that pertain to each day of the week, and to stated seasons of the year. They should be familiar with the harmony of the household, so that in the absence of the leader there need be no jarring or discordant notes.

The best time to lay the foundation for a domestic education is in early childhood. There is then a willingness to learn, which the circumstances of later years too often eradicate. Every one knows how anxious little girls are, as soon as they can go alone, to "help," and how troublesome their officiousness sometimes appears. Yet it should not be so accounted, even though they do hinder much more than they help. Their willingness to assist should be appreciated and encouraged, and their little mistakes kindly corrected. Such speeches as, "Do get out of the way!" "You bother me to death!" must fall rather harshly on the mind of a child who is trying to the best of her knowledge, to do some good in the world. Can we wonder that there is so much idleness and selfishness, such a distaste for housework, among those who should be able to lighten the cares of their mother, and cheer her declining years?

Let it not be supposed that learning to work will be an obstacle to their intellectual advancement. On the contrary it will tend to promote it, unless one should go to the pernicious extreme of placing heavy burdens on young shoulders, inadequate to bear them. Habits of industry and usefulness, formed at home, will be carried into the school duties, and greatly assist in their worthy performance.

There are too many idle, and, *as a direct consequence*, sullen, obstinate and mischievous children in the world. If their first attempts at assisting are harshly repelled, the golden opportunity is lost.

There are little tasks which they can perform easily, and they should be allowed to do so, even if the amount of assistance have to be expressed by the sign — minus. Their training is the mother's most important duty, and should be attended to, whatever else may be neglected.

MATTIE.

Marlboro', Mass., Nov. 18, 1867.

GRAPES IN GEORGIA.—Mr. J. Van Buren, of Clarksville, Geo., writes to the *Country Gentleman*: "My Scuppernong grapes were very fine; vines six years transplanted bore an average of three bushels clean grapes each, some of the berries measuring one and a quarter inches in diameter, and the clusters ranging from two to twenty berries each; and I would here remark that this grape differs from all others, in that the berries alone are picked or shaken from the vine and not the clusters. It is a very distinct variety, entirely unlike any other grape in vine, leaf and fruit. The Mustang grape of Texas resembles it somewhat in vine and leaf, but not in fruit. The Scuppernong is the sweetest of all grapes, while the Mustang is the most acid. The vines which produced three bushels the present year will probably produce six bushels each next year, and thus go on doubling annually for several years to come, as it is a variety not subject to any disease in vine, leaf or fruit. It blooms from the middle to the last of June, and ripens the first of October.

THE BERKSHIRE COUNTY PREMIUMS.—The Berkshire, Mass., Agricultural Society always pay their premiums in silver ware, with the privilege of exchanging any article for another in order to complete the sets. Nearly all the old families have obtained silver spoons enough in this way to stock themselves and set up their children. All those who have married Berkshire girls within the last half century will testify to the abundant supply. The result is that the Berkshire Society has a powerful hold on the hearts and purses of the people. At the exhibition just closed, a plow that took the first premium 54 years ago here, was shown; it is still in the possession of Henry Colt, who proposes to present it to the Society. It was imported from Scotland, and is all iron except the handles.—*Western Rural.*

MASSACHUSETTS FRUIT HOUSE.—Hovey's *Magazine of Horticulture* says that Bartlett pears, placed in the Fruit House, September 1, are now, October 15, in precisely the same condition as when put in, thus enabling dealers to furnish this favorite pear for three or four months. We doubt not that pears of all kinds will now be furnished at reasonable prices the whole winter. Heretofore they have been too dear for any except the wealthy to purchase.

LYCHNIS HAAGEANA.

The term Lychnis, of which the above is a new and elegant variety, is derived from the Greek for lamp, the cottony leaves of a related plant having been used as a substitute for wicks.

Mr. Breck, in his Book of Flowers, says, "the double variety is one of the most splendid decorations of the border; it is propagated only by divisions of the root or by cuttings of the flower stem. The cuttings are taken off at any time when the shoots are tender, and planted in a sandy loam, in a warm situation, but covered with a hand glass and shaded from the sun. When well established, they may be transplanted into the bed or border where they are to remain, and will flower strongly next year. There is also a single and double white variety. The single kinds are easily raised from seed. All the varieties do best in a light, rich, loamy soil. It is necessary to take up and divide the roots every other year, early in the spring. A light protection is necessary to the double varieties, to insure vigorous bloom. The flowers are fascicled, (collected in bundles,) level-topped or convex; two feet high; in June and July. The double varieties continue to give flowers until autumn.

The Lychnis Haageana, which is represented by the cut, copied from Messrs. Washburn & Co.'s Catalogue of Flower Seeds, is an elegant perennial. It flowers the first year, producing large scarlet flowers, with jagged petals, one foot high. It requires protection through the winter.

One variety of Lychnis is the well known Ragged Robin, so common in flower gardens.

PEACHES.—Two years ago we spoke of a peach crop, raised by Mr. NATHAN BROOKS of Acton, Mass., when he had just realized $600.00 from the product of less than one acre of trees. Some of the finest of them, then brought him $9.00 per bushel.

A few weeks ago, Mr. Brooks presented us a basket of this year's crop. They were of the Late Crawford variety. Average price per bushel $6.00.

His crop this year brought him $400.00, but, as was the case with all fruit, their flavor was not of the highest order. We hope the thief who stole two bushels of the best late ones, on *Sunday*, will repent of the mean deed, and restore to Mr. Brooks four-fold; if not in peaches, in some equivalent.

THE WOOL PROSPECT.

A farmer in Ohio asks the opinion of the Acting Commissioner of the Department of Agriculture upon the future prospects of the wool growing business in this country. From the reply of the Commissioner, in the last Monthly Report, we make the following extracts:—

It is manifestly *unwise* to destroy an interest of such magnitude because circumstances, temporarily existing, have diminished its profits. It is unwise to abandon it because its enemies have been able to cripple it by excessive importation during the pendency of the question of its protection. It is an old game, hitherto successful with them, first, to glut the market on the eve of the imposition of a duty, and afterwards to declare the resultant stagnation in prices to be the direct effect of the law. All the mischief has been done that can be done. The most potent element of cure is *time*, in which to consume the immense surplus of foreign wools which were thrown upon the market, primarily for the profit of evading the coming duty, incidentally for the discouragement such influx would bring upon domestic manufacture. Wool growers who hold on may expect a gradual improvement, which will be sure to follow, unless financial disturbances unexpectedly arise.

The country has been flooded with imported unmanufactured wools and woolen goods since July 1, 1865, in anticipation of an increase in the duties, which was so long de-

ferred that a ruinous displacement of domestic wools was the result. The extent of this derangement will be apparent by an exhibition of official figures of wool imports. It will be remembered that the four years of war were necessarily years of excessive importation, amounting to nearly two hundred and fifty-two millions of pounds of wool and twenty-seven millions of shoddy, and that during the last year of that period, 1865, ending three months after the close of the war and six months after such result seemed inevitable, the importation was reduced to forty millions of dutiable wool, and a little more than three millions of free wool from Canada. The reduction should have continued, as we now produce about one hundred and fifteen millions, and can add twenty millions in a single year if the business promises to pay. Instead of such reduction, an enormous increase was made, not only through the fiscal year of 1865–'66, but from July to March, 1867, when the wool tariff went into effect, as follows:—

Years.	Dutiable. *Pounds.*	Free. *Pounds.*	Total. *Pounds.*
1865	40,372,075	3,486,079	45,858,154
1866	67,917,031	1,206,234	69,123,265
Excess over 1865			23,265,111

Including the shoddy, the increase was nearly twenty-six millions. The imports of the year ending June 30, 1867, were 35,325,151 pounds, costing $5,770,083; shoddy, 5,086,187 pounds, costing $516,480. A glut in the wool market was the result, though prices did not decline, because the wool was largely held in bond in expectation of a decrease of future importation by high duties. This was sufficient to prevent a material increase of the low current prices, compelling farmers to await patiently the consumption of these foreign supplies. Nor was this all; manufacturers, as well as farmers, were to suffer by an equally excessive importation of woolens—in fact, an unprecedented influx, *almost equalling in a single year the imports of woolens for the entire period of the war*, as the following totals will show:—

Total for 4 years ending June 30, 1865	$87,762,918
Annual av. for 4 years ending June 30, 1865	21,940,729
Imports of the year ending June 30, 1866	57,115,901

This is a sum equal to the present total valuation of the annual wool clip of the United States.

Of the fleeces imported in the year ending June 30, 1866, nearly all was in direct competition with our own styles of wool, and about thirty-seven million pounds from Buenos Ayres alone, twenty-five million pounds of which came in at *three cents* duty, and nearly all of it was clothing wool that displaced an equal quantity of the home product. Fine wools, imported in the dirt, came in at less than half the internal revenue taxes upon our own wool growers. The quantity at each rate was as follows:—

Pounds.	Value.	Rate of duty.
32,366,135	$3,522,417	3 cents.
35,211,402	5,705,293	6 cents.
8,529	2,398	10 cents and 10 ℔ cent.
330,965	150,975	12 cents and 12 ℔ cent.

Added to this was the import of woolens, costing in gold fifty-seven millions of dollars, and in greenbacks, with freight and commissions added, fully one hundred millions; the whole requiring as much foreign wool to produce it as the entire importation of *woolens for three years* of the war. Can sensible manufacturers and intelligent wool growers expect prosperity till this glut in the market is removed? That it is being removed, since the passage of the wool tariff law, the falling off in importation shows.

The facts of wool and woolen importations, and the history of the woolen manufacture in this country, show that we have arrived at a period when one of two results must follow—either domestic manufactures must mainly occupy the field of domestic supply, or foreign goods will fill the markets of the country, stop the factories, depress sheep husbandry, reduce the price of wheat and other grain by decreasing the number of consumers and increasing the number of competing consumers.

The aggregate importation of woolens for each decade, and the average per year for forty years, ending in 1860, are as follows:—

	Aggregate.	Annual av'ge.
Ten years ending in 1830	$56,182,110	$8,618,211
Ten years ending in 1840	129,333,258	12,933,625
Ten years ending in 1850	109,023,552	10,902,355
Ten years ending in 1860	282,682,830	28,268,283
Forty years ending in 1860	627,224,750	15,680,618

In 1820, when this importation commenced, manufacturing was at its lowest ebb, the value of its annual product having been reduced to $4,413,068, by excessive importations after the close of the war of 1812, from $25,608,788 in 1810; just as foreign traders, aided by American importers, at the close of the late war, and the fall of gold, have seriously impaired both the wool growing and wool manufacturing interests by flooding the country with a vast surplus of foreign woolens. While suffering a series of fluctuations, caused by more or less successful efforts to break down the barriers to over-importation, the progress of manufacturing has been gradual and comparatively regular. In 1830 the product of woolen manufactures had increased to $14,528,166; in 1840 it was $20,696,999; in 1850, $43,207,545; in 1860, $68,865,963; in 1864 a return of manufacturers, representing about three-fourths of the total number of sets of machinery, made an aggregate of $120,000,000.

With the increase of the manufacture of wool, step by step, advanced the production of wool. The census of 1850 made the clip of that year 52,516,959 pounds; that of 1860 returned 60,511,343. The yield of 1864 was estimated at 95,000,000; that of 1866, 115,000,000. The increase of manufacturing and the relative

consumption of wool at different periods may be gathered from the following statement, with the qualification that the wool importation of 1865 was less than the consumption of foreign wool for that year, while that of 1866 was far more than that year's consumption. There was also, in round numbers, four millions of pounds of shoddy in the former, and seven millions in the latter year, not counted in the statement:—

	U. S. Product, lbs.	Imports, lbs.	Total, lbs.
1840 . .	35,802,114	15,006,410	50,808,524
1850 . .	52,516,969	18,669,794	71,186,763
1860 . .	60,511,343	34,586,657	95,098,000
1865 . .	105 000,000	40,372,075	145,372,075
1866 . .	115,000,000	67,917,031	182,917,031

It is not that woolen importations are so much heavier than formerly, in proportion to population. As shown above, the average for forty years, when we manufactured comparatively little, was $15,680,618. With population doubled and foreign prices at least fifty per cent. greater than twenty-five years ago, $45,000,000 would not be a larger proportionate importation. Then we manufactured scarcely half the annual consumption; now we manufacture three-fourths, and of most goods can easily manufacture for the entire demand, so that *any* importation tends to drug the market. This is the literal fact, and the future will show how sensitive a full market is to the slightest surplus—just as a few drops will overflow a brimming glass. All the woolens imported in four years of war amounted to but $87,782,918, or $21,945,726 annually; actually a less quantity of goods than was bought for $15,680,618 annually for forty years, commencing in 1821; but in the mean time the products of our mills had grown from four millions of dollars in 1820, to one hundred and fifty or sixty millions in 1864!

For the New England Farmer.

PRACTICE vs. PEN AND INK.

MESSRS. R. P. EATON & CO.:—I enclose *three dollars* to pay you for your paper from June 10th, 1866, to June 10th, 1867. Please continue to send it. More farmers by *practice*, and a less number by *pen* and *ink*.

ONIONS AND PARSNIPS.—Plant just before the ground freezes in the fall. The maggot does not injure the onion.

CORN.—Use the *plough* instead of the cultivator; it warms the land, and throws it to the atmosphere, and the rays of the sun. Plant your corn five feet apart each way. Four kernels in a hill are enough. Hoe *twice* before the corn begins to tassel.

MANURE.—Keep a year's stock of manure on hand; it is far better for all kinds of plants.

POTATOES.—Use straw, leaves, or old hay, in the hill; never put in strong manure, by which they become diseased. Spread the manure on the land and plough it in, and then plant your potatoes without manure in the hill, and they will be good!

GRASS.—Never mow your grass until the seed begins to shell, and the salmon color appears; then your cattle and horses will thrive, and have strength to work.

BARNS.—Have the roof tight. On the sides and ends, where your hay and grain are kept, let there be a space between each board, equal to the thickness of your hand. Then your hay and grain will be sweet and good, and your animals will have good *lung* food and be healthy. Tight *barns*, and *tight rooms*, and *air-tight stores* produce a vast deal of sickness among animals, and the *human race!* The above hints are *common sense*, which is mostly needed in this age!

LUTHER S. BANCROFT.

Pepperell, Mass., Nov. 4, 1867.

REMARKS.—Are the above common sense and valuable hints any less common sense and valuable because they find utterance by "pen and ink?" Some editors and some correspondents, friend Bancroft, may well heed your caution; but there are a great many farmers who need a very different admonition—men of large and extensive experience who hide their light under a bushel, and whose dear-bought knowledge is likely to die with them. To such the appeal of the younger and the less experienced comes with great urgency for *more* "pen and ink."

THE WEEDER.

"The morn is past, and yet the weeds are thick,
And the fierce August sun pours on me burningly;
"O God," she cried, "send down that shadow quick
Which I desire so yearningly.

"*For me* the heat and burden of the day,
And a stern master who doth show no lenity;
For him rich pleasure lands stretch far away
With groves of cool serenity.

"Above his meadows, into golden air,
The rounded knoll uplifts its green protuberance,
And ripening harvests wave and toss their hair
In golden-tressed exuberance.

"There are cool woodlands, in whose dusk arcades
The very noon-day seems of twilight emulous;
No heart wins there, but in the silent glades
The silent dews hang tremulous.

"Thro' the thick leaves the tempered sunbeams fall,
And pleasant shades are o'er the sward distributed;
There thistle-down may drift, there worms may crawl—
And I, I am prohibited.

I faint, with toil, yet keep my faith with all,
Tho' none save God regardeth me observantly;
Father," she cried, "when will that shadow fall
For which I pine so fervently?"

Then came a shadow; but 'twas icy cold,
As of some swart, dread angel o'er her hovering,
Wreathed around her in voluminous fold,
And wrapped her in its covering.

Chill tho' it was, she hailed it with a smile,
And, worn by grief and years and long infirmity,
Lay down beneath it, slept a little while,
And wakened in eternity.

EXTRACTS AND REPLIES.

WHAT SHALL I DO FOR MY SHOTES.

I have two very good shotes that have become so weak in their hind legs or the small of the back, as not to be able to stand up but a few moments at a time. Both taken at the same time and in same way. My neighbors have some in same condition. What is the cause, &c., and what the remedy? Will some one please inform me through the FARMER. S. C. F.

Enosburgh, Vt., Nov. 7, 1867.

REMARKS.—If you read and remember all that was published in the FARMER last year, in relation to pigs troubled as yours are, we do not know as we can help you at all. It was then stated by our correspondents that young pigs or old hogs are seldom or never attacked, it being confined to shotes from three to ten months old, or those weighing something like, say, one hundred pounds, and which have been highly fed. Mr. G. Hill, of Rochester, N. H., said, "on getting my two pigs home last January, I thought it would be too cold for them in the cellar under the barn. I therefore made a pen for them in the barn and gave them good feed. We soon found one of them was taken with cramp or something else. I changed their quarters at once, and gave the lame one a little castor oil on the top of some new milk. He soon came out all right. Both pigs are now equal to any others of their age. They have a chance to exercise by working over the manure, and I am not afraid they will work any too hard. My prescription for sick pigs is, give them work and good feed—enough of both kinds—and they will come out right."

From an erroneous idea that this lameness was caused by worms in the kidneys, the disease is sometimes called the "kidney worm." But after finding the kidneys and other organs perfectly sound in animals that had been troubled in this way, and after having experience in the management of shotes thus diseased, Mr. Geo. Perry, of Randolph, Vt., stated in a communication to the FARMER, that his "impression was that it was nothing more than too nutritious food and want of exercise."

Mr. Thomas J. Edge, of Londongrove, Chester County, Pa., wrote to us as follows: "Our Chester County sows which are kept for breeding, are usually fed liberally and when about four or five months old seem more liable to this disease than rougher pigs, for they seem to have the power of turning more of their food into flesh or fat." Assuming the cause of the disease to be too high feed, he says, "the disease is followed by its own remedy; for the lameness renders it difficult for the animal to get to the trough as soon as the other pigs, and of course does not (without mistaken kindness,) get its usual supply of food, and in the course of from seven to ten days, and often less, get as well as ever, and shows no bad results from the disease. The disease is not one of the kidney, but seems to be an entire or partial paralysis of the muscles attached to the lumbar vertebræ. As far as I have observed, it is invariably confined to the hinder extremities, and seems to vary much in intensity; sometimes extending to both hind legs and at others to but one.

The best preventive is less food and a liberal and regular supply of lime, ashes or other alkalies. I have firm faith in stopping the supply of food, or at least of trying this first. If this does not produce the desired effect I would give one tablespoonful of epsom salts and one of sulphur, mixed with a little bran slop, every day until a free passage is secured, when the salts should be discontinued, but the sulphur should still be given occasionally. In extreme cases coperas may be used in tablespoonful doses, once a day, for a week. In either case the food should be decreased, or I do not think either of the remedies will have much effect."

THE VALUE OF CORN COBS.

The question is often asked, Does it pay to feed cobs? Opinions differ. Some contend they are not only worthless but injurious. The results of the experiments, at the State Reform School at Westborough, published in the FARMER, October 26, furnishes the following facts relative to the value of cobs when fed to cows.

For the 20 days ending April 29, the average amount of English hay consumed by each cow daily was 16¼ pounds, of cob meal 6 pounds. The roots were the same as in the next trial. The cob meal would be 5 pounds of corn and one of cob. The average cost per day of keeping each cow was for hay, roots, and meal 24 cents and 6 mills. The cows lost in weight about one pound per day, worth, when beef is $10 per hundred, 6 cents, which should be added to the cost of keeping, making in all 30 cents and 6 mills.

During the next 20 days, the average amount of hay consumed was a fraction less than 16¼ pounds per day, and 6 pounds of Indian meal. The difference in the daily feed was 2 ounces of hay and one pound of Indian meal instead of one pound of cobs. The daily cost of roots, hay and meal per cow was 26 cents and 2 mills. The gain, in weight, was equal to one pound per day, and 6 cents deducted from 26 cents 2 mills, leaves 20 cents and 2 mills as the actual cost of keeping. This shows that it cost 10 cents and 4 mills per day to feed a single pound of cobs, which cost should be increased by the additional amount of milk obtained when the feed was free from cobs.

Another fact worthy of note may be learned from these trials, viz: that the cheapest milk produced from winter feed was when corn stalks were fed instead of English hay. This was in the trial ending February 29. On such feed the cows were thrifty, even gaining in flesh, though not so much as in the next trial at a greater expense of feed, and that English hay. So it is possible to have thrifty cows and cheap milk without English hay.

New Hampshire, Nov., 1867. F.

BRUSSELS SPROUTS.

In answer to "Inquirer," respecting Brussels sprouts, I will give my experience. Before I came to this country, when in England, I had good sprouts, the nobs varying from the size of a walnut to that of an egg and upward. The stalks were from two feet to two feet six inches high, being set thickly with sprouts from bottom to top. They were planted on very rich, moist soil. When the sprouts began to form, I broke off the large

leaves carefully up to the top bunch to give the sprouts a better chance to grow.

When I came to America I brought some seed with me, that I bought at a seed store. Whether it was the fault of the seed, or of the location where it was sown, I don't know, but I had poor success. It was sown upon a dry, sandy loam, exposed to hot suns, and I did not get any sprouts larger than a marble. It is a very delicate vegetable to raise, but when raised is very delicious. As you say, in your remarks, it is cultivated mostly for private use, even in England. Not being fully acquainted with climate or the soil at the time I first commenced with them, I lost the seed, and have not since further experimented with them. I think if the plants could be got ready to be set out as soon as the frost is out of the ground, and transplanted upon very rich and well prepared land, not too wet nor too dry, they could be made productive and worth cultivating for the sake of having a dish of greens fit to set before an epicure. Unless "Inquirer" lives in a warmer climate than I do, I presume it is too late to secure another start of the sprouts by breaking off the leaves as is done in England. E. H.

Jeffersonville, Vt., Nov. 5, 1867.

MULCHING TREES.

I noticed a statement in the FARMER that it was beneficial to protect peach trees by covering the roots. Will it do to put hay around the trunks? Will not the mice make it their winter quarters and gnaw the bark from the trees. Would it be advisable to put hay around pear trees? J. P.

West Chelmsford, Mass., Nov. 15, 1867.

REMARKS.—From our own experience, and from that of others, we have a high opinion of mulch for all kinds of fruit trees. See how nicely trees are mulched in the woods, and then think how different it is with those which stand in most of our orchards, both in winter and summer. We hear of the failure of fruit in almost all parts of New England, but in almost every locality there are men who succeed in raising apples, pears, &c. We must learn the secret of their success. Mulching, if not one of the secrets of the success of Capt. Geo. Pierce, of Arlington, an account of whose orchard we published a few week since, is one of his practices, particularly for the summer protection of his trees. In applying mulch we have not generally placed it against the trunk. Where it is so applied, it is but a short job to haul it away and make a mound of earth some twelve to eighteen inches high around the trunk, and then you need not fear that the mice will girdle the trees.

"DOMESTIC TRAINING."

"Mattie's" remarks upon "Domestic Training" were so good, I could but echo the editors' hope that they might be "continued." Judging from the tone of her remarks, we should conclude Mattie to be a notable house wife, although her modesty deterred her from giving her own way of doing work. Will she not favor us with some of her own experience? That an unskilful housekeeper works herself ill, in doing what a skilful one would call an easy task, we all know. How many times we have seen it exemplified; and I, for one, have seen it in my own house work. Although taught by a judicious mother, and feeling when married quite accomplished, I have found to my sorrow that *experience* is the best teacher, and I will venture to suggest one point upon which young house keepers may meditate—*doing too many things at once.*

When young, ambitious, and inexperienced, we try to wash, bake, and iron in one forenoon. Now it may seem very plausible theory, that by so doing we save wood and time; but ah, the wear and tear of mind and body far out balances the saving of wood or time. Dinner time finds us *heated, fretty*, and unfit to do the honors of the table, and night finds us exhausted and care worn, discouraged and *blue*, even if we can say, "I have done a good day's work."

Woman is very much inclined to work under excitement. Let her learn her own disposition, the strength of her own body, and govern herself accordingly. System and order must be learned by experience. Each day brings its duties. Let them be faithfully performed *every day* and no more, and then the strength will be husbanded for the next day's work. Overwork *to-day*, and *to-morrow's* work must be neglected. Then another hard day will be the result to bring the "work up," and so the housewife will become worried and care worn over the same work that a steady, every-day worker would enjoy. The education may be all right, and still the woman fail to make a good wife. Practice makes perfect. SARAH.

West Amesbury, Mass., Nov., 1867.

LICE ON COWS.

I wish you would send through your paper a receipt for the best thing to kill lice on cows. I have tried tobacco and chamber-ley, snuff, sulphur, &c., &c., steeped together and it don't kill them.

Franklin, Mass., Nov. 10, 1867. J. JORDAN.

REMARKS.—A judicious application of *unguentum*, thoroughly rubbed in with the hand, *never* failed to destroy vermin on cattle when we have used it. Use a very little at a time, and rub until every hair is touched with it. The cattle ought not to be exposed to rain or cold while it is being used. Unguentum is a powerful and rather dangerous application. When lice and their eggs have got a strong hold it is a very difficult matter to exterminate them, and it can be effected only by the repeated and thorough use of medicine. "Your prescriptions are all correct, only double your doses for such a powerful constitution," said an old practitioner, who was called to consult with a young doctor who attended a friend of ours in a violent attack of fever. This may afford a hint to our correspondent to double the *thoroughness* of his applications.

A BOUNTY ON WOODCHUCKS

Would remedy the evil a correspondent complained of in the FARMER, a few weeks ago. Every where that the dog law is enforced, dogs grow less, just as the framers of that law desired. In New Hampshire, as well as in Massachusetts, woodchucks have increased in numbers until we cannot raise peas or beans beyond a stone's throw of the house. Hence beans have been scarce and costly. It would be unwise to return to the first evil—dogs—to remedy the present evil of woodchucks; an animal so easily destroyed by traps and guns. It was an act of the wise men to offer a bounty for crows—the farmer's friends; an act of wiser men repealed it for reasons that would ostracise the woodchuck. Let the dog-tax be used to pay the bounty on the woodchuck's head. It is but right, if the protection given the wool grower by the dog law is indirectly a burden upon all other farmers, that the income from the wool growers'

protection should remunerate the other class. A small bounty would bring out every boy in trowsers, with a trap. Traps, guns, and dogs—for dogs are not extinct, tax notwithstanding—would soon make room for beans in the back fields.

New Hampshire, Oct. 28, 1867. A SUFFERER.

BRUSSELS SPROUTS.

Since we wrote you in October concerning this delicious vegetable, and when we despaired of having much success with them, we have met with better luck than we expected. We took off the upper leaves near the top, and at each joint the little heads came out plentifully, so that our table has been pretty well supplied with them, and in much greater abundance than we expected. The cows seem to prefer the leaves to the cabbage. We did not plant our seeds till rather late, but the plants are hardy, and stand the frosts which we have yet had, as well as the cabbage. They may not be very profitable for marketing, but we think they are hardy enough for our climate, and easily cultivated, and we cannot see why every one who has a garden, and wishes for all varieties of vegetables for his own use, should not have them in abundance. They are very delicate and tender for cooking, quite a refinement to the taste on the best of cabbages; but true to their nature, like the cabbage, you cannot cook them without having it known "all over the house" what is in the pot, by the odor they emit. We hope to indulge in a mess or two more this season from our experiment, and we are encouraged to have all we want another season. INQUIRER.

Massachusetts, Nov., 1867.

TO KILL RATS.

Roast fresh meat on a fork, keeping hands off, to prevent scenting it with your own effluvia, and while hot cut into pieces of the size of a walnut, still using your fork,—then cut small gashes in each piece, and put in one-third or one-half of a grain of strychnine to each piece and leave it where rats can get it,—and place water within a few feet of the poisoned meat. R.

Vermont, Nov., 1867.

REMARKS.—We cannot publish the above without a word of caution about using this most dangerous of all poisons. We have heard of a person being thrown into fearful spasms by picking his teeth with a pen-knife that he had used in putting strychnine into meat, as advised by our correspondent. Try cats, instead of poison.

OKRA.

Can anything be done with this vegetable in this climate? A year or two since we saw a fine plot of the okra in full bearing on the Hudson river in New York, and were regaled with its soft velvety taste. It seemed to us then as if a soup was good for nothing without it. We tried to raise it this year. Our plants started pretty well, but came to nothing. We did not raise a single pod. Whether we planted too late, as we are inclined to think, or whether our climate is too cold for them, we cannot tell; but somebody has experimented with them here enough to tell, we presume, and we should like to hear about it. INQUIRER.

October, 1867.

RECEIPT FOR CURING HAMS.

The readers of the FARMER may cure their hams nicely by the use of the following:—

Pack the hams, shank end downward, giving each piece a slight sprinkling of salt, and then pour over them when cold a brine made of 7 lbs. salt, coarse Western or Canada, dissolved in water and thoroughly skimmed before boiling, to each 100 lbs. of meat. The hams should remain wholly covered in this brine from 4 to 6 weeks, or until properly salted for cooking, then removed and dried and smoked. Having used this recipe for some years, I recommend it to, all desiring a simple, cheap mode of curing hams so as to make them tender, sweet and juicy, without the use of saltpetre, sugar, or other ingredients. Try it.

Essex, Vt., Nov. 20, 1867. S. G. B.

GERANIUMS.

There are but few more ornamental plants than geraniums and they can be easily raised and in great variety. You can propagate them by cuttings, but we have had good luck with the old plants. Last fall we took up our plants, which had grown to a good size, the old scarlet variety, shook off the dirt and hung them up in the cellar. In the spring we set them out, trimming off the ends. They soon began to grow, maturing a large, thick, round head, and continued to flower during the summer and until it was time to take them up to avoid fall frosts. They are now in our cellar as fresh as ever, and we expect good service from them another year. To keep geraniums in flower all the season, as soon as each flower begins to fade, cut it off, and its place will be supplied with others as long as the season lasts. INQUIRER.

Massachusetts, Nov. 4, 1867.

JERSEY HERD BOOK.

Is there a Jersey Herd-book? If there is, where is it kept? A. P. W.

Cincinnati, Ohio, Nov. 11, 1867.

REMARKS.—A pamphlet edition at $1 per copy was published some time since by John Brooks, Esq., of Princeton, Mass. A new and enlarged edition is to be published next May.

TO KEEP CIDER SWEET.

A few days after it is made, or when worked to suit the taste, put two quarts of horse radish roots pounded fine, into each barrel of 31 gallons—using this proportion of roots for a less or greater quantity of cider. B.

Essex, Vt., Nov. 20, 1867.

AGRICULTURAL ITEMS.

—An Illinois correspondent of the *Country Gentleman* calls sorghum syrup "disagreeable stuff," at best.

—Last year corn was selling at Clarksville, Ga., at $2 per bushel; it is now worth only forty cents. Other crops in about the same proportion.

—The easiest and most effectual plan to protect trees from mice is to bank up the earth around the trunk a foot or so high.

—In the Department of the Loire, a French girl won the prize for ploughing against six able-bodied young men.

—Much is wrong when three-fourths of the butter in market brings ten cents a pound less than the other fourth.

—For cracked and sore hands caused by exposure to cold and wet weather take two ounces of sweet or olive oil; warm it over a slow fire; add

to it a lump of beeswax the size of a walnut; thoroughly dissolve; apply freely every night. It will keep the hands soft, and is healing.

—In Minnesota the Red Astrachan apple proves tender when cultivated and not mulched, and perfectly hardy when well mulched the year round.

—A cheap way of saving rain water is to take any old cask, coat the outside with coal tar, sink it in the ground, bedding the bottom and sides in clay well packed and at least six inches thick.

—Forest leaves are worth more than straw, and they give to manure the character of mold from the woods. They have no superior for the covering of flower beds, for frost does not go straight through the leaves, it must crook around.

—The only fruit which grows in every climate is the strawberry. It is the only fruit which somewhere on the earth is picked every day the year round.

—Old animals of every kind are unprofitable, and should be got rid of before they become so deteriorated in value as to be difficult to sell even at a very reduced price.

—Poor feed makes poor cows. When we hear of a cow that gives milk in unusual quantity or quality, we set it down for certain that her owner is a good feeder.

—A Northern man who recently emigrated to Jefferson county, in the lower Valley of Virginia, made 1500 pounds of honey from 50 bee stands last summer, which he sold for $450.

—In Germany, seed wheat is changed from high and poor land to low and rich land. The seed of the first has the most vitality, and makes the best bread.

—If the best time to engage in a business is when others are leaving it, the present is a good time to buy sheep, says J. Harris, in the *Agriculturist*.

—On some of the Western prairies which have been considered uninhabitable for want of fuel, peat is found that can be pressed by machinery into good fuel.

—When the cold, wet weather of autumn comes, men and boys put on thick shoes or boots. But women and girls hardly ever make any change until winter comes in dead earnest, and very frequently not then.

—It is advisable, in the construction of poultry houses, to use pine lumber—the more pitch it contains the better—as this is very offensive to poultry vermin. Some think it pays well to make the roosting cribs of pine boughs as a protection from their greatest enemy—lice.

—Dr. D. Walsh, of Rock Island, Illinois, well known as an entomologist, says that all his examinations have resulted in the conviction that the black knots on the plum tree is the effect of a fungus, and is not a disease nor a gall. He thinks the spores or seeds are formed about the end of July, in latitude 40 deg. 30 min., and therefore if the excrescences be all cut off and destroyed by the early part of July, an effectual stop will be put to their further spread.

—The roots of perennial flowers should be protected during winter by a mulch of light manure or dead leaves. Nature affords protection to the roots of trees, shrubs and plants, by the fallen leaves. It is a great mistake to remove them for the purpose of making a place look neat.

—A Southern writer says that the Bermuda grass will renovate old worn out lands in time, stopping gullies, and covering the galled and scarred spots of earth with its mantle of green, where all other things refuse to grow. He also says it can be controlled and subdued by proper cultivation.

—How easy it is for the rich farmer, who can ride around his improved acres, and gaze with delight on his heavy crops, his blooded stock, and his first class implements and labor-saving machines, to say to his less fortunate neighbor, "*Why don't you* do this, that, or the other thing?"

—In New Brunswick the beech has been used with good success as a hedge plant. The *Maine Farmer* is convinced that it would yield readily and without detriment to the treatment necessary to form a good, compact hedge, of any form desired.

—A Georgia correspondent of the *Southern Cultivator* says, what with frosts and borers, and yellows and rot, the peach, our most delicious fruit, has become so uncertain that many have given it up. The pear is not much better. After all, the apple is the most reliable of all our fruits; but Northern trees are not fit for Southern culture.

—The following rule for ascertaining the number of bushels of apples, potatoes, &c., in bins and boxes, is recommended as simple and accurate: for the number of "even" bushels, multiply the number of cubic feet in the bin by 8 and point off one decimal. For "heaped" bushels, multiply by 8 twice and point off two.

—The soil exhibited by Hon. Marshall P. Wilder, at the American Pomological Society's meeting in St. Louis, as the best grape soil of the Rhine, was a hard, tough, yellow clay, the like of which may be found in many places along the south shore of Lake Erie, and over the hills of Hermann, Bluffton, and other points in Missouri.

—S. J. Woodman, of Chicago, Ill., writes to the New York Farmer's Club, that a barrel or a cask of new sweet cider, buried so as to be well covered with fresh earth, will turn to sharp clear, delicious vinegar in three or four weeks, as good as ever sought affinity with cabbage, pickles, or table sauce.

—A correspondent of the New Hampshire *Farmer* says: Repeated trials on as many different pieces of land, and each trial a complete success, have convinced us that December, the time that we

invariably cut brush, is the best season, as at that time the growth of the year is evidently at an end. A piece of valuable pasture land of ours, overrun with bushes which had been many times cut over by a former owner to no purpose, because cut in the summer season, was by us cut over in December, 1861, and to this time, a period of nearly six years, not a bush has sprouted or started, and the land, though moist, is well stocked down to grass.

—The Leicestershire, Eng., Chamber of Agriculture, after long deliberation, has declared against intellectual improvement among the agricultural class, on the sole ground that they would be rendered less efficient as laborers. It therefore opposes the education of the children of agricultural laborers.

—In reply to an inquiry as to the best time to plant nuts for growing trees, the Germantown *Telegraph* says it should be done as they come from the burr or pericarp, and, of course, before they get dry. This includes the chestnut, the shellbark, walnut and acorn, as well as some seeds like the paw-paw, &c. Hence they must be planted in the fall.

—Accounts from Austria are to the effect that swarms of poisonous flies have appeared in Transylvania, by which large numbers of the cattle have been killed. Farmers are compelled to house their stock closely, while large fires are kept burning night and day around barns and sheds to warn off this new and unwelcome pest. The guards have great trouble in avoiding their venom.

—A gentleman of Nebraska, writes: "I have been troubled for three seasons by ewes eating their lambs. Last year, I found out the guilty one, and knocked her in the head; she was eating the lambs of other ewes. I thought I was rid of the trouble, but this season it appeared to be as bad as ever. I killed the one I caught at it, but that does not seem to prevent the difficulty. They eat off their feet as soon as they are born."

—The forests in France are under the care of the Government, and under the new laws for their protection they have increased nearly one million of acres. Less than one-sixth of the area of the kingdom is covered with wood land, while it is estimated that from 20 to 25 per cent. of a country should be covered with forest in order to secure uniformly good crops. Our forests, now disappearing, demand the attention of Government.

—Judge French, of Concord, Mass., says an established community, who have for generations depended mainly on their land for support, usually will be found to have discovered what, on the whole, is the best course of husbandry to be pursuid on their own farms. This is worth considering by those farmers who propose entirely changing their system, and by those who advise such radical changes.

—S. P. Mayberry writes to the *Maine Farmer*, "a few years since we used to cultivate amongst our apple trees, but took a lesson from nature. Now we know that forest trees drop their leaves, which serve both to protect the roots and loosen the soil. This we imitate by mulching with straw and meadow hay, which we find preferable to cultivating the soil, as it is less work and better secures the object in view."

—A correspondent of the *New England Homestead* says vermin may be driven from hen houses by the following plan. 1st, Give the hen-house a thorough white-washing, nests, boxes, roosts, and everything about the premises. 2d, Sprinkle sulphur in the nest boxes three or four times during the year. 3, Keep the floor constantly covered with sand or gravel, and clean out at least once a month. 4th, Rub lard under the wings of the hens.

—Where a wood lot is part and parcel of a farm and has "down timber" upon it, farmers will find it a paying operation to cut up and cord these fallen trees before snow storms come on. This will give the wood an opportunity to dry, rendering it better for use and more easily handled when the sleighing season arrives, if not wanted before that time. It is difficult to gather such fuel after the snow has fallen, while every day's exposure to storms renders it less valuable for market or for domestic use.

—When raising calves for cows, the greatest care is necessary when they have their first calf, as everything depends on the habits which they then acquire. Also, about the time they are going dry, for the longer they can be kept in milk then, the longer they will give milk thereafter. They should be milked perfectly clean at every milking, and if in the winter time, a few turnips or potatoes should be given in addition to their other food, to increase the flow of milk.

—Levi Bartlett, of Warner, N. H., writes to the *Country Gentleman* that "the growth of our wheat straw was large, and long heads; but when put through the threshing machine the farmers were disappointed in the yield, that being only about two-thirds what was expected. Oats and barley fell short in about the same ratio. Corn about an average, and potatoes less than half the usual product, while the growth of weeds among hoed crops has been remarkably luxuriant."

—The Toronto *Globe* mentions, among other dairy novelties exhibited at the late Provincial Fair, a milk can of large size, designed for carrying milk to factories and markets. It is furnished with an adjustable lid or cover, fitting the can closely and moving up and down readily. It is designed to diminish agitation as the milk is being moved to the factories or to market. No doubt such a can will prove valuable to the dairying fraternity.

—The Southern pines, *Pinus palustris*, grow from eighty to a hundred and twenty feet in height; are often very straight, and sometimes with trunks free from limbs to within twenty feet of the top.

The branches are crooked, often drooping, and terminated by bunches of long straw-like leaves, grouped in threes in long sheaths. When young, these trees have a palm-like appearance which reminds one of the Orient. The cones are very large, nearly cylindrical, and from six to eight inches long. The seeds are large and very nutritious, and are the delight of squirrels, wild birds, and poultry, which grow fat on them in their season.

WHAT BECOMES OF OUR WOOL.

As we are entirely dependent on the home market for the sale of our yearly clip of wool, and as this home market is equally dependent on the demand of the manufacturers, wool growers have a direct interest in knowing what these manufacturers are about, as it is very evident that the future demand for wool must depend on their success in improving old, and introducing new styles of cloth. We are, therefore, confident that the following extracts from the Report of the Secretary of the Association of Wool Manufacturers, will prove interesting to our readers.

During the war, the standard of excellence in our goods was undoubtedly far too low, and discredit was thrown upon our national production. Home competition, the inevitable result of protection, is now for excellence; and the vast improvement exhibited the present year is the subject of universal comment and surprise with the leading merchants. The leading organ of the dealers in dry goods—the *Economist*, a well known free trade advocate—declares as follows:—"It can be truly said of our manufacturers this season, 'they have made wonderful progress over last year.' Such continued improvements in the manufacturing of woolen goods will soon place us beyond the fear of rivals, and cause our products to be imitated the world over; as our most choice styles and salable patterns are the result of American ingenuity, both in coloring and in style. As the admissions of an opponent are legitimate testimony, we may fairly quote in this connection the declaration of the same organ, that 'a great impulse has been given to domestic manufacturers under the influence of the high tariff, and the result is seen in the splendid display made by our woolen mills.'

Our progress has not been limited to improvements of old fabrics in style or economical production. Many new fabrics have been successfully achieved. Among the notable examples of recent introductions, may be specified the silk-mixed cloths, having threads of silk incorporated with both the warp and filling; adding strength to the texture, and giving agreeable neutral shades to the surface. It is admitted that the American products of these goods, which are largely consumed, fall short in no respect of their German prototypes. The introduction of these goods is interesting, as aiding in the development of a kindred branch of American manufactures, all the silk used in these goods being spun in this country. The consumption of silk is by no means inconsiderable; that consumed by one manufacturer, for this class of goods, exceeding annually $80,000 in value. The silk and wool manufactures are united in another fabric of great beauty, largely made in Connecticut, — the Irish poplins, composed of worsted filling, which is covered completely by a warp of silk. This beautiful addition to our products of luxury, it is hoped, is the harbinger of a broader extension of the silk manufacture, which needs only sufficient protection to take its place in this country with the manufactures of wool and cotton.

The great perfection which we have attained within the last two years in the manufacture of the class of cloths styled Esquimaux beavers, for overcoatings, is worthy of especial commemoration. Five years ago, all the goods of this class, consumed in this country, were imported. The cheapness and excellence of the goods of this class recently fabricated here, have led to the exclusion of the foreign product. The goods of this class, manufactured by the Germania Mills, exhibited at the Paris Exposition, received the award of a medal of high class.

Marked improvements have been made within the last year or two in the production of knit goods. Until quite recently, the manufacture of shaped stockings, shirts, and drawers, made abroad wholly on hand machines, has not been attempted here. An American machine now performs automatically the narrowing and widening of the best class of knit goods, which is done elsewhere by hand. A great difficulty in the manufacture of knit goods has been the seaming, which, when done by hand, involved the distribution of the work to the homes of the skilled women by whom the work was finished at great cost. Within the last year, a machine has been perfected by American ingenuity for seaming automatically. In one establishment, a hundred little girls are employed on these machines, earning from a half a dollar to a dollar a day, and accomplishing the seaming more perfectly than it was ever done by hand. Thus a completely shaped knit article is produced entirely by power, equal in all respects to the goods of the most celebrated English makers; while the American goods are afforded at materially reduced prices.

Of recent novelties in our manufacture, the fabrics which have attracted most admiration are the cloakings, so largely introduced during the present season. Even experienced manufacturers are astonished by the new range which is given to the application of woolly fibre, by the surprising variety of styles and effects obtained, and that they are capable of being produced by machinery. The models which gave the idea of the fabrics produced here, originally conceived and executed in Austria, under a protective system of over 70 per ct. first appeared at the London Exposition in 1862, and were regarded as marked features of the Exposition. To the genius and enterprise of a young manufacturer of Rhode Island, is due the conception of re-producing the Austrian inventions in this country. He was able to carry his conception into practical execution, by personal observation and actual labor in the Austrian mills. Not content with imitation, he introduced new styles and textures adapted to American wool; and the goods now produced by him, and by other manufacturers who have followed his example, although purely American in design, are in no respect inferior to the foreign models; while they are sold at from two to three dollars less than the price at which the imported goods can be afforded, —the American goods being woven by machinery, while the Austrian goods are woven by hand.

While, in the department of clothing-wool fabrics, every field seems to have been explored in this country, that of combing wool is still limited by the want of raw material. We have encouragement in this direction, from the successful working of mills in Rhode Island and elsewhere, producing Italian cloths; and the establishment of another in Lawrence, within the last year, for the

manufacture of styles of worsted dress goods not before attempted. I am confirmed, by the opinions of several manufacturers, in the belief, that there is a favorable opening for a new application of our longest-fibred American merino wool, in the production of the fine all-wool merino dress-stuffs, produced at present only in Europe; but so largely produced there, that, in a single establishment in Reisenberg, Bohemia, 12,000 persons are employed in this manufacture. As these goods are admirably adapted for printing, the introduction of this manufacture would be greatly favored by the perfection to which the art of cotton and delaine printing has attained in Rhode Island and Massachusetts.

HOME MADE FERTILIZER.—Mr. H. W. Risley, recommends in the Georgia *Southern Cultivator*, the following formula for making "guano," which he says he adopted "during those sad years of war, when he was obliged to make his living out of the earth by the sweat of his brow:"—

First gather any quantity of swamp muck into a pile to dry. Measure off 6 barrels of this (or any other rich black earth) into another pile, and add the following salts previously dissolved in a barrel or more of water, viz: 40 pounds nitrate soda, 60 pounds sulphate ammonia and ½ bushel common salt. Then add one barrel of ashes, one barrel of Plaster of Paris and one barrel ground bones. Mix all well together and use in the same manner as Peruvian Guano.

AQUARIUMS.—Aquariums are now so well understood, as to be in a fair way to become essentials in the room-gardening of all persons of taste. Growing plants, fishes and water reptiles are placed in the same globe or tank of water, and the gases which the fish reject are the food of the plants; while the plants, on the other hand, prepare the elements necessary for the health of the fish. By this beautiful principle of reciprocity, both plants and animals remain in perfect health, without the water scarcely ever being changed. A tank for plants and animals might form the base of a pretty parlor ornament, a central portion consisting of a case for ferns and similar plants, and a cage for birds on the top.—*Gardener's Monthly.*

TO KEEP CIDER SWEET.—Of the various preparations used for this purpose, I have had some experience with sulphite of lime and white mustard seed. Treated with the lime, the cider soon becomes flat and insipid. The mustard seed I much prefer—½ lb. to a barrel—put in when it has about half done working. It gives it a sprightly, agreeable flavor, which it retains until warm weather. Both of these methods, however, spoil it for vinegar. With the mustard seed it becomes thick and ropy during the heat of summer.—*F. Curtis, in Country Gentleman.*

NICOTIANA MACROPHYLLA VAR. GIGANTEA.

With the aid of the cut, there will be little difficulty in translating this much of Latin, which we copy from the books as descriptive of our illustration. Though Shakspeare gave it as his opinion that by any other name a rose would smell as sweet, it does not follow that tobacco,

> "The stinkingest of the stinking kind,
> Filth of the mouth and fog of the mind,"

must smell just as bad in Latin as in English. Without venturing an opinion on this question, we may say that the above drawing represents the most showy of all the *Nicotiana Tabacum.* Its leaves are much larger than those of any other variety; it grows six to eight feet high, and the plants are crowned with immense bunches or corymbs of large purple flowers. Its huge foliage and stately aspect give it the advantage over most other ornamental-leaved plants for lawns or groups in the flower-garden. Mr. Breck, in his Book of Flowers, says "it may be grown in the garden as a curiosity, as well as for its leaves, which are useful to destroy insects. Its decoction, the powder of the leaves, and the smoke produced when they are burned, are

all used by the gardener in freeing his plants from insects. It would be well if the plant were raised only for the destruction of insects, rather than, as I fear is the case, for the destruction of human beings."

AN UGLY THORN.—In a late letter from Kendall County, Texas, in the *Mirror and Farmer*, Dr. Boynton notices a bush which grows on most of the land that produces the rich, juicy mesquite grass, on which sheep winter in that climate. From its connection with this nutritious grass, this shrub is called mesquite bush. It attains the usual size of a peach tree and is very like it in form. The thorns drop off from the dead branches and are scattered in great numbers about the ground. These frequently stick into the feet of the sheep and produce severe lameness, thus giving great trouble to the shepherd. They seem to be poison, as the wounds produced by them will not heal for weeks.

For the New England Farmer.

FARMING IN SHIRLEY, MASS.

Perhaps a brief account of some of the things which interested me during a late visit at the farm of Mr. A. Lawton, in Shirley, Mass., will interest the readers of the FARMER. His farm is well elevated. The soil is good for grass, grain and fruit. There are some noble old apple trees here, which are supposed to be two hundred years old,—venerable monuments of years gone by. They have been great bearers, but are not now productive, and the owner intends to put the ax to the roots, as the land which they occupy would be valuable for grass. Some of the fields on this farm are hard to subdue in the first cultivation. One of them, containing just two acres, was so full of small stones, that Mr. L.'s neighbors told him he would never get paid for the labor expended in clearing it. He set it out with hops and the first crop sold for $1000. On this field there is now a remarkably handsome apple orchard which has been set six years; the trees being about forty feet apart, and the growth this year about one yard. On the death of his father, less than twelve years ago, Mr. Lawton bought this farm, which was the old homestead, by running in debt for the whole of it. The farm is now entirely paid for, and Mr. Lawton has undoubtedly several "spare shots in the locker." It was with very good reasons therefore that he expressed the opinion that farming, even in Massachusetts, was a profitable business. Nor is he, by any means, the only one in his neighborhood who entertains the same idea. About half a mile from his residence, his neighbor, Mr. H. P. Kittredge, of W. Groton, purchased a farm about the same time that Mr. Lawton purchased his. Mr. Kittredge also had no capital to begin with. But he, as well as Mr. Lawton, has paid for his place from the sale of what his farm has produced, and is estimated to be worth from eight to ten thousand dollars—acquired entirely by farming.

Hop Growing.

About ten years ago Mr. Lawton commenced the cultivation of hops, and he sold his first crop for six cents per pound. This year he raised one ton of hops which he has sold for 62 cents per pound, amounting to $1240. These were raised, and the whole operations of the farm, which is of good size, and produced good crops of hay, corn, potatoes, vegetables and fruit, carried on with no other labor than that of himself and son, about 14 years, with a few days of hired help. The quantity of hops was only about one-half of what would be called a good yield for the amount of land. Mr. Lawton says, however, that he will not complain of the crop when the price is so much beyond that of former years. Within the last four years Mr. Lawton has sold $5000 worth of hops. Last year he returned as the income of his farm over $1700.

In the cultivation of hops, Mr. L. tried the horizontal process of training, heretofore described in the NEW ENGLAND FARMER, on one acre, this year. He likes the method very much, and intends to adopt that instead of the former plan of using poles. The horizontal process is patented and costs about ten dollars per acre. Mr. Lawton thinks that hops do not exhaust the soil any more than the ordinary farm crops, and do not require more manure. He uses a compost of mud and manure to dress with. Hops for the market are not required to be so ripe as formerly. Buyers prefer the light-colored. Consequently, it is not necessary to force their growth by so rich dressing. He says that the hop-growers in New England do not understand preparing their hops for market so well as in other States. They should be very clean and light colored.

November 26, 1867. W.

FENCE POSTS.—Around each post used in fencing, a small mound of earth should be raised, to throw off the water of heavy rains. This keeps the water from entering the post-hole from the surface. In every place where this simple plan has been tried, the posts have lasted much longer than those set in the ordinary way.

—It is estimated that at least 1000 tons of meadow hay were spoilt in Essex county, Vt., during the past season by the heavy rains. It was unfit to cut and therefore allowed to rot where it stood.

HOW TO PREVENT THE DECAY OF WOOD.

WHEN using wood for fencing, posts, rails, bars, and gates, or for implements, or building purposes, it is not only important to make them endure in order to save another set of materials, but also to save the time which it takes to construct them.

When shingles are partially decayed, they hasten the decay of the boards under them, and thus a double loss occurs. There is, then, not only the loss of shingles to be supplied, but the cost of nails, staging and carpenters' time to be added. And so it is in replacing fences

If, by some cheap contrivance, farmers could make their shingles last forty years instead of twenty, and their wooden fences in the same proportion, what a vast saving of labor and lumber would be secured. That they can succeed in effecting a very important saving we have no doubt. In the first place, it can be done by the use of *whitewash* on buildings and fences, and by other materials on wood that is inserted in the ground. On the *roofs of buildings*, we sincerely believe that $10, expended for lime, and judiciously applied, would save $500 each ten years in every village in New England. If the shingles are laid, whitewash over them annually, or at least, as often as once in two years. We know of many roofs, on some of which the shingles have been laid 40 years, that are perfectly tight, although the shingles are worn down to less than half their original thickness. In one neighborhood several roofs were covered about the same time with the best white pine, shaved, heart shingles. These were not whitewashed, and have all decayed and been reshingled! One set of buildings was covered with the *cheapest sap shingles*. They have been whitewashed every other year, and are now flat, tight, and nearly as firm as slate, at the close of *fifteen years*. Another set, upon which shingles of the same kind were laid eleven years ago and whitewashed, has roofs that are tight and in perfect order. The wash upon them is made of lime, water and a little salt, and laid on with very little care.

If the shingles are new, dip them into *hot whitewash*, and lay them as soon as they are dry. Gov. Smith, of New Hampshire, stated in the *N. H. Journal*, some time since, that he "bought hemlock shingles *fourteen years ago*, at a cost of $1.50 per M., and treated them in this way, and the roof is tight now, no moss having accumulated on them, while his neighbors in the same time have reshingled where the first quality of pine was used without any preparation." Whitewashing roofs not only saves shingles, but is a safeguard against fire.

A rule for making whitewash, given in the *Scientific American*, is as follows:—

Take a clean, water-tight cask and put into it *half a bushel of lime*. Slack it by pouring water over it boiling hot, and in sufficient quantity to cover it five inches deep, and stir it briskly till thoroughly slackened. When the lime has been slackened, dissolve it in water, and add two pounds of *sulphate of zinc* and *one of common salt*. These will cause the wash to harden and prevent its cracking, which gives an unseemly appearance to the work. A beautiful cream color may be given to the wash by adding *three pounds of yellow ochre*; or a good pearl or lead color, by the addition of *lamp or iron black*. For fawn color add *four pounds umber, one pound Indian red*, and one pound *common lamp black*. For stone color add *four pounds raw umber* and *two pounds lamp black*. When applied to the outside of houses and to fences, it is rendered more durable by adding about a pint of sweet milk to a gallon of wash.

Some paints are also cheap and exceedingly durable, such as the Venetian red and Spanish brown. Buildings or fences painted with either of these would scarcely want more than one coat in a life-time. To be sure, they are colors that do not usually please the eye on prominent objects, but are exceedingly durable.

Some time since a recipe for making a durable paint was sent to the "*Societe d' Encouragement*" in Paris, which was said to have the hardne[illegible] [illegible]ist[illegible] lamp, and is

very cheap. It had then been in use five years. Its component parts are: 50 of resin, 40 of finely powdered chalk, about 300 of fine, hard sand, 4 of linseed oil, 1 of red oxide of lead, and 1 of sulphuric acid, all to be mixed. The resin, chalk, sand and linseed oil are heated together in an iron boiler; the red lead and the sulphuric acid are then added, and all carefully mixed. The composition is applied while hot. If not found sufficiently fluid, it may be made thinner by adding more linseed oil. When cold and dry it is said to form a varnish of the hardness of stone.

Another mode of preserving wood, either in or out of the ground, is by saturating it with some substance, which either fills the pores or hardens them, so that dampness and air have little effect upon them. In building important works, the Government prepares the lumber by "Kyanizing," or filling its pores by immersion in creosote or some kind of acid. A solution of blue vitriol is, perhaps, as good as anything that we can readily command.

It is easily obtained and prepared, and is cheap. About *one pound of vitriol to twenty quarts of water* will give it sufficient strength. Pine posts, soaked in such a solution, have remained firm and sound after having been in the ground eight or ten years. It is excellent to preserve the stakes in vineyards, trellis posts and small stakes used about the garden for tying up shrubbery, raspberry, and other bushes, dahlias, &c.

Seasoned posts may be long preserved by putting on three or four coats of *hot coal tar*. All the parts that touch the ground, and for six inches above, should be covered. This will be worse than nothing unless the post is *seasoned*.

A Large Grape Vine.—Mr. Stewart, Orford, C. W., has a Clinton vine 70 feet long—that is, 35 feet each way from the root, running over and on an eight-foot picket fence, which hung this year with one mass of grapes from end to end. He entirely ignores our idea of cutting grape vines back to five or six feet, arguing that the leaders should not be cut at all. The vine referred to is in his garden, and has had all necessary care; and though the grapes had been somewhat injured by hail, both in bunch and berry, they would compare favorably with the Clintons I have elsewhere seen. I do not see why this should not be the best way of growing, especially for wine making.—*Country Gentleman.*

COOKING CATTLE FEED

Some ten or a dozen years ago Mr. Thomas Horsfall, of England, published a detailed and well written statement of his plan of cooking the feed for the cows of his dairy, which was quite generally copied, either in whole or in part, by the agricultural papers of this country. His success in economizing bean and oat straw and other coarse, and when uncooked, unpalatable articles of feed, attracted much attention both in England and in the United States; and in both countries many farmers have experimented more or less thoroughly with cooked feed, but so far as we have been able to ascertain, without developing any very satisfactory results. Even in England where labor is comparatively cheap, and capital abundant, very few farmers have realized the success claimed by Mr. Horsfall, or by the speakers at one of the evening meetings during the late Fair of the New York State Agricultural Society at Buffalo, some of whom claimed that the value of feed was doubled or tripled by cooking.

This subject was not long since discussed at one of the stated meetings of the Royal Agricultural Society of England. From the report of this discussion we infer that it was generally admitted that there was some gain in cooking feed for fattening animals, but the question was, whether that gain was equal to the cost and trouble of cooking. Thus much even some of the members appeared to be unwilling to admit. The following statement was made by a Mr. Lawes:—

Anxious to try the effects of cooking, he last autumn ordered 10 beasts to have 2 lbs. of bean meal boiled and poured over the chaff, which was to stand 24 hours; 2 lbs. of cake were then added to the mixture, and it was served out. Of those ten beasts, however, one obstinately refused to eat the mixture; it was a white bullock with a black nose, and decidedly the worst of the lot. It so stoutly resisted the mixture that it would even eat the straw turned out from the cart-horse stable rather than the prepared food. It was then ordered to have the bone meal unboiled, but still mixed with straw that had been moistened the day before, and with a small quantity of malt combs; and at this moment that very animal which had been the worst of the ten was by far the best. It weighed at least 8 stone more than those which were of the same size at Michaelmas, 1 cwt. more in live weight than the smaller animals when they came in, and 56 lbs. more than any other beast in the lot.

Another question was as to the quality of the meat produced by the animals kept on cooked feed.

On this point, the same gentleman was disposed to think that the quality of the meat

was inferior when the food was cooked. We all know that it is a common practice for New England farmers to feed their hogs on corn at least a few weeks before killing "to harden up the pork." Mr. Lawes said:—

If pigs were always fed on boiled Swedes and meal, although they might increase very fast and be very profitable to the seller, still it would be found out by degrees that the quality of the pork was bad. The butcher would ultimately refuse to buy, and would say that such pork, to use a common expression, "boiled away." All animals as they fattened had a certain amount of water displaced; that was to say, they contained less and less water: but if they were fed with boiled Swedes and meal, the water would increase as well as the fat.

Some time ago he had fed one animal on steeped barley and another on dry barley, with a view of testing the merits of the two systems of feeding. The animal which was fed on the steeped barley, increased very fast, while the increase on the other was comparatively slow. They were both killed; the loins and other parts were cooked in the establishment, and it turned out that there was much more waste in the former case than in the latter. But a new phase of the question had been suggested, whether natural cooking or fermenting might not be substituted for artificial heat. It should however be borne in mind, that all fermentation meant the loss of a certain quantity of carbon consequent on decomposition. In all food the most valuable constituent was the carbon.

If they mixed sugar or saccharine matter with woody fibre, they got a certain amount of heat together which might soften and render the latter more digestible; but that was always done at the expense of the sugar, which is one of the most valuable articles they had. An animal always eats till he has enough carbon in his stomach; he then stops. He might take double the quantity of albumen, but he would not stop until he had got sufficient soluble carbon, and the soluble carbon was the first thing to disappear in the process of fermentation. He did not think, therefore, that economy of food was to be arrived at by a process of that kind.

Mr. Dent had talked with several gentlemen who had cooked food, and most of them were inclined to give it up; but he had never yet found them disposed to abandon the system of pulping.

The third question, related to the effect of cooked feed upon the health of the animal itself. Upon this point Professor Simonds, one of the most distinguished veterinarians of England, spoke at some length.

The professor said there was scarcely any limit to the quantity of water that might enter the animal organism, if we gave food which contained a large quantity of water. Speaking as a pathologist, he believed that a great number of diseases among the lower animals arose from the bad state of the blood induced by excess of water, and deficiency of nitrogenized matter in the food. The practical farmer knew that if, in the lambing season, he gave his ewes too many white turnips, or other green food, which had grown rapidly, and contained a large amount of water, it would lead to disease and loss, whereas, if he put them on dry food, containing, weight for weight, a large proportion of nitrogenized matter, a good quality of blood was produced, and the health of the animal preserved. Admitting that cooked food had the effect of accumulating weight, to say nothing about flesh, in a certain space of time, he was inclined to think that this arose from the facility which it gave for the digestion of the food by anticipating a part of the process commonly carried on by the action of the gastric juice.

But it was questionable policy giving to an animal, and especially a ruminant animal, cooked food, for thus they might to a considerable extent supersede mastication; if so, they would supersede insalivation, and thus interfere with one of the chief processes of nature. The action of the saliva was first to convert the amylaceous parts of the food (or starch) into sugar or gummy matter. A further provision was made in the ruminant animal for stirring up, if he might so express it, the food; and a chemical change took place in its character before it passed into the true digestive stomach. There was a re-mastication and a reinsalivation; and, inasmuch as the secretions coming from the rumen were very analogous to those with which the food were mixed in the mouth, it not only remained mixed with saliva a much longer time, but was mixed with a much greater quantity of that or a like substance.

If then, by the use of cooked food they dispensed with part of the operations of nature, and sent the food quicker into the intestinal canal, they would also dispense with the process of re-mastication and re-insalivation; and he could easily understand why, although a large increase might take place in bulk, the quality of the animal might become bad. The digestive process depends materially upon the condition of the food; it is even possible, by giving cooked food, or food which was physically in the same condition with regard to fineness and moisture, to render animals non-ruminative which were naturally ruminative; that is to say, we may give them food that would be retained for a very short space of time in the rumen, pass quickly into the digestive stomach, and become subject to the action of digestion without first undergoing remastication. We should thus interfere at once with the law of nature; if we cook food at all, we ought not, before cooking, to reduce it too fine. If the straw be cut into lengths of four to six inches, a cooking process may be set up so as to convert the amylaceous part into sugar, without interfering with the functions of the rumen; but such food should be re-masticated.

He would advise that if food is pulped and mixed it should not lie too long, to undergo the process of fermentation, but be given pretty soon after it is mixed. Straw might, doubtless, be converted into palatable food, and animals induced to eat a larger quantity of inferior provender cut into chaff, by simply throwing over it a small quantity of oil cake dissolved in water. This was a common practice among farmers in Lincolnshire in feeding their horses, especially during the winter.

Upon the whole, he was certainly not in favor of the so-called system of cooking food, either for the preservation of the health of the animal, or for the promotion of the process of digestion, and was inclined to think that, by the physical alterations they might make in character and condition by cutting straw, pulping roots, and mixing a solution of oil cake with them, they would gain the point at a lower expenditure, and with much more advantage to the animal economy.

—For the last eight years I have practiced hauling hickory wood on my farm every year, and placing it where it would attract the borer moth, and then burning it with the worm in it, before the end of two years. I think I have thus kept the worm in subjection.

SHORT-HORN STOCK IN VERMONT.

An occasional correspondent, and a great admirer of good stock, lately visited the Short-Horn herd of A. M. Winslow & Son, Putney, Vt. Though he has seen much of the best stock of New England, both at Shows and on the farms of individual breeders, he says he thinks the Messrs. Winslow's herd, taken all in all, excels every thing he has seen elsewhere.

Among their herd of fifteen thoroughbred cows is Lady Sale, a very fine animal, which has taken first premiums wherever she has been exhibited; and another cow, whose name he does not mention, from the sale of whose calves thirty-six hundred dollars have been realized during the past seven years.

Rising Star, a bull six years old, weighs 2500 pounds, and is a fine specimen of the Durham race of cattle. The bull calf, Duke of Putney, by sixth Duke of Thorndale, out of Lady Sale sixth, is ten months old, weighs 10 cwt., and will be remembered by the visitors at the State Fair, the past fall, as the winner of the first premium. He was there spoken of by some stock men as probably equal to any animal of his age in the world. In color, the Duke of Putney is of a dark wine, with a few small streaks of white. One thousand dollars have been refused for the calf, and two thousand for its mother—prices that must be both comfortable to the owners, and complimentary to the stock.

One pair of their thoroughbred oxen, weighing 3800 pounds, were very fine animals.

Eight calves of a red color, with a very little white, were nice and thrifty, for youngsters. Among another lot of four calves, was a heifer for which $50 had been refused. She was very large and promising. When such stock brings such prices, asks our correspondent, "why do we not have more such herds, and more such breeders as Messrs. Winslow & Sons? Doesn't such stock pay as well as the seventeen, eighteen or twenty-dollar cows that your cattle market reporter alluded to in his last week's report?"

WINDOW PLANTS.—Window Plants should not be kept very warm at this season. They should have all the sun and air, and as little of the artificial heat of the room as possible. These remarks apply especially to Mignonette, which is very impatient of in-door confinement. Succulents, such as Cacti, are excellent window plants in this respect, as the dry air does not affect them. To keep the air about the plants moist, is one of the secrets of window-culture. Some who have very fine windows well stocked with fine plants, make glazed cases with folding doors of them, by which, when the room is highly heated and very dry, they can be enclosed in an atmosphere of their own. In such cases, ferns and mosses can be grown to perfection, and pendant plants in hanging vases give a Brazilian forest appearance to our happy Christmas homes.—*Gardener's Monthly.*

For the New England Farmer.

FARM HELP.

Although I have recently written upon this subject, I desire to add a few more thoughts suggested by reading the article and comments thereon in a recent number of the FARMER, for it is one of vital importance, and its thorough discussion cannot fail to awaken a deep interest with every cultivator of the soil. When it is freely admitted that the difficulty of procuring good help is the main cause of slow progress in making permanent improvements; that it takes away much of the pleasure of farming, and is frequently the turning point in the sale of the farm, it is high time for farmers to consult together to devise and adopt, if possible, some remedial measures. For one, I see no reason why decided improvement cannot be effected both in the supply and character of the help, by individual exertion and earnest co-operation. It may not be accomplished under the old nor under the present system. Such an entire change in the character of help demands corresponding change in the mode of dealing with it.

But farmers should remember that they are not alone in their trials with help. Since the first year of the war no industrial occupation has been exempt from the evils of which they complain. The concurrent testimony of all employers is, that although they pay extravagantly high wages, much less work is performed in a day than formerly. So great was the demand for labor, compared with the supply, that workmen had the advantage. And it can hardly be said that any craft or class of workmen rendered themselves particularly conspicuous in disregarding the rights of employers. The same spirit of independence and alertness to better one's condition has been manifested by all classes, from the common laborer up to the professional ranks. After all, this is but carrying out the spirit of the age. Time is the working man's capital, and he only seeks to make the most of it, as the man of wealth does of his investments. But the tide is setting against them. Notwithstanding the repeated strikes, and the extended and clamorous talk during the short-time movements early in the year, wages have fallen, and from one-fourth to one-third more labor

is rendered for a day's work than six months ago. In our eastern cities more men have been seeking employment during the past half year than for a like period for the last ten years. Unless the prospects of trade and manufacturers brighten before spring, a large surplus of labor will be sent out from every city and village, and farmers will find a larger number of applicants than usual from which to make selections. If the present rate of immigration continues from the old world, from the Provinces, and the Canadas, this generation, at least, will never witness another so great a scarcity.

But allowing the supply sufficient, how can the quality be improved? It is true the change from the farm help of thirty years ago is great. Since farmers cannot keep their own sons and daughters at home, they are, from necessity, dependent upon hirelings. The class which Providence has thrown in our midst constitute a much better material than is generally admitted. It is customary to condemn them for some glaring faults, while their excellencies are seldom enumerated. Now, before there can be rapid improvement, they must be better apppeciated, and a thorough knowledge of their characteristics is necessary to their appreciation. The Irish have many qualities essential in farm laborers; they have usually followed out-door pursuits at home, and come here with a natural fondness for the country and for the farmer's life, and always prefer it to the shop or factory. They are strong in muscle, and possess great endurance; they are patient and persevering under hard work. They have a love for pleasantry, enjoy a good joke, and are generally cheerful and resigned to things they cannot control, and hence are less inclined to worry and fret than some of their more active and nervous employers; nor does the somewhat monotonous routine of the farm appear to them so irksome. They are willing to hire out and serve others, and we see them performing the drudgery in our houses and in every place where hard and disagreeable work is required. They are fond of animals and are naturally good judges of stock. If they own a cow, she is almost invariably a good one; and as for pigs, they are ashamed to keep a poor one. Many of the best teamsters, coachmen, and grooms in and around our cities are Irishmen. Their gardens testify that they understand clean and thorough culture. Irish gardeners may claim some of the finest displays of flowers and choicest collections of vegetables at our horticultural exhibitions as specimens of their skill. They take hold with good courage and work out fair crops from land usually considered not worth tilling, and I think it safe to say they understand the management of wet lands better than the majority of New England farmers.

The great desire of this long oppressed race is to possess what was denied them in their native country,—a bit of land. Bank, manufacturing and railroad stocks, and even government bonds, have little attraction for them; land is first, and if means increase, it is more land and more houses. Hence in cities we see them rapidly coming into possession of whole blocks, squares and streets, and establishing homesteads all around the suburbs, and pushing out into the country to buy up our smaller and cheaper farms. Thus, while performing our drudgery, they are accumulating wealth, and gaining a social and political power, the precise effect of which it is difficult to foretel. In one sense, this foreign element cannot be said to drive out or crowd our native sons and daughters, for they willingly accept positions which we decline, and occupy land we refuse to cultivate. Having minds more plastic than the Germans or French, they are easily influenced, and more readily lay aside their old habits and customs to imitate our ideas and ways of living.

And what shall be said of their failings? Are they not too well known, and too often portrayed to be delineated here? Many of them are directly traceable to the peculiar circumstances under which for generations they have struggled. Under the inspiring and expanding influences of our institutions these fade away; others, as the lack of "the educated conscience," the feeling of individual responsibility, decision and stability of character are of a more serious nature and their correction is the work of time. It cannot be expected that people of mature life will advance much from long established habits. The greatest improvement is to be looked for in the youth. There is abundant evidence to prove that those born in this country, of the second and third generation, will give our sons and daughters a hard chase in whatever pursuit they compete.

But to give the question a more practical turn, how can this help be managed with their present attainments, without the continual recurrence of those unpleasant jars which have brought them into such disrepute? A few suggestions may be briefly stated. Besides patience and forbearance, tact is necessary; which here means judgment and plain, straitforward dealing. Let the period of contract for labor be as short as possible, never engaging any one for the season who has not, to your personal knowledge, established a reputation for fidelity. Hire strangers and those inclined to disregard the rights of employers by the month, or what is better, by the week or day. Make a brief and concise contract, unincumbered with provisos or conditions, and barter trades for recompense. Pay in cash, at stated times of brief intervals,—when pay-day arrives fulfil your agreement, if you borrow the money. In a quiet and courteous way, show your independence and their dependence. Much flattery is as unwise as constant chiding. If disposed to exhibit a hasty temper or mor-

bid sensibility, remember that a multiplication of words is like fresh fuel to a slumbering fire. Always deal generously with help; for if they see anything like over reaching, or even fancy it is intended, they will take twice and thrice as much out of their employer. When one is resolved to break a labor contract, so far from using compulsion to make him fulfil his agreement, I should say let him go in peace. If he can really better himself, it is not generous to detain him. If in our judgment he will only lose by the change, it may not be wise to try to argue him into staying. Anything like coercion tends to arouse all that is ugly in his nature, and in all probability "suits for the enforcement of labor contracts" would bring only expense and trouble to the plaintiffs. A discontented, grumbling hand is of little profit at best, and his influence upon others is so bad that it is frequently better to pay something to have him leave.

A better way for preventing sudden leaving is the one adopted by our factories. About two weeks' pay is always kept back; pay day is near the middle of the month, but the pay is only made up to the first day of the same; if a workman quits without two weeks' notice he forfeits so much of his wages. The condition is distinctly understood by all the workmen, and is so simple and just that no one complains of it. This is the only constraining measure that mills with from one to four thousand names upon their pay roll pretend to exercise against sudden quitting. This rule could be easily adopted in an agricultural community, for help both within the house and without. Two weeks' notice would give ample time to obtain other help, and the forfeiture of two weeks' pay would prevent sudden leave-taking for mere trifles. Working out the two weeks of notice gives time for reflection, and not unfrequently the resolution to leave is changed to a desire for staying.

Another suggestion for the consideration of neighborhoods which propose to adopt measures for the improvement of the character of the help and to maintain the rights of the employers, is the keeping of a list of the names of those hands who have been discharged for gross misconduct, or have broken their contract without justifiable cause. Any farmers' club can easily propose other simple regulations for adoption by the town or county represented, and thus while the individual employer shall have the control of his own help, he will also enjoy the benefit of mutual support and uniformity of action.

Should all these hints be heeded, there will still be cause for sighing over the degeneracy of modern help, just as long as farmers depend upon cities and villages for their supply; for the requisite qualifications cannot be looked for in the surplus sent back into the country, when it is composed largely of street boys; of men of dissolute habits; of those who wish for a change; of the feeble, who seek to restore their health; of the dull, too stupid to earn a living at mechanical employments; of the indolent, too lazy to get their bread in the sharp competition of the city; and of another class who, though their attainments and habits are all that is desired, have no experience in farm work, nor taste for rural life, and who only engage in it temporarily. No, the rural districts must furnish their own help before it will assume a permanent and reliable character. This cannot be done until cottages are provided upon every farm for the laborer. In this way farmers will have greater control over their help, and more hope of retaining good hands for a series of years. The children of the laborer brought up on the farm will acquire a taste for rural life, and their early training will prepare them for efficient and reliable workmen. By providing these homes, farmers will benefit themselves, their families, and the laborer; but having, in a former article, (Monthly for August,) stated these advantages, I will not enlarge upon them now.

N. S. T.

Lawrence, Mass., Nov. 22, 1867.

For the New England Farmer.

FARM HELP.

In the article "Farm Help," in a late number of the FARMER, there is much truth. That farming is as honorable and refined as any other branch of business or profession, and much more conducive to health and longevity, is being every day acknowledged, and I see no trouble in getting over the difficulty about *help*. As to educating the foreign help up to usefulness, honesty, and regard for truth, it is next to impossible. We do not as a general thing get the *best class* of foreign labor, consequently the effort to bring them up to the standard of valuable help, and true manliness is a very hard and hopeless undertaking. Why not then turn our attention in a very much more available quarter. I would remark in this connection that the same trouble is found with female servants, at the present day; in fact, Biddy desires to be the lady of the house, and Pat to be chief head out of doors, and such will be the condition of things until one and all of us determine upon a radical change.

Let us look at the capabilities of the generally despised *negro*. As a class, they are as readily learned in any requirements desirable to make them useful members of society and consequently *good* help, as our foreign population; in their disposition, they are generally gentle and affectionate, very quick to acquire and willing to work.

I tried the experiment for a year with twenty freedmen as farm hands, on a large farm in Tennessee, in the year 1864, and though I took them as they came, used to abuse, and not kindness, unacquainted with our modern farming tools, they were very ready and anxious to learn, and in an incredible short

time were masters of every new tool placed in their hands.

Again the black man as a slave has been accustomed to *tend* ten acres of cotton or tobacco. This is no fancy sketch, but the truth—*ten acres*. He does not require, as with us, a boy or a man to drive while he holds the plough, but laughs at the idea that one man cannot hold and drive. I will grant that the negro is apt to be lazy, but not so much so as some white laborers it has been my fortune to fall in with. Owing to the condition of servitude in which during all their lives they have been kept, they know their place.

As to education, give the negro a book and directions how to go on, and he is very apt at learning. These remarks apply to both males and females. No sensible farmer leaves his hands by themselves to do the work on a farm, but looks after and superintends it himself, so that any shirking or laziness on the laborer's part is very readily seen, and by being more or less of the time about, help will not be so apt to *laze*. The negro is very susceptible to kindness and *praise*.

My remarks are not *guess* work, but gathered from *actual experiment* and observation. Why, then, may not the farmers in certain localities rid themselves of their prejudice as to race and color, and join in getting negroes, both male and female to do their work, much better, and at less cost, than in hiring Tom and Dick as they come along.

It has been for some time my conviction that black help can be employed usefully, economically and satisfactorily on our farms.

F. COPELAND.

West Dedham, Mass., Nov. 27, 1867.

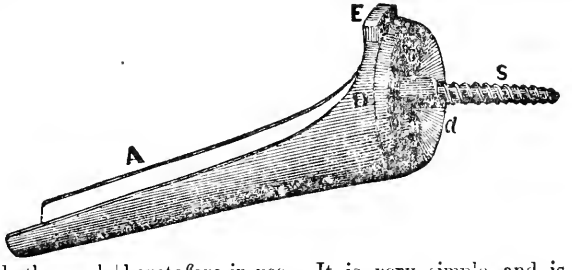
ASSORTING FRUIT.—We have often urged the importance of selecting the best specimens for market—especially so with the larger fruits which may be easily picked over. As additional corroboration of our views we give the following brief quotation from the published proceedings of the American Pomological Society at St. Louis:—

Dr. Claggett dwelt upon the importance of proper transportation, and said that of the fruit brought to market two-thirds would bring more money than the whole, if one-third were at home. A shipper would make money by gaining a reputation for putting up only perfect fruit, and giving all the imperfect fruit to the pigs.

—The *Rural New Yorker* says that a gentleman of Rochester has succeeded in checking the blight on his quince trees by removing the surface soil about the roots and applying a liberal supply of salt. It also added greatly to the productiveness of the trees.

LIVERMORE'S SAP SPOUT.

The annexed cut represents a recent ingenious and very cheap invention of R. F. Livermore, of Starksboro', Vermont, which it is believed supplies a want long felt by maple sugar makers, as it is less injurious to the tree and more economical of sap than any spout



heretofore in use. It is very simple and is entirely of metal. A is the spout; D the head, in which is a hole, H, for the passage of the sap. The head is concave, C, forming, with the exterior bevel, D, a sharp edge, *a*, which surrounds the chamber or tap in the tree. From the central part of the concavity projects a screw, S, holding the spout firmly to the tree, and pressing the sharp edge, *a*, against the bark, thus preventing leakage. The chamber in the tree is made by the ordinary tapping bit, which should be guaged so as to allow the screw to take firm hold of the wood. The screw is placed in the centre of the hole or chamber and turned until the edge, *a*, presses firmly against the bark around the chamber. A projection, E, is added, on which the sap tub is hung and kept in its place.

Though possessing so many valuable qualities, these spouts are exceedingly simple in construction and use, and we understand are offered at a price which can be remmerative to the manufacturer only by the large sales which will result from its general introduction.

FARM LABORERS OF PRUSSIA.

M. Emile de Laveleye has just contributed an article to the *Revue des Deux Mondes*, in which an interesting account is given of the progress made by Prussia during 50 years of peace. Writing on agriculture, he points out that nearly all the land-owners cultivate their own estates; except for detached portions, renting is the exception. They are, therefore, retained in the country by the care of their own interests, for nothing more imperiously requires the eye of a master than rural industry. It is true they are aided by a class of

employees who are not found in any other country. They are educated young men belonging to families in a good position, often just leaving an agricultural college, who remain for a certain time on some large estate to initiate themselves in the practical direction of one of their own. This novitiate is an ancient custom still preserved in many trades. Thus, frequently, the son of a rich hotel-keeper will not hesitate to enter another hotel as butler or waiter (*Kellner*) to be initiated into all the details of the service over which he will one day have to preside. When any one visits the farms (*Rittergutter*) he is astonished to see as superintendent the son of a banker, a baron, or a rich land-owner. These young people drive a cart or guide the plow. At noon they return, groom their horses, and then go and dress themselves and dine at the owner's table, to whom they are not inferior, either in instruction, birth or manners. After the meal, they resume their working-dress and return, without any false shame, to their rustic occupation. Thus we find in feudal Prussia a trait of manners suited to the democratic society of the United States, and which hereafter will become general. In France, in England especially, a young man of the upper class would believe his dignity compromised in performing the work of a farm-laborer.—*Paris Correspondent of Land and Water.*

EXTRACTS AND REPLIES.

CURE FOR SCRATCHES.

Can you or any of your correspondents tell me what will cure scratches on a colt? Is there anything in the shape of medicine that will do it? By giving me any ideas on the subject you will oblige

Norway, Me., Nov. 22, 1867. A SUBSCRIBER.

REMARKS.—As this troublesome and offensive disease was pretty fully discussed in our columns during the past year, we submitted your inquiry to Dr. Trask of Reading, Mass., who has been a cattle doctor for some twenty years. He replies by remarking that most diseases of our stock are brought on by the neglect or violation of the laws of nature

In the case of the horse afflicted with the scratches, he says, the bowels must be kept loose while fed on dry food, and the body warm and clean. In grooming his limbs, they should always be rubbed down and not up; and he recommends that they should be slightly greased with neatsfoot or skunk's oil, or that obtained from the neck or legs of dead horses. In cleaning off the vile matter from the fetlock, he finds a corn-cob the best thing he ever used. He then applies, while warm, a wash made by boiling one hour, wormwood and the bark of whistlewood in urine. After which the foot and leg should be greased, and the animal kept on a spare diet.

As large additions have been made to the readers of the FARMER within a year, and as the papers of others may be lost which contained our own suggestions and those of our correspondents, we will give the substance of what was published upon this subject about a year ago:—

If the disease is in its first stages—that is, has not ulcerated—wash the parts affected perfectly clean with castile soap and warm water; rub dry with the hand or warm flannel. Then, with a soft sponge, bathe freely with brine from the beef or pork barrel, three or four times in twenty-four hours. Exercise the animal, by walking him about, two or three times in the course of the day. Give but little grain, and that in the form of a mash; but green food when it can be had, such as grass, or roots, and especially carrots.

If the disease has assumed the *ulcerated* form, the hair must be cut off, and the parts cleansed as stated above. It is doubtful whether the brine would be efficacious in this case,—but it would be well to try it. If not, prepare a lotion as follows, and wash three times each day with it, viz:—

Chloride of zinc, one ounce.
Creosote, four ounces.
Strong solution of white oak bark, four quarts.

There is a tendency to this disease in some horses, so that on the slightest appearance of it, measures should be taken to prevent its progress. The hair about the ankles should remain there, certainly through the winter. "Cutting it away, and thereby exposing the heels to the operation of cold and of wet is no unfrequent cause of grease. In winter, when the legs most require warmth and protection, the heels are deprived of the cover which nature intended should protect them; and parts where the blood flows most tardily are laid bare to the effects of evaporation and frost."

Mr. Hiram French, of Eaton, C. E., recommends a decoction of tamarack bark, made by boiling a bushel of the bark in a kettle of water thoroughly—strain off the liquid—add more water—boil again—then strain as before—remove the bark, and boil the whole down to one pailful. Give the horse one pint of this twice a day by soaking his oats in it This purifies the blood and creates an appetite. After thoroughly washing with strong soap suds, and rubbing dry, apply, night and morning, an ointment composed of half a pint of linseed oil, two table spoonfuls of fine salt, same of sulphur, same of saltpetre, and one ounce of turpentine, well mixed.

"W. H. J.," of Winchester, N. H., suggests, as the disease is caused by impurity of blood, that, in addition to good feed and careful usage, a spoonful of sulphur should be administered once a week, and then if, on trial, our remedy does not cure, apply every morning, after washing clean, an ointment composed of a tea-cupful of lard, with as much camphor gum as can be dissolved therein, simmered together with a little rosin.

"J. C. M.," of Lancaster, N. H., has cured by giving sulphur, cleaning the issues on the legs, and roweling in a bit of onion.

"B. F. B." of Fletcher, Vt., washes perfectly

clean with castile soap and warm water, then apply while warm, an ointment of gunpowder ground fine, mixed with sweet cream or fresh butter, to the consistency of thin paste.

WARTS ON CATTLE.

I have a heifer eighteen months old, which has a large number of warts, (I should call them) on her skin, commencing just front of her bag and reaching nearly to her front legs, the whole weighing a half dozen pounds or more. They have been growing for three or four months. None of my neighbors have ever seen anything like it. The bunches hang down six or eight inches. Perhaps some of your readers can tell me what to do for her. She is half Dutch, and otherwise than the bunches a fine looking heifer.

H. H. Brown.

South Sudbury, Mass., Nov. 29, 1867.

Remarks.—We think we have never seen so many warts on cattle as this year. Whether the unusual amount of rain which has fallen the past season in New England has any connection with their production we cannot say. During the fall we have seen so large excrescences on some animals that we have been led to doubt, with our correspondent, whether they ought to be called warts. We saw a cow a few weeks since whose back was literally covered. We hope some of our readers will be able to advise Mr. Brown what to do in the case of his heifer. In the meantime, we copy from Hooper's "Practical Farmer," the following suggestive observations. Cattle, he says, are subject to various excrescences growing from the cuticle at first, but afterward identified with the true skin. They assume many forms, from that of scales of greater or less thickness, and accompanied sometimes by chaps or sores, to fungous growths, of different size and hardness, and bearing the character of warts. They are occasionally very numerous and exceedingly troublesome; and they are most numerous and most troublesome about the teats. When they grow about the eyelids they are a sad nuisance to the beast. When there are only exfoliations and scales of the cuticle, friction with camphorated oil will occasionally remove them. It has been known to disperse the watery excrescences. Mercurial preparations, whether blue ointment, or corrosive sublimate and soap, are dangerous, but they will usually get rid of the smaller ones. When they are numerous, and particularly about the udder, the practitioner will probably try to remove the largest of them by means of a ligature passed round the roots. This, however, will often be an almost endless affair, and recourse must be had to the knife and to the cautery. The cautery will stop the bleeding, destroy the root of the wart, and thus prevent its springing again. When they are small, this will be most successfully attacked by means of the nitrate of silver, the warts being touched daily with it in a solid form, if they are few and distinct; or washed with a strong solution of it, if they are more numerous and scattered over a large surface. They have been attributed to various causes, as contusions, stings of insects, want of condition, inflammation of the skin; but in most cases the actual cause is unknown.

In case recourse must be had to "the knife and cautery," it will be necessary to cast the animal, and sear the root with a red-hot iron, as unless this is done the warts will speedily sprout again.

PLOUGHING IN MANURE.

Feeling myself called upon to reply to your correspondent, "H." who seems to be a "staunch friend of the harrow," I beg leave to answer in the first place, most emphatically, that while claiming to be no less a friend to the harrow than himself, I have "no experience" in harrowing in manure; believing the *plough* the only proper implement for burying manure, for any crop. Whether this view is sound or unsound, the practical farmer can judge. The harrow gives a superficial covering, and much of the coarse manure from the barn yard, is not covered at all. The plough gives it a deep bed. Its gases are evaporated to the surface impregnating the soil all through, which gases possess about all the fertilizing properties of the manure. The theory of its leaching and being lost has, I think, become an exploded doctrine.

The vegetable roots seek the source of these gases till they find the decomposing manure. When harrowed in there is a mere surface benefit—soon to evaporate, dry and waste.

The largest crop of corn I ever raised was with manure ploughed in. The largest winter wheat crop I ever knew in Massachusetts, nearly fifty bushels to the acre, was on good pasture land, dressed with pig manure, and ploughed in. Fallowing, with any green crop, or the turning in of mowing stubble with second crop, illustrates the principle of evaporation on the winter wheat crop, and its nourishing effects. I am unable to comprehend how the statement of "H." about the "pile of manure" applies to or explains his harrowing theory. But it is quite certain this fact proves nothing as to the usual manner of fertilizing. Of course a manure heap drenched by rains must enrich the soil on which it lies. "H." says on the "lands at the West, the Lord grows taller grass, keeps it in better condition than we overwise mortals do, but that he never owned a plough and does it by top dressing." A bounteous Providence has bestowed upon much of the soil of the West a degree of fertility which for a time obviates the necessity of either manure or "top dressing." But the time will come when the voice of Wisdom which directs "that man shall till the ground," and that he must "live by the sweat of his brow," will be heard and heeded.

Brooklyn, L. I., Dec., 1867. H. Poor.

SAFE AND SURE REMEDY FOR LICE ON CATTLE.

I was sorry to see in a late number of the Farmer so dangerous a remedy as unguentum recommended for use, and to stay its application, I forward you a receipe that I have used for ten years and have never known it to fail to exterminate the vermin without any injury to the cattle.

To one gallon of soft water add one pint of soft soap, and boil them together; then add one ounce of arsenic, and stir till well mixed; after this add another gallon of soft, cold water, and it is fit for use. The soap neutralizes the poison and renders it harmless to the cattle, but a dead-shot to lice and their eggs.

My manner of application, is, to take an old coffee pot and pour the liquid slowly upon the back of the animal, from head to stern, while two persons, one on each side, rub it in with old cards or swabs. David Currier.

Peacham, Vt., Dec. 2, 1867.

Ladies' Department.

From the Round Table.

LITTLE CHILDREN.

God bless little children!
Day by day,
With pure and simple wiles,
And winning words and smiles,
They creep into the heart,
And who would wish to say them nay?

They look up in our faces,
And their eyes
Are tender and are fair,
As if still lingered there
The Savior's kindly smile!
So very meek they look, and wise.

We live again our play-time
In their play;
Their soft hands lead us back
Along a weary track—
The pathway of our years—
Unto the time when life was May.

O! when my days have ended,
I would rest
Where little children keep
Their slumber long and deep;
My grave be near the little mounds
I know that God hath blest!

DOMESTIC ECONOMY;

OR

HOW TO MAKE HOME PLEASANT.

BY ANNE G. HALE.

CHAPTER VI.

MAKING AND MENDING MEN'S CLOTHING.

Mrs. Dall, in her admirable work upon the education and elevation of woman, says, very sensibly, that all men ought to learn to sew, "and so might the cares of many women be lightened;" and quotes the pleasant words of Sidney Smith to the same effect: "I wish I could sew," he writes to Lady Holland, "I believe one reason why women are so much more cheerful than men is because they can work, and so vary their employments." Every housekeeper knows how delightful such assistance from the male portion of the family would be when

"With eyelids heavy and red,
With fingers weary and worn,"

she goes on, day after day, and week after week, in the old routine—

"Stitch, stitch, stitch,
Stitch, stitch, stitch,"

for

"Gusset, and seam, and band,
Band, and gusset, and seam,"

till there seems no end to her toil, and no bottom to her work-basket.

The invention of sewing machines has indeed lessened the labors of some. But all cannot afford the more expensive kinds; and the cheap ones are, really, worse than none,—with their aggravations of bending and breaking needles and looped thread and uncertainties of stitch; so that the greater part of family sewing is still done by the old-fashioned machine of strong right arm and dexterous fingers, that never need repair, and whose work is always satisfactory.

We know that men might sew if they would; for "men-tailors" have the name of stitching better than women,—and what one man can do, so can another. Sailors, too, often accomplish marvellous feats in the way of embroidery and carpet-work, besides keeping their "sea-toggery" in good order, during their long voyages. And I remember a brown-haired boy, who sat beside me in my earliest school days, and measured his seams of patch-work with mine; and I often wonder if the world's approval, in these later years, of his scholarly translations and highly finished poems, have been as sweet to him as the admiration of his round-eyed school-mates and the praises of his proud and happy mother when they saw the quilt completed, and his own little bed was adorned with its yellow and crimson glory. Farther on, a sailor-boy; who, in his too short stayings at home, made merriment for many a winter evening, among a bevy of frolicsome girls, and whose dimpling stitches were as evenly set as any made by the best seamstress of the group.

Certainly, mothers ought to teach their little ones how to sew as soon as Nellie can handle a needle, or Tommy wants a bag for his marbles. I have in mind one rosy elf, whose blue eyes have not yet beheld the brightness of four summers who often busies herself in the fabrication of a bonnet, or a bib, or an apron, for her "darling dolly;" and whose hems and gathers are really creditable to her tiny ladyship. I venture to say it will not be long before she does her share of the family sewing.

Although men ought, and sometimes do, sew, as long as women are expected to sew for them they may as well set about it with a good grace. And, after all, there is a proud satisfaction in seeing how these "lords of creation" place themselves at the mercy of our needle and thimble and scissors;—weapons which, in the hands of a weak woman, have turned the fortunes of more than one of the world's heroes. Knowing, thus, wherein her greatest strength lies, of course the good housekeeper "will work willingly with her hands .... will not be afraid of the snow for her household. .... Her husband is known in the gates, when he sitteth among the elders of the land .... and her own works praise her in the gates."

But, then, she sometimes needs a little instruction in the selection of materials and in the preparation of garments; matters in which good judgment, and good taste, and no small amount of ex-

perience, are needed, before just the right thing is obtained and made. It is well to remember, in the first place, that an inferior article always proves the most expensive in the end. Have an eye, and a hand, also, to economy, in the purchase of dry goods, and get the best, always. Not the nicest—nor the brightest—but *the most suitable*,—the wearer's occupation and age and circumstances should determine that.

As to colors, grays and drabs are the best for common wear. Browns and blues and greens, and black, also, show dust, and turn dingy, and look shabby much quicker than lighter colors; so that farmers and grocers and mechanics ought not to use them, except for Sunday, or *dress*, suits. If you have brown, even for those, see that you get one with a golden cast. Beware of a *purplish*, or a *red* brown; and never, on any account, buy a purple, or a plum color or any of the purplish slate shades;—the sun turns them very soon, and acids are sure to spot them. These, with a sort of dark, purplish blue are the worst colors for men's or boys' wear. The black and gold and brown and gold mixtures, the gold being a silken thread, are excellent, both in color and material.

Double warped, and doubled and twisted warp, and the tricot, especially the French tricot, are the strongest of all cloths. German broadcloths and French cassimeres are considered by many superior to the English and American; so are the beaver and pilot cloths. Doeskins and satinets made in England are generally better than American, though, occasionally, we find some bearing American stamps that are really good. All sorts of fancy vestings and trimmings are usually more satisfactory if of French manufacture; and "more's the pity;" for by this time the American people, with their superior machinery and abundance of good materials, ought to do as well in these things as any European nation.

But the trouble is that there is too much "imitation," and *fraud*, to speak plainly, both in the substance of cloths and in their dyes. Shoddy enters into nearly everything. Look sharp, or it will evade you in some seemingly stout, strong satinet or doeskin, or beaver-cloth. Get a small strip, and pick it and pull it all back to wool. If the fibres are long, tough, yet soft, the material is good. If any cotton has been carded with it the wool is probably second-hand—shoddy. Don't buy it. It isn't worth the making. A good way to test the cloth is to burn the threads. If they are all wool they will crisp, and crust up. If they are cotton, or have a considerable portion of cotton, they will burn clearly and bright. Cotton and wool cloths that do not pretend to be all wool are often very strong, and serviceable for boys and mechanics; but the sun and air generally turn their colors very quickly. Cotton jeans, and denims, and linen, and cotton and linen for summer wear, should be thickly and evenly woven; and if of one color, only, will look better after washing than plaids or stripes or checks. Black and white checks, if of cotton and wool, are apt to turn brown in wearing, and look streaked after wetting.

Avoid large figures, and plaids, and all unusual colors, in the linings of garments. Also in the trimmings. All such things are signs of an incorrect taste, and show a lack of good sense. Flashy-and-fine is twin sister to Shoddy.

The fashion of making the vest of the same cloth with the pants, or of having coat, vest, and pants alike, has been good economy. It has also been the neatest and most becoming style ever invented for men; and prudent and judicious people are sorry to see that the old fashion of fancy vestings is returning. Silks and satins are more costly, and never so durable as woolen cloths. Velvets are very expensive, and soon lose their beauty. (Of course none but the vainest of fops would ever wear a velvet coat, or pants; and they are never within sight or hearing of this paper.) Valencias and other fancy goods look spotted and soiled in a short time. They will not bear scrubbing, and are generally miserable enough after washing. Nothing makes a man, or a lad, look more shabby than a faded or a defaced vest; and these styles cost so much that most people cannot afford to lay them quickly aside; so they are obliged to keep wearing the hateful things, feeling mean and disagreeable whenever they catch a glimpse of them, and glad enough of any pretext for getting on others.

In selecting cotton cloth, or cotton flannel, for underclothing, see that it is firmly and evenly woven; and rub it briskly—especially the cloth—to ascertain if it doesn't owe its thickness to sizing. For very nice garments, or for collars, wristbands and bosoms of shirts, get bleached goods or linen. If you want warmer material, and such as will last a long time, buy the unbleached and bleach it yourself. By calendering and dressing, bleached cotton is about half worn out before it is ready for the market. A certain corporation (which shall be nameless) has boasted that during the war its taxes were paid by the additional profit gained from extra stretching of its cloth.

The process of bleaching is very simple. The following formula is the same as that used in many bleacheries, and a large number of housekeepers have tried it, with great success: For thirty yards of cloth procure half a pound of chloride of lime. Dissolve it in one pail of boiling water. Strain it. Add two more more pails of boiling water Wet the cloth thoroughly in warm water. Put it into the hot lime-water. Let it lie an hour, meanwhile turn it continually that every part may be well saturated. Wring it out, and wash it in clear warm water, and hang it up to dry. *Use no soap in any way.* If you choose, you may pass it through a rinse tinged with blue. The cloth will look equally white and clear with that which is stiffened and dressed, and in wearing will prove much stronger.

Be careful how you choose linen. Don't buy till you have thoroughly tested it. There are many mixtures of cotton and linen, and cotton cloth of a linen finish, which sometimes deceive the most practiced eye. Get a small piece and rub and scrub it till all its stiffness is gone. Then wash and dry it; afterward, iron it. If it looks glossy after ironing you may venture to buy, it is good. The undressed linen is generally trustworthy, though sometimes it has a cotton woof. You can tell whether it is so or not by ravelling a few threads. Cotton threads are rough, and break easily; linen—smooth and strong. It is well to do the same with a sample of the dressed linen after it is washed. Flannel for under-jackets and drawers if half cotton is less warm, but does not shrink, or mill, so badly as the all wool. Blue-mixed, gray, and scarlet are less liable to shrink than white. These are the only suitable colors for underclothing. The French flannel is generally more nicely finished than the American; but it is no better than our best kinds. Persons whose employments expose them to great extremes of heat and cold find their health much benefited by substituting flannel shirts for the usual plain white cotton, or the blue and white checked, or striped drilling ones. The fancy flannels that are thus used, whether striped, plaid, or figured, need a good deal of care in washing and drying.

The most comfortable under garments are fabricated of yarn—either woven, knit, or crocheted. If you have a good deal of leisure knit, or crochet them; they will last longer than those that are woven. Stockings, mittens, and wristlets, are better knit, or crocheted, than woven. Look out for cotton in the yarn. Test it as you would the threads of cloth purporting to be woolen. Cotton stockings that are woven will not last one-half as long as those that are hand-knit. They cannot be knit so rapidly as woolen, but, in the end they *pay*. The superiority of home-made socks and stockings was well shown by the great demand for them during the war;—the long tramps of the soldiers gave all feet coverings severe tests.

Next to selecting materials comes the cutting and making of garments. When a girl marries she is supposed to know how to do all plain needlework. But the truth is few, very few, do. Of cutting and fitting they are lamentably ignorant, even if they can sew a straight seam just as it ought to be done. Those who believe that marriage is not the goal, but the starting-post, of their lives, will soon learn to do all these things well; for they will have plenty of opportunity, and they will be sure to improve it. To all such these suggestions will not seem of little consequence. School-studies, music, drawing, embroidery, deeds of charity, missionary-work, teaching, shop-work, mill-work, housework, some, or most of these occupations have so filled your time that the plain sewing that you learned so long ago must now be learned over again. Let us begin with a shirt. You remember when you were a little girl of making a shirt for your father—button-holes and all—and how proud you felt at the praises bestowed upon the neatness and nicety of the work. You think you might possibly recall that skill—one sometimes does—and you feel mortified to see how clumsy and awkward you are in managing such a simple thing. Don't be discouraged. Pick out the stitches and try again. "Even to seven times?" Yes, to "seventy times seven," if it be not properly done.

Having succeeded in setting your stitches well, you will wish to attempt cutting.

Take six yards of cotton cloth. This will make two shirts, It is as much as you can handle easily at once. Or, you may take seven, if you wish to line the backs. It is more economical to cut two from the same piece; because some portions can be cut at the side, and just beyond others. The yard wide, or the thirty-eight-inch width, will cut to the best advantage. If you buy the bleached and dressed, wash and scald it before cutting; because it will shrink at least *ten* inches in the seven yards. Then dry and iron it very smoothly, being careful to keep it straight, particularly the selvage. If you bleach the cloth yourself you will use the same care in ironing it, and fold it evenly in the middle of the width.

Some men are always troubled by badly fitted shirts,—the neck and front are the chief difficulties. Accuracy in cutting, and in the allowance for seams, will prevent this. Procure a pattern from one who makes the cutting of shirts a special business; or, rip an old shirt, and iron every piece, and cut a pattern from it, in stiff paper. Measure the person to be fitted around the chest, outside the vest, directly under the arms. Also around the neck,—thence, to the top of the shoulder. Lay your body-pattern upon the cloth, and with these three measures calculate the slope of the shoulders, and the size of the yoke, before cutting. The back should be two or three inches fuller than the front, and should be gathered between its two shoulder slopes, being previously lined to the depth of twelve inches below the yoke; the body, about forty inches long. The arm size is cut according to the pattern; using some discretion as to the size of the person's arm, and the width of the yoke.

The linen for the shirt front should be about half a yard long. If you wish it closely plaited, one width will only make the fronts of one shirt. Some people make three fronts from a width by leaving a portion of the front single; thus obtaining fronts for three shirts from one yard. If the linen be dressed, wash it and scrub it soft before cutting. Fold a hem an inch wide along one side, straight, by a thread,—for the left front, on the outside of the cloth;—and stitch it very nicely, the whole length, about one-sixteenth of an inch from the edge; for the right front the hem is turned on the underside of the linen, and plainly hemmed. Measure the plaits, very carefully, as

you fold, and baste them at each end of the front, so that it shall be exactly as wide and as long as the pattern; and from the front of the body cut the cloth of the same shape, to make a place for its insertion. Beside lining the back, the front of the shirt from the arm-size to the linen, should be lined.

Make a strap one and one-quarter inches long and one inch wide, in which cut and work a button-hole. This strap is to be stitched at the bottom of the hem, with the linen front, into its place. It is to fasten down the front to a button at the waistband of the pants, and prevents its rising and setting out.

Stitch the bosom into its place; hem the lining over the side-seams, and cover the belt-seam with linen tape, or a folded strip of the cloth. Stitch the shoulder parts of the yoke to the sloping top of the shirt band, both front and back. Gather the fulness of the back—the lining separately from the outside—stroke the gathers carefully, and fell the middle of the yoke to them. Then cut the top of the linen front to match the slope of the remainder of the yoke, and fell it on. Take the measure of the neck, and calculate by it how deep to hollow the centre of the linen front,—if you have a pattern, shape it by that.

Next, stitch a binding—one inch wide in the middle, but sloped from the bend of the yoke till it is half an inch at the ends—around the neck.

For the length of the sleeve, measure the arm from the top of the shoulder to over the wrist-joint—the elbow being bent at a right angle. The width is determined by the arm size, which it enters straight. It may be cut away to half its fulness at the wrist, and finished with a binding an inch wide, to which a wristband may, or may not, be sewed, according to the fancy of the wearer.

The sleeve should be left open three inches, at the wrist; the opening being hemmed as narrow as it can be with neatness. The beginning of the opening should be button-hole stitched for one sixteenth of an inch, and also barred across in button-hole stitch, to prevent tearing.

Stitch the sides of the shirt, and fell them, to within twelve inches of the bottom; and then hem this; and finish the beginning of the side hem like the sleeves; or else cut a two-inch square of cloth into two three-cornered pieces, and sew in the straight sides of each from the point, one half their length, and then hem the remainder, smoothly, over upon the wrong side of the shirt.

In shaping collar and wristbands suit the fancy of the wearer, and also in attaching them to the shirt, or not. Even when they are sewed to the shirt it is well to have others that can be buttoned on. Don't use or, rather, don't consent to the use of any of the paper abominations—either collar, bosom, or wristband—by any one of whose linen you have the oversight. None but slack and inefficient seamstresses would ever feel satisfied with the sight of them. Pretence and sham follow in the same category with flashy-and-fine and shoddy.

The needlework of a shirt is simple, except the making of the buttonholes; but a little care and attention will soon conquer those. Be sure to cut the slit straight, and no longer than will admit the button. Then sew its edge overstitch—take up not more than three threads. Then pass a strong, coarse thread around the aperture, sewing it securely at each end, to form bars. Take thread of the same size that you have stitched with and begin it at the left hand corner. Put your needle through the cloth, from the inside, exactly under the coarse barring thread, as if for over-stitch. But do not draw your thread wholly through—leave a loop, which must be taken upon the needle, and through which, then, the whole length of thread is drawn tightly. Continue the work in this way around the button-hole, making the stitches all of the same depth, (three threads,) and make them lay exactly together, so that the chain formed by the loops on the edge is perfectly even. To finish the corners—after working all around—bar them strongly, and then work over those bars with the looping stitch just as the sides have been done. The beauty of a button-hole consists in the evenness of its chain and the regularity of its stitches.

If studs are worn in the front, make a fine strong cord by twisting two or three coarse threads together, and fasten it securely to the end of the lowest button-hole on the right hand side of the front. This cord should be long enough to wind around the neck of each stud after it is placed in its buttonhole, and to pass from the lowest one to the highest, and then to return, in the same way, to the lowest one, where the two ends of the cord should be tied. By this means the studs will never drop out, as they are so apt to do if not secured.

In sewing on buttons give each six stitches; (of course you will use those that are pierced—metal eyes would corrode, and stain the cloth;) then take the needle through to the outside of the cloth and wind its thread around, between the button and the cloth till you have formed a good neck to the button. Then pass your needle back to the wrong side of the cloth to fasten off,—which do, strongly.

I have been minute in these directions because the work required for a shirt includes all that is needed in the making of many articles of clothing, and if you can cut and make this properly, you can easily manage all other under-garments.

In mending shirts, when a patch is needed, put it on of a square shape, and see that it lies flat; an irregular patch, or one that looks like a pancake, is very ugly. Put as few patches as possible on the right side. Line all thin places as soon as you find them; this will prevent, for a long time, the

necessity of a patch. Very frequently a piece may be set in, instead of covering the outside.

Darn cracks and bracks with very fine thread; and be sure that you don't draw, and pucker them. Take short, even stitches; be as particular about them as if you were doing embroidery: indeed a darn may be made to look as handsome, and will be certainly more to your credit than the nicest embroidery.

When the plaits of the bosom crack, sew the raw edges very closely together with the finest thread, —taking the very least of seams. If the linen breaks away at the side of the bosom set in a piece neatly. When the button-holes of the bosom-front are badly worn, cut off the hem; and put in its place a binding of the same width, stitching it as if it were the original hem, and make therein new button-holes. If buttons get strained and loose cut them off and sew them on again; and always be quick to supply the missing buttons. When the edges of collars and wristbands are worn through sew them over, very evenly, in button-hole stitch,—it gives a handsome finish to the edge, and they will then last nearly as long as new.

As soon as shirts and other under-clothing are actually past mending, cut out whatever portions are not entirely gone, and assort them in bundles. Keep the best for mending with,—half-worn cloth is better than new for this purpose. Prepare the remainder for bandages, to be used in case of accident, or in sickness; and handkerchiefs, for the same occasions. Good wiping cloths—for tumblers and other glass ware—and dusters, and holders may be made from the more inferior parts, before the rag-bag gets its share.

This subject will be continued in the next chapter.

—A case has been recently recorded of the death by drowning, of a young child who fell into a wash tub, and of the death of another who fell into newly made soap.

IT'S ONLY A LITTLE GLOVE.

BY MATTHIAS BARR.

It's only a tiny glove,
So ragged, and old, and worn—
You scarce would stoop in your daily path
To look at the thing forlorn;
You never would think by those fingers small,
A heart could be rent and torn.

It's only a little thing,
This treasure I hoard and keep;
But many a vision of joy it brings,
And sometimes it makes me weep,
And I dream a dream of a fair-hair'd boy
Under the flowers asleep.

It's only a little glove,
Yet dearer it is to me,
For the restless feet that pattered and beat
Their music upon my knee—
Dearer for sorrow, and care and pain
Than the riches of land or sea.

It's only a tiny thing;
But I love it with deepest love—
A golden link in the chain that binds
My soul to the world above;
And I know I am nearer to Heaven each time
I bow o'er that tiny glove.

FLOWERS IN WINTER.—The best geraniums for winter blooming in the house are the different varieties of the Zonale or Horseshoe family. These are free growers, adapt themselves well to the atmosphere of the parlor, and are seldom out of bloom. To flower well, they should be potted on through the summer, and well pinched to make them of good shape. The colors are white, pink, orange, red, scarlet and crimson, in many different shades. If bedded out in the summer, they will grow very strong and may be potted before the frost, and will soon bloom. The varieties with gold and silver foliage are not as well adapted for parlor culture as the plain-leafed kinds, but do well in a green-house. All the varieties are good; but, for the parlor, those of dwarf habit are preferable. The rose, nutmeg, ivy, apple and oak geraniums also do well in the parlor, but are desirable rather for foliage than flower.—*American Journal of Horticulture.*

THE
NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

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LIFE IN FEBRUARY.

"Old customs! Oh! I love the sound,
However simple they may be:
Whate'er with time hath sanction found,
Is welcome, and is dear to me."

YOUNG AMERICA is a stout, progressive, and generally well-behaved fellow; thinks well of himself and his possessions, and cares little for what has been done by the old 'uns who have preceded him. Nevertheless, it is curious, interesting, and perhaps instructive to read and dwell a little upon some of the singular customs of bygone days, or ages, as well as on some that exist at present in various parts of the world.

When a man is married in Abyssinia, and immediately after the matrimonial ceremony is concluded, it is a custom for his *friends* to assemble, and with whips made from hippopotomus hides, give him a most unmerciful flagellation, in order to test his courage for endurance! Whether this is to test his courage in war or hunting, or under the discipline and torments of his new wife's tongue, does not appear. Sometimes these scourgings are extremely severe, but the poor spouse bears it all with the heroism of a martyr, while his delighted bride smiles approvingly at every crack of the cruel thong!

Some tribes of Esquimaux live in huts under ground, where the frost penetrates the earth forty or fifty feet deep; and they have a custom of building a hut, and when parents or other relatives are aged, infirm and past service, of placing them in the hut alone, with a small amount of food, and leaving them there to live and enjoy themselves as long as they can! A more humane custom, but hardly less singular, is, to abandon the hut entirely where a person dies! No matter how valuable it may be, whether one just erected, upon which all their skill and means have been expended, or whether one tumbling to pieces with use and age, the deceased is left there, and access to the hut is closed forever.

In good old enlightened England, they had a thousand curious customs, and it is quite singular that more of them have not descended to us. A number of these customs were observed in the month of February. One was to eat pancakes and fritters on Shrove Tuesday. *Shrive* or *Shrove*, we suppose, means confession of sins. Taylor, the water-poet, in his works, 1630, has a curious account. "Shrove Tuesday, at whose entrance in the morning all the whole Kingdom is in quiet; but by that time the clock strikes eleven, which, (by the help of a knavish sexton,) is commonly before nine, then there is a bell rung, called the pancake bell, the sound whereof makes thousands of people distracted, and forgetful either of manners or humanitie; then there is a thing called wheaten floure, which the cookes do mingle with water, egges, spice, and other tragical, magicall inchantments;

and then they put it, by little and little, into a frying pan of boiling suet, where it makes a confused dismall hissing, until at last it is transformed into the forme of a flip jack, cal'd a pancake, which ominous incantation the ignorant people doe devoure very greedily."

At York, they had a custom for a long time, that all the apprentices, journeymen, and other servants of the town, had the liberty to go into the cathedral and ring the pancake bell on Shrove Tuesday; and people came, not only from the city, but flocked from the country, to take a part in the fun. They also exercised themselves in running, arching, leaping, wrestling, mock-fights, &c. All this was innocent and very well, but they had practices which were cruel and barbarous, and had the blows been upon their own backs, as in the case of the Abyssinian husband, they would have been less censurable.

One of these practices on Shrove Tuesday,—when they ought to have been confessing their sins,—was to blindfold hens, or tie a cock to a stake, and, standing at a distance, throw cudgels at it until the poor creature was beaten to a jelly. It was not uncommon for religious (?) parishes to manage this cudgelling of the cocks, and apply the money collected in aid of the poor rates!

Hogarth satirized this barbarity in the first of his prints, called the "Four Stages of Cruelty."

A custom has long existed among ourselves which is cruel and unworthy of the age. It is called *shooting at a mark*,—that mark being a fowl, and is a little less cruel than cudgelling an animal to death, because life is terminated by ball or shot. Even in this case, the poor birds are terribly frightened, and often severely injured without drawing blood.

Another custom of great cruelty is that of cock-fighting. It has obtained a considerable foothold in some portions of New England, and attracts young men and old into some of the most pestilential dens in the land.

All these cruel practices are inhuman, debasing, and unworthy the age in which we live. They have a tendency to make men selfish, unfeeling and cruel everywhere. Our laws punish them, and it is the duty of every good citizen to prevent them, as far as lies in his power. Perhaps the greatest amount of cruelty inflicted is that upon horses; that is not usually a systematic cruelty, but springs from passionate excitement of the moment.

We must qualify what the poet has said at the head of this article, a little, so that no custom which we remember with respect shall be cruel, or in any way debasing, or shocking to the best feelings of our natures.

SILESIAN AND SAXONY WOOL.

The letter from Mr. Tellkampf, which we publish on another page will attract the notice of those of our readers who are interested in wool growing. He says that the present tariff operates seriously against a supply of several qualities of wool needed for various descriptions of woolen goods. But instead of proposing that the duties on these kinds of wool should be reduced, he suggests that the manufacturers invest one hundred thousand dollars in a stock farm for breeding such sheep as will produce the wool they need; and from which farmers may be supplied with rams of the desired quality.

While this may certainly be received as evidence of the good faith of the manufacturers, and as a very liberal proposition on their part, we must say that we think some simpler plan, and one more in accordance with the usual course of business in this country, may be adopted to stimulate the production of the desired staples. It is so obviously for the interests of wool growers to furnish every variety of product required by their customers, the manufacturers, that we believe our farmers will readily make any changes in their flocks necessary to enable them to supply the demands of the market. Still some union of producer and consumer may be necessary to secure the needed importation. The proposition, however, of Mr. Tellkampf has not as yet been acted upon by the manufacturers.

In this connection we may be pardoned for publishing the following extract of a business letter recently received by one of the editors of this paper from a leading wool merchant in Boston:—

The universal feeling with wool dealers and wool manufacturers is, that the fine wool of the country has been materially injured by the introduction, so generally, of the heavy, greasy bucks of Vermont. While the supply of wool in the country was less than the demand, Vermont, by holding back her wool, got as much for it as Ohio and Pennsylvania did for the lighter and cleaner wools grown by them. Consequently, it was very nat-

ural that the latter should strive to increase the weight of their fleeces, even by the addition of grease, when they found that manufacturers did not appear to make the distinction. Such now is the prejudice against this class of wool, with dealers and manufacturers, that it is hard to induce one to look at a pile of Vermont wool.

May not this account for the complaint of the *Ohio Farmer*, recorded in the "Agricultural Items," in the NEW ENGLAND FARMER, of 14th ult., viz.: "Three years ago I put $2000 into Vermont sheep, and now I cannot get $500 for them."

MILK PRODUCERS.

An adjourned meeting of the Milk Producers' Association was held at Meionian Hall, in this city, Thursday, Dec. 26. There was an attendance of some two or three hundred delegates of clubs and neighborhoods, and individual milk producers. The President of the Association, Lyman Belknap Esq., of Westboro', was not present at the opening of the meeting, and the senior Vice President, J. W. Robertson, Esq., of Quincy, acted as chairman of the convention.

After the election of W. Ramsdell, of Milford, N. H., as one of the Directors of the Association, and after some general remarks by several gentlemen as to the purposes, objects and work of the Association, D. Rounds, Esq., from the committee appointed by the previous meeting to prepare a Constitution and suitable By-Laws for the government of the Association made a report which was accepted. Each article was then taken up separately, freely and ably discussed, and after some alterations, the following was adopted by the Association as its constitution and by-laws:—

Constitution.

PREAMBLE.—Believing the right way to promote the interests of any community financially, is to encourage the producers of that community, by securing to them a full and just recompense for their labor, skill and capital invested; therefore, we, the Milk Producers of Massachusetts and New Hampshire do organize ourselves into a mutual benefit association, and bind ourselves to be governed by the following Constitution and Laws:

ART. I.—This society shall be called "The Milk Producers' Association."

ART. II.—Its officers shall consist of a President, three Vice Presidents, Secretary, Treasurer, and seven Directors, who shall be chosen annually in the city of Boston, on the first Tuesday in December, and shall be so distributed as to equitably represent each section of the Milk producing territory interested in this association.

ART. III.—1. The President shall preside over the meetings of the Association and Executive Board, when not necessarily absent, but in case of absence the senior Vice President present shall take the chair and perform the duties of the presiding officer.

2. The Secretary shall keep a record of the proceedings of each meeting of the Association, and its Board of Officers; and shall preserve all reports of committees, and conduct whatever correspondence the business of the Association may require.

3. The Treasurer shall have in his custody all the funds of the Association and disburse the same upon the order of the Secretary, countersigned by the President. He shall also present at each annual meeting, and oftener if required, a clear and accurate statement of the financial condition of the Association, and as his office is one of trust and responsibility he shall be required to give bonds with at least two satisfactory sureties for the faithful performance of the duties of his office.

4. *All* the officers of the Association shall constitute its Executive Board, and it shall be their duty to meet quarterly, and oftener if the interests of the Association require, also, to confer with the purchasers of milk, and establish once in six months the price at which milk shall be sold by the members of the Association, to be governed by the following consideration, viz: the cost of feed,—the time of year,—the distance from market, and the expense of transportation.

ART. IV.—The annual meeting of this Association shall be held in the city of Boston on the first Tuesday in December, at which meeting the Board shall present its annual report; after which the order of business shall be as follows:—

1. The report of the Treasurer.
2. The election of officers.
3. The transaction of such business as may relate strictly to the objects of this Association.

Other meetings of the Association may be held during the year should the Board deem it expedient to call the same, or should a request be made in writing by not less than fifteen members.

ART. V.—Milk producers directly interested in the objects of this Association may become members of the same, by signing the Constitution and Laws, and paying into the Treasury one dollar, and shall thereupon receive a certificate of membership which shall entitle him to vote personally or by proxy at all its meetings.

ART. VI.—Alterations or amendments may be made to this Constitution by a vote of two thirds of the members present at any annual meeting.

By-Laws.

1. As order is essential to expedition in the transaction of business in a deliberative body, therefore this Asssociation will observe those rules which are generally regarded as law in parliamentary debate.

2. No member shall be allowed to speak more than ten minutes upon any one motion unless by mutual consent the time shall be extended.

From the somewhat extended discussion which resulted during the consideration of the constitution of this Association, we inferred that the immediate cause of the present movement was a proposed reduction of the price of milk, on the part of the dealers in the article, for the present winter.

It was stated that although the cost of cows and hay had about doubled within four or five years, milk is now actually sold for less money in currency than it formerly brought in gold. Though the farmers sell by the old fashioned quart, the dealers sell by the wine measure,—about one-fifth less. In Derry, N. H., for the six summer months, the can of eight large, or over ten small quarts, was sold for thirty cents.

During October and November, thirty-four cents were allowed, and thirty-eight cents per can for the other four winter months—throwing the hard month of April into the summer range of three cents per quart, city measure. It was said that though the milk might be sweet when delivered, the dealers returned it to the farmers if it soured on the way.

And yet all these matters of price, all these terms and conditions, changes and alterations, were arranged and made by the dealers alone. The producer had no voice in the matter, no part in the discussion, no hand in the bargain, save that of unconditional acceptance or rejection—of keeping his milk or taking the price "ready made," for him.

The opinion was expressed by several members, and apparently acquiesced in by the convention, that the consumer paid enough for his milk. The trouble is that by some means a fair proportion of the money paid by the consumer did not reach the farmer who owned, fed and milked the cows. It was stated that on one route a can of milk was worth thirty-one cents at the upper end, and sixty-eight cents at the lower end. The fact that the middle-men in some of their contracts with the railroad corporations had secured the exclusive privilege of transporting milk over certain portions of their roads was assigned as one of the reasons for this undue difference between the price obtained by the farmer and that which was paid by the city family.

While the convention, therefore, disclaimed any wish or disposition to increase the cost of milk to the consumer, a very strong desire was expressed that a better quality than that now furnished to them should be supplied. To effect this object various plans were suggested, and the following resolution was unanimously adopted:—

Resolved, That we respectfully invite the City Government to appoint a thorough chemist as City Milk Inspector.

At the close of the forenoon session, a call for signatures to the constitution was made, and we understood that seventy-five different towns were represented. The election of officers made at the last meeting was then unanimously confirmed, as follows:—

President—Lyman Belknap, of Westboro'.
Vice Presidents—J. Robertson, of Quincy; L. Crosby, of Billerica; Dea. Geo. Shute, of Derry, N. H.
Secretary—D. Rounds, of North Wrentham.
Treasurer—S. H. M. Hurd, of Wayland.
Directors—W. S. Pillsbury, of Londonderry, N. H.; C. A. Hubbard, of Concord, Mass.; Hammon Reed, of Lexington, Mass.; Elias Colburn, Temple, N. H.; C. H. Haskell, Harvard, Mass.; Gen. —— Nason, Hampton Falls, N. H.; Samuel Osgood, Sterling, Mass.; Wm. Ramsdell, Milford, N. H.

These gentlemen also constitute the Executive Committee; in other words, the men who are expected to do the work of the Association.

In the afternoon, after the transaction of business, some time was spent in an informal but animated conversation. The anomalous condition of the farmer, as a deeply interested but utterly *silent* partner in the great milk supplying business, was depicted in strong and somewhat indignant language.

The liberality and fairness of the convention was, however, manifested by a unanimous vote to allow Mr. J. D. Brown, of Concord, Mass., to express his views. For the past twenty-three years Mr. Brown has acted as "middle-man,"—or as he considered himself, an agent,—between the farmers of that section and the milkmen of the city. He thought there was much misapprehension on the part of farmers in relation to the profits on milk after it left their hands. Until the late rise in prices, he had received for freight and commission, four cents per can of seven large quarts, and since "the doubling up" of prices, five and one-half cents per can. He stated that the common price of milk in Boston is now eight cents per small quart. He himself was a milk producer, as well as middle-man; had not got rich from his long service in either capacity; had delivered milk to a large number of distributers in the city, and while some had succeeded, others had failed in the business, and he thought the farmers of Concord and vicinity made money as fast as himself or the city peddlers. If this Association could devise any fairer way than the present for doing the business, he was willing to stand aside. For some months past the supply of milk on his route had exceeded the demand, and he had been obliged to refuse to take all that was offered. He had also in some cases transported and delivered milk in cans for farmers who desired him to do so, for which he charged three to four cents per can. In such cases the farmers provided for its distribution in the city themselves.

During his remarks, Mr. Brown gave way frequently to members who asked questions and controverted some of his positions, to whom he respectfully replied, though he may

have failed to adduce reasons satisfactory to the convention for the difference in the price paid by the consumer and that received by the producer, in many cases.

After Mr. Brown had taken his seat, his statements were reviewed at length by Mr. Ramsdell, of Milford, N. H., and by W. S. Pillsbury, of Londonderry, N. H., who thought that he and the farmers of Concord must be exceptions to the general rule.

In reply to a direct question put to one of the milk producers, whose name we did not learn, the statement was made that nine quarts per day for nine months of the year,—which was his usual time for milking cows,—was a fair average production of milk.

The Executive Committee were directed to have the constitution printed and forwarded to the members of the Association, and to milk producers who are not members, with a request that they circulate it among those interested, for their signatures.

The committee were also directed to assign topics for report and discussion at the annual meetings of the Association. This we hope will be done immediately. Talk is plenty wherever men congregate in this country, but facts and practical plans are sometimes scarce. There are many questions connected with the milk business which should be deliberately investigated. Topics calculated to bring out important facts should be assigned a year in advance, to afford time for thought, inquiry, and arrangement. Studied reports on the cost of producing, of transporting, and of peddling milk; on the relative value of milk for cheese and butter, manufactured at home or in the factory, and many other subjects, such as breeds of cows, variety of feed, &c., would give great interest to the annual meetings.

That the Association embraces men capable of doing justice to any of these topics must have been evident to all who attended the late meeting. We have great faith in the efficacy of facts, and in the "sober, second thought of the people," to correct the evils and injustice which individuals and classes occasionally suffer from wrong laws or practices. Within the past twenty-five years there has been a pretty thorough revolution in the modes of marketing our farm products, and it is not at all surprising that some of the details of our present system should need a little adjusting, or be susceptible of some improvement. And we are quite hopeful that this Association will be able to effect the needed adjustments and improvements in the important business of furnishing city and village families with a pure article of milk at reasonable prices.

For the New England Farmer.

CHEMICAL TERMS---No. VII.

Fermentation.—Certain chemical combinations take place in animals and vegetables during life, by which are formed animal and vegetable tissues,—albumen, mucus, fat, starch, gum, sugar, &c. These are called proximate elements, and sometimes organic products. They readily undergo decomposition. They are made up from various combinations of carbon, oxygen, hydrogen and nitrogen. These are called ultimate elements, and are the principal constituents of all living organisms. To them are added in minute quantity, a few other substances, as sulphur, phosphorus, potassium, iron, silex, &c.

As soon as life ceases in organic bodies, nature commences a process of decomposition, the object of which is to resolve these proximate elements into the ultimate elements of which they are constituted. In all the changes that take place, the form only of the organic body disappears. The elements which compose them are unchangeable. We no longer see them, because they are converted into invisible gases. This process of decomposition is called fermentation, putrefaction, decay. It is really but one simple, continuous process, for if, under certain conditions, gluten, starch, and sugar are left to act mutually upon each other, they will be entirely changed, so that their ultimate elements will be set at liberty to enter into new combinations. Various changes occur during this process of decomposition, which we may modify or arrest for our convenience or use,—thus subjecting the forces of nature to our service. In examining the process as it goes on, we may divide it into several stages. These stages are marked by the presence of certain new products, or chemical combinations, which were not before apparent, or at least not in the same forms which they now present. Thus starch is changed into gum or dextrine. Gum is changed into sugar; sugar into alcohol; alcohol into acetic acid, &c. Chemists are in the habit of calling these several changes so many kinds of fermentation, as though they were distinct and separate processes. Thus they speak of saccharine or sugar-forming fermentation, vinous or alcoholic fermentation, and acetous and putrefactive fermentations.

Some have gone so far as to point out twelve distinct fermentations, each marked by some distinct product,—but I shall speak only

of the four kinds above named. The process of fermentation is somewhat varied, according to the substances upon which it acts, and the circumstances under which it is carried on. It may be more readily excited, and carried on more vigorously, by the addition of some ferment. When fermentation is set up artificially, the ferment most commonly used is called yeast,—a substance prepared from the altered gluten of barley in the process of brewing. Any albuminous substance in a state of decay, as flesh, fish, glue, cheese, &c. will produce the same result in time, but the yeast from malted barley seems to possess this power in the highest degree, and acts more rapidly than any other substance. Yeast is produced from the gluten of barley acted upon by a substance developed in the process of malting, called *diastase*, whose nature and mode of action do not seem to be well understood. If this substance or a mixture containing it, be added to a mixture of starch and water, or of vegetable substances containing starch, the starch will be changed into gum or dextrine, and this will be changed into sugar. This is the first kind of fermentation, or as it is called, the saccharine or sugar-making fermentation. Now if this process is allowed to go on, or if to a solution of honey or grape sugar in water, yeast be added, the sugar will part with a portion of its carbon and oxygen and be converted into alcohol. The portions of carbon and oxygen which the sugar has lost will combine and form carbonic acid, and thus the products of this kind or stage of fermentation will be alcohol and carbonic acid. This is the fermentation which takes place in the working of wine, cider and beer, all of which liquids contain sugar and albuminous matter. The intestine motion that goes on in the liquids during the process, is owing to the formation of carbonic acid which rises to the surface. This process goes on until all the sugar present is converted into alcohol, provided there is also present sufficient albuminous matter or ferment. If there is not, a portion of the sugar remains unchanged, giving to the resulting liquid a sweet taste. It is in this way that sweet wines are prepared,—a portion of the sugar contained in the grape juice remaining unchanged. When the process of fermentation in cider is arrested by the addition of any substance having the power of arresting it, a portion of the sugar remains unchanged, and the cider is thereby rendered sweet.

The vinous fermentation, or the conversion of sugar into alcohol, may be arrested by the essential oils that contain sulphur,—as the oil of mustard and horseradish, or by the action of sulphurous acid, which has the power of rendering the yeast inactive. Sulphuric acid also possesses the same power, which is more especially shown in rendering inactive the fermenting matter in putrefactive fermentation. Hence sulphate of lime, iron and zinc are used in putrefying masses as deodorizers. They act by preventing for a time, the evolution of offensive gases. The sulphite of lime, which is a combination of sulphurous acid with lime, has recently been used to arrest vinous fermentation. Care should be taken that enough of this substance should not be added to the fermenting liquid to leave the smell or taste of sulphur.

In the acetous fermentation, the alcohol previously formed from the sugar, is converted into acetic acid or vinegar. The alcohol is oxydized by the oxygen of the atmosphere. Hence it is necessary in this process that there should be free access of air.

If the products of vinous fermentation, as wine, cider or beer be exposed to the air at a temperature over 66° F., and if some ferment be present, and especially if some vinegar be added to it, or some of that slimy substance found at the bottom of vinegar casks, called mother, this form of fermentation will go on till all the alcohol is changed into acetic acid and water. When sugar is present in the alcoholic liquid, the vinous fermentation may go on at the same time with the acetous, and the sugar be changed into alcohol, while the alcohol is being changed into acid. Acetic acid is a very strong, pungent, corrosive acid. Common vinegar contains but a small per cent. of it, the remainder consisting chiefly of water and coloring matter. The revenue standard in England is five per cent.

In the putrefactive fermentation of animal and vegetable substances, air and moisture must be present, and the temperature must be between the freezing and boiling points, as it is wholly arrested by a temperature indicated by either of these points. Any putrid substance will act as a ferment upon fresh animal or vegetable substances. Hence if straw, peat or other vegetable matters be mixed with putrid animal manures, the process of putrefaction is soon communicated to the whole mass, and an active compost is formed.

During this fermentation, several gases are formed and given off from the decomposition of the albuminous matter present in the putrefying mass. These matters contain nitrogen, sulphur and phosphorus, which combine with hydrogen, and form ammonia and sulphureted and phosphoreted hydrogen. These are the offensive gases which have been already alluded to. The hydrogen is furnished by the decomposition of water, whose oxygen combines with carbon, forming carbonic acid.

Much has been said and written upon fermentation, and that portion of it which relates to ferments and their origin and mode of action is still involved in mystery. Ferments appear to communicate nothing to the fermenting mass, nor to take any thing from them, and yet as we know a "little leaven will leaven the whole lump." Ferments seem to act upon bodies exposed to them much as contagious disease attacks healthy bodies, by a sort of infection which causes an action in the body

attacked, similar to that existing in the body communicating it. Indeed the similarity is so great that the idea has been recently advanced that the same substances that will arrest fermentation, will also arrest the action of certain infectious diseases. J. R.

Concord, Mass., Dec., 1867.

For the New England Farmer.

SHELTERING LANDS.

Every one must have had sufficient experience to know that buildings, and even high, tight board fences and stone walls protect the lands near them more or less, according to their extent, from the evil effects of high winds. Thus we have seen fruit trees, shielded from the east wind by buildings, give large crops, while in the open, exposed orchard, the effects of blight destroyed the crop. So with fences,—they ward off blighting winds, and fruits grow and ripen near them, while similar kinds, if exposed, reward labor with only failure. If the effects of protection are so evident and so beneficial on the small scale, as given by buildings and fences, then, where given on a larger scale, a proportionably larger benefit must result.

Wherever we have seen buildings, gardens, or fields protected by natural groves, like results have been seen. The cold winds have been broken and their blighting influences mitigated, if not destroyed, so that the temperature in stormy and cold weather becomes several degrees more agreeable than that in open fields exposed to the full range of winds and tempests.

The lesson taught by such observation is, that if farmers will protect their fields, buildings, and gardens by belts of trees, they will break the force of winds, and soften the asperities of the climate, so that extreme sudden changes will not be as severe. This protection of his home and its surroundings, of his stock and fruit trees, will result in the health of the former and the productiveness of the latter.

It will probably be argued by some that these belts of trees occupy too much land, and land in the proximity of buildings is valuable. Timber, too, must be valuable when woodland on the roughest mountains will bring more cash per acre, than improved lands in the valleys did a few years ago, or when timber land in the valley will give a better return on actual cost than can be realized on much of the improved lands. So, then, the lands occupied by these belts of trees, is not lost, but is silently and without labor beyond the first setting out, producing a crop which at some future time will, if the owner gets tired of his protection and longs to hear and feel the rough winds roar around his premises and witness their devastating influences, yield in cord wood, more than enough to pay all cost of labor, taxation, and interest on land, at ten per cent. The greater gain, however, results from the protection to the grounds, buildings, the family in the house, the stock in the barn, and the trees, shrubs and vines on the surroundings.

Fuel, not only to those who purchase, but to owners of woodlots, has become an expensive item in New England. Our long winters are an expensive inheritance, and one that must continue to all generations. To guard against the demands of these winters is required. not only by comfort, but economy. Well built houses and out-buildings will, in a measure, do this, but the well arranged grove will protect these buildings from wrenching winds, as well as the indwellers from the insinuating cold they bring. Thus no inconsiderable saving of fuel in the house will be the result of protection, while at the same time a similar saving in the fuel which is consumed to keep up animal heat, will be effected. Thus sheltered, how calmly the rain descends and the snow flakes fall, and how quietly they lie. Then if the animal is loosened from its stall, it partakes of the quietness and calmness of the elements, and when it is brought back to its fastenings, it does not come with its hair matted to its very skin with the driving snow, but bearing a few loose flakes that readily yield to the brush or the comb. Animals so protected require less food, are better natured, take on more flesh, and give a greater growth than those exposed in the most moderate manner to rough, grating winds. A. Bacon.

Richmond, Mass., Dec. 25, 1867.

For the New England Farmer.

THE GARDEN IN JANUARY.

The main part of our gardening during this month will be done in the house, as the ground in our northern climate is frozen and mostly covered with snow; yet there are a few things which may be appropriately looked after; and with this view the garden should be occasionally visited to see that nothing is going wrong. Sometimes during a January thaw water will do damage by standing on, or washing over the surface. This should be avoided. During heavy snow storms, trees are often so loaded with snow, or during rain and sleet, with ice, as to break them down, or otherwise injure them. Small trees and shrubs are often ruined at such times. A little attention in gently clearing them of their overloads will often save a favorite shrub or valuable tree.

An open gate, or a rail out of place, will often admit some farmer Don't Care's stray creature; and perhaps half a dozen young pear, or other fruit trees are destroyed in consequence, besides injuring other vines, shrubbery, &c. Such ill-cared for, hungry animal will often do damage, in a garden, in a few moments that cannot be repaired in a year or more, to say nothing of the ill-feeling engen-

dered. It is then best to guard against any such casualty, by having all fences, gates, &c., closed, and in order, that lead to the garden or orchard.

Much labor and time may be saved by planning to facilitate work in the spring. A man who has his plans laid before hand will accomplish a greater amount of work in a given time than one who works by no plan, order or system. During these long winter evenings is the time to lay plans for the coming season, and not only that but it is the time to improve the mind and lay in a store of information in regard to our pursuits. There are quite a list of works devoted to the subject of gardening in all its branches, as also those devoted to the farm; any one of which will impart much information. And then we have our agricultural journals, all of which devote more or less space to the garden as well as a larger one to the farm and other branches of husbandry. Procure some of these and occupy a portion of the time that is usually spent idly or at the store, or in worse places, in gaining useful information in regard to your business. If you have heretofore neglected the garden, resolve on the threshold of this year of grace, 1868, to turn over a new leaf and have a good garden, to produce the various vegetables and small fruits which go so far to promote health, and relieve the monotony of dishes so frequently found upon the farmer's table at certain seasons of the year.

Having but few special directions for the garden this month, the space may be appropried to some general suggestions. Among the various desirable requisites of a garden is shelter; a moderate slope descending towards the south-east or south, to a level. In such a location we usually have a variety of soil, ranging from light, early and warm, to that which is more heavy and later; and consequently we can have a succession of vegetables which may be more varied than can be had on a level. In all gardens it is better to have some windbreak or protection from the cold winds. Besides the protection afforded by tight board fences, walls, &c., from high winds, they are often a means of greatly retarding frosts. If you have ever taken the pains to observe, you may have noticed that plants standing near to the protecting side of a close fence or building, are frequently preserved from frosts that kill or very much injure those standing away from the influence of such protection. To understand the why and wherefore of such occurrences, we should understand the laws that govern the atmosphere in all its circumstances and variations. As air becomes cooled, it is condensed and seeks a lower level. Thus it will be found that while frost may be indicated at the bottom of a hill, at the top there may be a temperature of several degrees above the freezing point. A fence or other obstruction checks the flow of the undercurrent of air which walls up as water does against a dam; so that while plants on one side of the fence may be frozen, those on the opposite side may be unaffected. This fact may be proved by any one, by making a hole through such fence against a plant, and observing that while others standing a few feet at the right or left will not be frozen, the one standing before the opening will be frozen to the size of hole in the fence. To the inquiring mind it is interesting to study into all the works of nature, and to behold in them the hand of Him who rules over all; and without whose notice not the least sparrow falls to the ground.

Cold frames should be examined as frequently as the weather permits, to see that all the plants for spring culture therein are doing well. During thaws and mild weather they may be uncovered and light and air admitted freely. Hot bed frames and sashes should be put in order by making any needed repairs of painting, glazing, &c., and new ones made, ready for early spring use. Every garden should be supplied with one or more hot beds for starting early vegetables.

WM. H. WHITE.

South Windsor, Conn., Dec. 26, 1867.

NORTH CAROLINA TEA.—A barrel of tea was recently sent from H. C. Davis, of Bedford, N. C. to the New York Institute Farmers' Club, a part which was distributed to the members. This is said to be the same as the Yuba Mate, or Jesuit tea of Paraguay, which is largely used in Brazil, especially in the mining districts. The natives ascribe almost innumerable qualities to it. Like opium, it produces some singular effects; giving sleep to the restless, and spirits to the torpid. A pint will make a gallon. It is drank hot, and is a preventive of intermittent fever. Molasses and milk add to its goodness, and the cost of this tea is from 40 to 50 cents a bushel.

NEW ENGLAND POULTRY CLUB.—At the recent annual meeting of the Worcester, Mass., Poultry Club, it was voted to change the name of the association, and extend its field of operations, as above—including in future exhibitions all the New England States. The following officers were elected for the ensuing year:

President—O. B. Hadwin; Vice Presidents—Geo. Sumner, S. J. McIntosh; Secretary and Treasurer—S. E. Thompson; Asst. Secretary—Winslow S. Lincoln; Executive Committee—H. Woodward, O. L. Hatch, Alba Houghton, Jr., S. Woodward, H. L. Stowe, H. S. Taintor, C. W. Hamilton.

MILK RAISING.

We observe in the papers reports of the proceedings of a meeting in Boston of persons engaged in producing milk. The apparent object is, to take such action as shall increase the price paid the farmer for his milk at the barn or depot. We believe in meetings for discussion, and for the diffusion of knowledge. Farmers necessarily are scattered, and so have not the advantage which manufacturers or even mechanics enjoy of comparing views and acting in concert. Such meetings, therefore, if properly conducted, may result in much good, yet they are liable to lead to much evil, or what is more probable, to end in no practical or valuable result.

Demand and Supply.

We must remember that the price of farm products, as of everything else, is governed by the great law of demand and supply.

To use a homely illustration, if ten men are in a party remote from home, and there are but nine hats, hats are in great demand; but if there chance to be eleven hats for the ten heads, hats are abundant and nobody wants the spare one. A certain amount of milk must be used, varying of course, to some extent with the price. If much more than the usual quantity is produced, nobody will buy it, except at a low price. If the supply is short, hotels and babies must still have their milk, even by paying double price.

A combination among farmers that they will sell no milk under fifty cents a can, might compel the contractor to pay that price for a very short time, until others outside the combination could undersell, as they surely would very soon. At that high price, the production of milk would be doubled in six months, and as neither hotel customers, babies, nor anybody else, could be persuaded to use double quantities, there would be an over supply, and the farmers would undersell each other, and force the price below even a fair one.

What is a Fair Price?

A fair price for a producer to receive, is the price that will, in the course of the year, pay him fairly for the cost of maintaining his cows, including the interest on their value, the loss by depreciation and accident, and reasonable pay for his care and labor, taking into account the return he gets in the manure left on his farm. And this is also a fair price for the contractor to pay. A fair price for the contractor to receive in the city, is to be estimated in the same way. He has heavy investments for horses, wagons and perhaps railway cars and ice-houses. He pays largely for his milk-routes, and employs many men for whom he is responsible. He guaranties payment to the farmer, and takes the trouble and risk of collecting pay of his customers. To do all this well demands a man of business capacity more than ordinary, who could earn a good salary in other business, and he is entitled to be paid accordingly. We are apt to look only at the profit such a man is making and to think he gets more than his fair share, when in fact he is paying us more than an inferior man could pay us and yet lose money in his business.

How shall the Price be Fixed?

The complaint is that the contractor fixes the price, and the producer has no voice in the matter. This is no doubt often true. There being no concert of action, no meetings even of the producers, the contractor can do no otherwise than fix his own price, and the producer must take it or cease supplying milk. It seems to us that a meeting of the farmers and the appointment of a small committee, small enough to be efficient, to represent the producers and advise with the contractors as to the price for each quarter of a year, might produce good results. The interest of all parties is to fix the price which the laws of demand and supply would determine, neither too high nor too low, and producers would feel far better satisfied, even at old prices, if they thus had a voice in the matter. Beyond this, we do not see that much can be done. Combinations to raise the price of produce or labor usually result in little good, while consultation and temperate discussion and action may serve the good of all parties, including farmer, contractor and consumer. *

Salt and Lime as Manure.—Mr. George Steele, of Thorndale, Chester Co., Pa., who is on a farm which was exhausted and its cultivation abandoned seventy-five years ago, but which has been reclaimed from barrenness by an improved system of treatment, in which lime has been extensively used, informs the New York Farmer's Club that salt has a very beneficial effect on his land as a manure for wheat. The primitive rock is talc slate, and the soil gravel, clay and loam. The salt and lime have been applied after ploughing, and

harrowed in; the lime spread with a shovel or lime spreader, as soon as slaked, while in a powdered condition, and the salt sowed broadcast, or mixed with the lime before spreading, or the lime slaked with brine. From his experience and observation of the effects of salt on this land, he estimates one and a half sacks of merchantable ground salt, or an equivalent of dirty salt, and 25 bushels of lime per acre, as good for wheat as a moderate dressing of stable manure, and the grass after the wheat is as good, where the salt and lime are applied, as where the stable manure was applied.

For the New England Farmer.

MARES AND COLTS.

An Essay read before the Concord, Mass., Farmers' Club, Nov. 14, 1867.

BY HON. JOHN S. KEYES, OF CONCORD.

At what age and in what condition are mares best suited for breeding? How should they be treated during gestation? What is the best management of colts until they are three years old?

Breeding is a science of which but little is known, and that little but poorly practiced. Most of it is done in a loose way, without much attention to anything but convenience, and the results are what might be expected,—uncertain and profitless. When proper care and attention is bestowed, animals may be bred almost to order, and among the large and experienced breeders in Vermont, New Hampshire, and Maine, colts of almost any size, shape, color and qualities are raised as wanted. Of course this requires a knowledge of the science, a care for every detail, and an expense in the selection of the stock that are alone consistent with making this a business, and following it as any business must be pursued, to make it a success.

For our purposes, in this discussion, three questions only are to be answered, and all others need not *now* be considered. To the first—the best age and condition of the mare for breeding—there is but one reply: in the prime of her years and finest order. But to this reply, there are many limitations of cost, profit and convenience, which will materially modify the answer, according to the circumstances of each case. For farmers who wish only to raise a colt occasionally, either for their own use or for sale, we must be governed by the convenience to our work and the cost of the trial. We cannot take the family mare from her work of all kinds on the farm and give up her use for nearly if not quite the whole season, to get a foal, without supplying her place at an expense not warranted by the profit. If she gets injured by an accident, or used up by many seasons of hard work, we are too apt to put her to breeding, as the best use that can be made of her, though there is more certainty of getting poor stock in that way, than of any profit. But we can do this, and it is, under all the conditions, the best plan: let that filly have a foal before she is put to work. This is the real secret of successful, pecuniary result in breeding horses. Every filly breeds before working in all those sections where raising colts is followed. It is the best time, in my judgment, at from three to four years old, depending on the size and maturity of the animal. It saves them from being worked at too young and tender age; and it imparts to the offspring all the vigor the mother naturally possesses, unimpaired by any of the hardships or strains she may undergo in work. It develops her own frame and bodily powers, and, if well kept before and during gestation, with no injurious results. Such a filly that had been kept growing her first three years, without stint of good, nutritious food, with great freedom of range in the pasture, and roomy, well ventilated stalls, and moderate exercise during the winter, if put to a horse in the prime of his powers, say from seven to twelve years old, could not fail of bringing as good a colt as she ever would produce from that horse at any age. Indeed, I believe a better, or one that I would rather take my chances with, than of any born later in life, after the mare had worked even on a farm, to say nothing of stable or city use. The colt then would be weaned and the mare ready for breaking and use at from four to five years old, and be worth more than if she had never bred, besides paying all her keeping to that age, with the one good colt thus raised.

As to the second question, mares should be treated during gestation as naturally as possible, whether by this is meant either the actual time of birth or the whole period of bearing. Their work should never be severe or long continued, and their keeping such as would supply both mare and foal with ample nourishment. Too high condition might not be better than moderate order, but it would be vastly preferable to any stinting or scanty fare. In the event of breeding at the earlier age, three or four years old, they should be at pasture all the season would permit, and in the winter should have no work, only moderate exercise, to keep them growing constantly.

Breeding later in life, after the mare has been worked, she should be kept at grass as much as possible, and if required to work, great care should be taken to prevent any over-work, or undue exposure, and the feed should be liberal to support not only the mare but the foal. With care and good treatment, the colt may not suffer or be any the worse for the use of the mare during the earlier stages of pregnancy, but no such tax as hard work and breeding can be imposed on any animal, without injury. For some time before the birth, she should be at pasture if possible, and

if not, should have a box stall and a yard for exercise, and entire freedom from restraint in her motions, by tying, &c. Generally speaking, no other or peculiar care is required than nature gives the mare the instinct to seek for herself, though if we artificially interfere with this instinct, we ought to provide as nearly as may be the natural conditions of the animal.

Third. The foal being born, for a few weeks needs no care but the mother's, though if it is accustomed to being handled and caressed from the very first, it will be easier to break. It is well, too, to let the colt accompany the mare in the light work she may do while nursing, as it thereby gets accustomed to the objects that it is to be familiar with afterwards, and to learn more early the great lesson of obedience. Good pasturage for the mare, and freedom, are the best for both, as it is the most natural. As soon as weaned, and when conveniently situated, even earlier, the colt should be broken to the halter and taught daily, with patience and gentleness, some of the many lessons it has got to learn. Too much care and kindness cannot be used, and the great majority of the faults of horses are the results of faults of the owner, in breaking. Good feed, sufficient to keep the colt steadily growing, rowen, roots, and green fodder, with but little grain, where these can be obtained, are the best.

The different processes in bitting, harnessing and accustoming the colt to vehicles and use, should be gradually, but steadily pursued, and above all things it should never be frightened or allowed to break away from control. The more of this that is accomplished the first year the easier and the better it will be. The same management should be followed the second year. As fast as size and strength will permit, more attention should be given to what is too much neglected, the paces. These can be taught in the second year better than perhaps any other time, and a wonderful change can be made in the walk, trot, canter or gallop of a colt, if proper care and attention is used. Natural defects cannot be wholly overcome, but almost as much may be gained in these as in other particulars by thorough and systematic training. This is a matter too much neglected. and many a horse has a very uncomfortable gait all his life, from want of training. He can neither walk without breaking into a trot, nor trot without breaking into a canter, and if urged, or if left to himself mixes up these different paces to the great annoyance of the driver. The great rule to be observed in this training is to keep the several paces entirely distinct. When training, the walk should be first practiced, and this should be made as rapid as possible, without breaking. He should first be permitted to trot a few steps and then walk. And when he has learned to walk well and rapidly for his size and figure, trotting should be attended to, and in trotting the same rule should be carefully observed. Keep him trotting while the lesson lasts, and never allow him to slack into a walk any more than break into a canter. There is nothing gained by being in a hurry to make the colt show speed in trotting. Patient training without anxiety on the point of speed, will make a much faster horse, than over urging at first. Still a colt should, after being taught to walk fast and trot steadily, be occasionally pushed to his speed in trotting. This should be done for only a very short distance at first, while it may be gradually increased as the power and stamina of the animal increase. If it is desired to fit him for use under the saddle,—a practice that has increased immensely since the war,—he should be taught as soon as he can bear a light weight on his back, (not too young for fear of injury,) the best saddle gait in the same way as the other paces. And as before, and always, the greatest pains to be taken to keep these distinct from each other.

Although a colt should be thus broken, handled, driven and ridden before three years old, still too much care cannot be used to prevent over-exertion, and permanent injury therefrom. Two or three miles a day, with a light carriage, is the outside work such a colt ought to do; and as this is so generally done in the village or neighborhood, if not always thought about, the distance is very apt to be exceeded before the driver is aware. Of course, while thus training, attention should be paid to the habits of stopping at the word, and not starting till the signal is given; of how much weight should be borne on the bit, and of all the other things which go to make up a pleasant driver.

As I said at first, if a filly at three years old, I would breed from her and raise a colt, suspending the training and using during so much of the time as would be likely to interfere with the growth of the fœtus, and parturition, and the first weeks of nursing.

I have thus given my best answer to these three questions. I shall be satisfied if they provoke criticism or elicit discussion, and thus set me and the other members to adopting the right course. J. S. KEYES.

Concord, Nov. 14, 1867.

WESTERN NORTH CAROLINA.

The climate of this section much resembles that of the North-Eastern States, though it is neither so cold in winter nor so warm in summer. The reason of this is found in the fact that though we are in the 35th parallel of latitude, we have an average elevation of more than 2000 feet above the sea. Though we are in the latitude of the cotton-growing belt, yet we are elevated many hundred feet above it. This secures us at all seasons one of the finest and most bracing atmospheres found east of the Pacific slope. Hence it is that we are strangers to all miasmatic diseases.

It is known to almost all the natives of this

country, that at a certain elevation on our mountains, there is a *stratum* of atmosphere so peculiarly constructed, and so dry, that it will not permit the formation of frost. When a farm is located so far up on the mountains as to be above the region subject to spring frost, we say it is above the frost line. Orchards so located never fail to bear full crops on account of spring frosts. The peach, in these situations, sometimes fails from the destruction of fruit buds by winter-killing, though this is unusual. I am not aware that the apple ever fails at this elevation, even from this cause.—*L. F. Sensabaugh, Waynesville, in Country Gent.*

NATIONAL ASSO. OF WOOL GROWERS.

ANNUAL MEETING.

The Executive Committee of the National Wool Growers' Association met at Pittsburg, Nov. 26. The following officers were elected for 1868.

President.—Hon. Henry S. Randall, LL.D.. of New York.

Vice Presidents.—The Presidents of the State Associations.

Secretary.—Wm. F. Greer, of Ohio.

Treasurer.—A. F. Wilcox, of New York.

The constitution was so amended that each Association may appoint two additional members of the committee, and until elections are made, the following gentlemen were appointed:—

Norton S. Townsend, Ohio; John D. Wing, New York; J. H. Pickerell, Illinois; J. D. Hazelton, Wisconsin; John H. Davis, West Virginia; Burditt Loomis, Connecticut; Henry Keyes, Vermont.

Mr. Delano, of Ohio, offered the following resolution:—

Resolved, That a committee of three be appointed by this Association, with power, at their discretion, to arrange with the National Wool Growers' Association for a National exposition of their respective industries at such time and place as may be agreed upon.

The President informed the Association that he had held some correspondence with the officers of the National Association of Wool Manufacturers on the subject of holding a National Exposition of the wool and woolen interests of the country at some place, say Chicago, in the spring of 1868—each Association being empowered to designate such objects of exhibition as it shall deem expedient. The Manufacturers strongly favored the measure, and would make prompt preparations to carry it out on a splendid scale should this Association invite their co-operation. They decidedly preferred Chicago as the place of holding the Exposition. He (the President) believed that a general exhibition of our sheep, wool and woolen manufactures would be attended with the most beneficent effects on the respective interests at large.

After a free discussion, in which fears were expressed that the trouble of transporting stock might prevent a creditable show, the resolution was adopted and the following gentlemen were nominated and elected said committee:—Henry S. Randall, of N. Y.; John D. Wing, of N. Y.; A. M. Garland, of Ill.

The following were reported by the committee on resolutions, separately considered and adopted.

1. *Resolved*, That the financial necessities of the nation render a tariff for revenue purposes indispensable, in order to pay our national obligations and preserve our national honor.

2. That in regulating duties on imports, Congress should exempt such articles of general necessity as are not produced in this country, and should so adjust duties on other articles as to give fair and equal protection, as far as practicable, to all products of American industry.

3. Considering the compact, extensive and persistent efforts of the free trade interest to destroy American industry and weaken our national resources, it is the duty of all the industrial interests of the nation to unite in a common effort to counteract this foreign free trade policy.

4. We regard the present duty on wool and woolen goods as well adapted to promote and harmonize the true interests of producers and consumers of wool and woolen fabrics; we therefore have full faith in the ultimate results of the tariff, and insist that it be neither modified nor repealed, until time shall have fully demonstrated its effects.

5. That the "interests of wool manufacturers and wool growers being recognized as identical, further measures should be adopted to make each class familiar with the respective wants and necessities of the other."

6. That the National Association of Wool Growers take great pleasure in expressing their thanks and gratitude to the Congress of the nation for passing, at its recent session, the existing wise and necessary tariff for the protection, increase, and development of wool growing and wool manufacturing interests of the country, and that we have every confidence this legislation will be stable and permanent, to the end that business arrangements already made in conformity to it may be encouraged, and a great branch of national industry advanced and protected.

The President, Hon. C. Delano, and Gen. White, of Pennsylvania, were appointed a committee to prepare an address to the wool growers of the United States in reference to their present condition, interests and necessities.

A resolution was passed authorizing the President to appoint Hon. R. M. Montgomery, of Ohio; Hon. E. B. Pottle, of New York; A. M. Garland, of Illinois, one or more,—as he may deem necessary,—to represent the wool interests at Washington.

In convention the general interests of the Wool Growers were discussed at considerable length after the adjournment of the Executive Committee.

—The squirrels have almost disappeared from the woods in South Carolina since the war.

EXTRACTS AND REPLIES

CHEESE FACTORIES.

As people are making all kinds of inquiries through your valuable paper, from what will make the hair grow on a bald pate, to what will prevent toe-nails from growing in, we should like some information in regard to the manufacturing of milk into cheese, by a factory.

We cut a good amount of hay, suitable for keeping cows; have the best of pasturing, and can keep cows as cheap as can be done in any other place in New England.

Will you, or any of your correspondents, give us any intelligence upon the following questions? and, more if you choose, will be gratefully received.

1. What will be the cost of a medium sized factory, fitted up with an eye to economy, all ready for business, with lumber at ten dollars per thousand, and labor at two dollars per day.

2. The milk from how many fair cows, or how much milk, will it take to commence busines with?

3. How is the milk received, when and how paid for? When is the cheese usually sold? And in fact how is the business done?

4. What amount of help will it take to run the concern?

5. How many months in the year will the milk be required, usually?

6. How have the profits generally compared with butter making, all things taken into account? such as the milk for hogs and the extra labor of making butter. More inquiries hereafter.

A. J. MITCHELL.

Lempster, N. H., Nov. 25, 1867.

REMARKS.—From a report in the *Boston Cultivator*, it appears that the capital invested in eight factories in Massachusetts was last year as follows: Barre Central, $7800; Barre, South, $5053; Hardwick Centre, $4213; Hardwick, South, $4500; Petersham, $3000; New Braintree, $8000; Warren, $4600; South Adams, $3000.

Of forty-one factories from which full returns were made at the annual meeting of the American Dairymen's Association last year, the average number of cows was 458 to each factory; the smallest being 140 and the largest 1049. Some account, however, is given of a factory at Pleasant Prairie, Wisconsin, with 75 cows, and of one in Medina, Ohio, with only 64.

The milk is sometimes delivered at the factory by farmers; at others, it is collected by agents of the factory.

Further answers are furnished by a correspondent of the *Vermont Farmer*, who says, "a cheese factory has been recently erected in the Northeasterly part of Orwell, and is of the following dimensions: 30 by 90 feet, and three stories high, with steam boiler and fixtures sufficient for making and curing 1000 cheeses. Cost of building and fixtures, $6000. The milk from 300 cows has been used this season and 60,000 pounds of cheese made. At first, the size of the hoops was 18 inches diameter and 10 inches deep; but the managers finding that cheese made in a smaller hoop would sell at a higher rate, they have since used those 15 inches by 10 deep. The object has been to imitate cheese made in Chedder county, England, and it has been made to resemble, in color, good butter made in June. The cheese made this season has been mainly consigned to White and Douglass, 76 Broad street, N. Y., and has been sold at 15 to 15¼ cents per pound. Manufacturing commenced June 17 and ended Oct. 22.

H. B. Jones and wife, formerly of Pawlet, have managed the manufacturing, and have received for their services 90 cents per 100 pounds of cheese made. Net receipts to those furnishing the milk, about 11 7-10 cents per pound."

TO DESTROY LICE ON CATTLE.—NORWAY OATS.

Mr. J. Jordan inquires what will kill lice on his cows. Smoke them with tobacco. A few cents' worth will do the job for several head of cattle. It is the cleanest, the safest, the cheapest and the surest remedy I know of. Smoke them thoroughly at first; then in about a week go over them again, and the lice are all dead, nits and all.

I wish to inquire about the "Norway Oats." If they are as good as recommended, they are the ones I wish to sow. I sow two and a half bushels to the acre, and usually average 50 bushels, or 20 from one of seed, of 30 pounds each. Now if by sowing one bushel of Norway oats I can get 100 bushels weighing 10 or 12 lbs. heavier per bushel, and if they are as good for feed and to sell, I go in for that kind. Will some one who has had experience with them inform me. One who is not anxious to sell them at forty cents per pint.

GEORGE R. JENNESON.

Walpole, N. H., Dec. 7, 1867.

REMARKS.—We have never raised the Norway Oats. We have seen a fine specimen of their growth, in the possession of agents for the sale of the seed, but know nothing further of them than our correspondent does.

EVERGREENS FOR SHELTER.

Will you allow me to suggest, as a subject for discussion in your columns, the importance of screens of evergreens, not only around our buildings to protect them from the cold blasts of winter, but around our bleak fields to break the dry and parching winds of summer, and thus to enhance the practical value of our farms, as well as greatly to increase their beauty and attractiveness. I think such a discussion, if properly conducted, would be very acceptable and profitable.

We have native evergreens, such as the red cedar, white pine, &c., sufficient for this purpose, but few know how to propagate them from seed or by transplanting. I find there is not one man in ten about here, and they have always lived in sight of the white pine, that knows its seeds; and a larger proportion do not know whether the seed of the cedar will germinate in a few days or weeks after planting, or whether it will lay in the ground through winter before coming up. Now, if you will enlighten us on this subject, we will try to profit by it and extend your circulation.

ONE OF THEM.

Davisville, R. I., Dec. 7, 1867.

REMARKS.—We call upon some member of the great NEW ENGLAND FARMER'S Club, who has had practical experience in the cultivation of evergreens, to "lead" in the discussion of the topic propounded by "One of Them." In the meantime, we copy from the *New England Homestead*, the following statement of the singular effect on pota-

toes of shelter from the strong, east wind, which accompanied a warm rain last summer.

"Last spring a farmer in Mittineague, Mass., planted potatoes on the east, south and west sides of a field of corn. The soil was wet and hot, most of the season. The potatoes had a good growth, and promised a fair crop,—but while yet in good growing condition, and nearly fit for harvesting, there came on a heavy and warm rainstorm attended with a strong east wind. In a day or two after the storm, the potato vines on the east and south sides of the corn began to wither, and in a very few days, they were dead. The potato rot soon found its way to the tubers, but on the west side of the field, the potatoes sheltered from the wind by the corn, were vigorous, and continued green till fully ripe. Who knows how much that driving rainstorm had to do in blasting that field of potatoes exposed to its fury? Are our warm east winds the sirocco that produces the potato rot?"

PROPAGATION OF SALMON AND TROUT.

It may be gratifying to your many readers who are interested in the restocking of the American rivers with fish, to learn that the first salmon of the season hatched to-day.

They are a part of the lot which were placed by the New England Commissioners at the Cold Spring Trout Ponds, at Charlestown, N. H., to be hatched for the Connecticut river.

The eyes of the embryo salmon were first clearly seen in the egg about the 25th of November. The eggs were taken from the parent salmon on the Miramichi river, on the 10th of October, which gives 62 days for the period of their incubation.

The first trout which broke shell at these hatching works, this season, made their appearance on the 9th of November, 35 days from the time when they were taken from the breeders—being the quickest time on record for trout in this country.

LIVINGSTONE STONE.

Charlestown, N. H., Dec. 11, 1867.

DOMESTIC TRAINING.

The hints of "Mattie" on domestic training I regard as appropriate and timely. Children naturally wish to help and make themselves useful, and it seems to me that parents often make a great mistake in repressing this laudable ambition. Parents should begin early to lay the foundation of future usefulness in their children. This is of great importance to the child, and is one of the first duties of parents to their offspring. I have often thought that if it was in the power of parents to give their children opportunity to acquire but one branch of education, it should be the domestic training that will fit them for the discharge of the many duties implied by the term domestic, or home education—a knowledge of those little everyday occupations which each one must perform in making his or her way through this checkered life.

The next branch should undoubtedly be book education. And fortunate is that child whose parents combine in its training these two branches in just proportions. Parents of large means are liable to injure or spoil by over indulgence, or exemption from labor, children that are naturally good. Especially, I think is this true of their daughters. A home is or should be our highest ambition. But unless she who presides over its domestic affairs, understands the duties of her position, how long can she retain the respect due to the mistress of the house? Unless a woman is familiar with every detail of housework, in all its numerous branches, how can she make home what it should be,—what she herself would have it to be? or how can she properly direct others? Where I find the kitchen and wardrobe in good order, I expect to meet a lady; one who is such in the best sense of the word. Ability to fold one's hands properly in a parlor, to talk smoothly or flippantly of anything or nothing, to apologize genteely for not singing or playing on account of a bad cold, or to make calls ever so systematically, do not of themselves constitute the lady,—certainly not the woman, whose children shall rise up and call her blessed, and whose husband shall find in his home attractions and comforts which will satisfy and content the mind.

"Mattie" has spoken a good word on the domestic training of the girls. If the subject is "to be continued," may I hope she will not forget the domestic training of the boys? O. FOSTER.

Tunbridge, Vt., Dec. 1, 1867.

REMARKS.—There is one branch of the domestic education of both sexes, to which we wish to call attention—the care of the sick. That young man or young woman who enters upon life with little or no knowledge of this subject, lacks an essential qualification for usefulness. That celebrated physician, Dr. Rush, used to say that the knowledge gained by three months spent in the kitchen by every doctor before setting out in practice, would be found to be among the most valuable of his attainments.

IN THE BLUES

Do you not, Mr. Editor, sometimes have the *blues?* I know you are a very even-tempered man, and much given to looking at the bright side of things. But don't you sometimes feel, in your private heart, that affairs are going topsy-turvy, and inside out, and every way but the one you hoped and strove for, and had a reasonable right to expect? If you do not, then I should like once in a while to borrow (though I don't like the too common practice of borrowing,) a little of your faith and trust, a little of your clear-sightedness, to enable me to see through the clouds that sometimes intercept my view.

This is the way the world wags, now and then, here in Doolittle Dale.

One acre of potatoes (Sebecs) was planted early, with the intention of getting them to market while the price was pretty well up. Manure, a compost of lime, salt and peat, was spread on the furrow and harrowed in,—with Wilson's superphosphate scattered in the drill at the time of planting. Field on a sloping hill-side; soil a good and deep sandy loam at the lower end, changing to gravelly loam in the middle, and at the highest part a poor sand with very little loaminess. The potatoes came up well, and made a fine promise for the first six weeks, then began to show rust, and stopped growing. The result was about fifty bushels of good potatoes—best in what we called the poorest soil. There was no rot in this field. When ready for market, the price was about $1.75 a barrel.

Another acre of Sebec potatoes, planted later than the above, barn manure spread liberally, looked well the whole growing season; but when harvested, were at least half rotten.

A half acre of New Jersey Peach-Blows, barn manure ploughed in, also promised a good crop, but the potatoes were hardly worth digging, yield-

ing only about a bushel of marketable potatoes to a row twenty rods in length. No rot.

In all the above cases, large potatoes were used for seed, cut, two to four eyes on each piece, and planted in drills. JONATHAN DOOLITTLE.

Massachusetts, Nov., 1867.

REMARKS.—Our friend Jonathan asks if we ever have the "Blues?" Yes, we reply, and every sentient being has them in greater or less degree. That frame or state of mind is a part of the imperfection of our mortal condition.

But "the Blues" may be warded off in a great measure by the exercise of a little philosophy. Being "blue" did not add a single bushel to the scanty crop of potatoes, nor in any way prepare the mind or body of Mr. Doolittle to avert such a result in the future. We must be on our guard. The "blues" are contagions. Do you not remember Zimmerman's story of the nuns, one of whom began to mew like a cat? Hour after hour, and day after day, she traversed the gloomy aisles of the nunnery, mewing like a cat in distress; or if she turned to the right or the left, where the cheering sunlight found its way into the rooms, still that dismal and distressing mewing went on, until the whole sixty or seventy nuns were mewing like so many cats. So it is with the "blues." Exorcise the fiend at once, potatoes or no potatoes!

By the way, some persons say,—"anybody can be a farmer." Let them solve your difficulties about the potato crops, if they can. And ours, too, for we are in the same category. Indeed, who can solve them? Who is so great as to do these things?

But, friend, be of good cheer. Add to your many virtues a firmer faith, a calm resignation, a confiding trust that all is for the best, *when we have done our best.*

BOOKS ON SCIENTIFIC FARMING.

Are there books on the sciences, as Geology, Chemistry, &c., that a farmer can study and learn more of the nature of the soil, manure and crops with which he has to do; or, in other words, which will enable him to become more of a scientific farmer? Now I think that farming generally is not what it should be; that it is looked upon by a great many as a dirty, drudging, hard-working life, instead of a healthful and most independent business; for, who but the farmer feeds the world?

If farmers were better educated, or I will say more suitably educated for their work; as well and as suitably as are the lawyers, doctors, merchants and other professions, perhaps farming would be more of a pleasure, more successful. Agricultural colleges may succeed in training young men for farmers, but not every one is so situated that he can go.

Have you, or any of your readers ever tried the American cow milker? Does it draw the milk clean? How does it work in cold weather?

Bridgewater, Mass., Nov. 30, 1867. Y. F.

REMARKS.—Books, why, yes, dear Young Farmer, (Y. F.), there are books on every subject and on every branch of every subject. "And further, by these, my son, be admonished: of making many books there is no end; and much study is a weariness of the flesh."

After the good Book, from which the above thoughtful and suggestive sentence is quoted, we will recommend Webster's Unabridged Dictionary, as "a work on geology, chemistry, &c."—especially the "&c.," "that a farmer can study." Then we may mention—well, we don't hardly know what to say, as every year brings something new,—and better, of course, than anything else,—in the form of elementary works and text books. Neither do we know what progress you have made—what books you have read, or what are your habits of reading. Few can ever hope to be accomplished geologists, chemists, botanists, physiologists or naturalists. Either requires a life-time. Men who have grown gray in the study and practice of either one of these sciences often feel like comparing themselves, at a ripe old age, and when exciting the wonder of their contemporaries that "one small head could carry all they know," to the youth who has gathered a few pebbles on the sea-shore, while the great ocean of knowledge lies unexplored before him.

On the farm and off the farm dissatisfaction, unrest and murmuring are prominent characteristics of our race. All ages and all sexes are seeking and grasping for rights and positions, for knowledge and wisdom which they do not possess. It is not on the farm alone that our "waters cast up mire and dirt." Farmers undoubtedly are not educated as well or as "suitably" as they should be. Neither are "lawyers, doctors, merchants and those of other professions." Could you look into the mind of your doctor or your lawyer, and see what a Scotch reel Doubt and Irresolution, Ignorance and Uncertainty are sometimes dancing there, while with a calm countenance and deliberate, *knowing* words he proceeds to diagnosticate your disease, or to unwind the intricacies of your case, you might see reason to pity him and to congratulate yourself. Verily, "all things are full of labor; man cannot utter it: the eye is not satisfied with seeing, nor the ear filled with hearing:" nor, it may be added, is the mind content with knowing.

Still it is a privilege and a duty to improve our opportunities and faculties. We don't believe that a little learning is a dangerous thing, or that because we cannot expect to be thorough chemists, geologists, or botanists, it is lost time to learn the difference between an acid and an alkali, between granite and slate, or between radicles and stamens. The ordinary school-books on these subjects will probably be as good as any that can be procured. Don't read fast. Don't skip or slight or be provoked by the hard words. Those not familiar with the Greek and Latin from which they are derived will need some patience to hunt up their definitions in the dictionary, but when once fixed in the memory, and their expressiveness well understood, the Lepidopteras and the Exogens will become as familiar as the Morus Multicaulis of the days of the silk fever, and give

you a new interest in the butterflies, and their four gaily painted wings, and in the bark, pith and stem of the vegetation by which you are surrounded.

FARMING.—TWIN HEIFERS.

It requires considerable knowledge to carry on farming successfully, and if we learn from others, it will, as a general rule, cost less than to learn by experience, which, according to the old adage, sometimes charges high wages for tuition. The suggestions received through the columns of the FARMER are of great value to some, especially to young farmers like myself; and I hope people will not be diffident in imparting such knowledge as they may possess. Those that receive benefit will at least be thankful.

I have a pair of twin heifers, and have been told by some that both would not make good cows, or that one would be inferior to the other. Did they tell the truth? H. G. SMITH.

West Mansfield, Nov. 18.

REMARKS.—Not of a certainty. We have recently seen two or three pairs of heifer twins, which are being raised because they promise great excellence. Our correspondent probably alludes to the opinion which has prevailed among breeders from time immemorial, that when a cow produces two calves, one of them a *bull* calf and the other a heifer calf, that the female, to which has been given the curious name of Free Martin, will be barren. The old Roman writers on agriculture allude to them as *taurœ*, intimating that they had something of the bull about them. Mr. Youatt, in his treatise on cattle says, that Mr. John Hunter, of England, an accurate inquirer spared no pains or expense to ascertain the real foundation of this belief; and he availed himself of the opportunity of examining three of these free-martins. In all of them there was a greater or less deviation from the external form and appearance of the cow; and in the head and the horns some approach to those of the ox; while neither of them had shown any propensity to breed. The teats were smaller than is usual in the heifer; but the outward appearance of the bearing was the same. They were slaughtered, and he examined the internal structure of the sexual parts; he found in all of them a greater or less deviation from the form of the female, and the addition of some of the organs peculiar to the male; and he ascertained that they were in fact *hermaphrodites*. It is not then a mere vulgar error that the female twin is barren. On the other hand, there are several well authenticated instances of these free-martins having bred. An anonymous writer in the *Farmer's Magazine*, for November, 1806, describes a free-martin belonging to Mr. Buchan of Killintringham, that had a calf, and was a handsome beast, with a well-placed udder, and was a good milker. The same gentleman, however, had another free-martin which never bred. Another writer in the same Magazine, November, 1807, says, "on the 11th of November, 1804, a cow of mine brought forth two calves, one a bull, and the other a cow calf; and in spring last the female twin produced a very good male calf; yet a neighbor of mine assures me that a female twin belonging to him never would take the bull, and was sold on that account to the butcher at the age of four or five."

It would hence appear that the rule is, and a very singular anomaly in natural history it is, that the female twin is barren because she is an hermaphrodite; but in some cases, there not being this admixture of the organs of different sexes, or those of the female prevailing, she is capable of breeding.

But in case both of the twins are heifers we are not aware of any facts which justify the apprehensions of our correspondent.

BLANKETING HORSES.

Many times I have taken my seat to pen a few lines for your paper, but have as often deferred the accomplishment of my purpose. The subject that I now propose to write upon is the winter care of horses. From what little experience I have had in taking care of them, I have come to the conclusion that a team of horses is better off not to be blanketed. Two years ago I had two horses, and kept them blanketed all the time, save when they were on the road. They both had frequent colds, run at the nose, and shivered when coming in contact with the cold air. When taking them out of the stable, in the morning, to water, with the blankets off, they would tremble like an aspen leaf. Last winter I did not put a blanket on to either of them, and I did not see any signs of a cold, nor did I see one of them tremble after drinking. Even when I came in with them quite warm and sweaty, at night, I could see no inconvenience from not blanketing them. Now, hoping that some more abler pen than mine will take up the subject, I submit the foregoing as the result of my experience. C.

Surry, N. H., Dec. 1, 1867.

MILKING ONCE A DAY.

I would ask through your valuable paper, if it is as well to milk cows only once a day, as twice, through the winter months? Whether you can get as much milk in milking once as twice, or whether it is hurtful to the cows, or has a tendency to dry them quicker? If it is just as well to milk once, it will save time and labor in cold weather.

Franklin, Mass., Nov., 1867. J. JORDAN.

REMARKS.—There is no doubt on our mind that milking the cow only once in twenty-four hours would have a decided tendency to dry her. On the contrary, milking her three times would have a tendency—it might be slight—to increase the quantity of milk. Nature is usually generous in attempting to supply the demand made upon her. By high feeding and frequent milking, many cows can be made to yield for ten or eleven months in the year.

SITTING HENS AND STERILE COCKS.

One of our correspondents at North Easton, asks us several puzzling questions on the above topics.

What we wish to say to him first is, "that sitting hens *have their ways* as well as anybody;" and that some of these ways are just as much past finding

out as why a pig's tail curls instead of hanging down straight, while a cow's hangs down straight and does not curl! And the next is to send to Williams & Co., 100 Washington St., Boston, and purchase Bennett's Poultry Book, wherein he will find a treatise on the breeding and general management of domestic fowls, and pretty much all the information to be had on the subject. By studying it carefully, we have no doubt he will save chickens enough next spring to pay for the book several times over. It will tell him all about changing roosters and the management of sitting hens.

CHERRY AND APPLE STOCKS.

How long may cherry on Mahaleb, and apple on Paradise stocks, be depended upon for sufficient fruitage to warrant one in retaining them? Late works on fruit culture strongly recommend the cultivation of these dwarfs, but leave the reader much in darkness on the point named. What has experience taught in the matter?

Why not, in mulching young trees, remove the soil for a sufficient depth, then put in the mulch and cover it with three inches of earth? Would not this materially aid in retaining the moisture, and at the same time prevent the mulching from being disturbed by winds, as well as present a less inducement for the harboring of mice, &c.? If a lead trough of *sufficient size*,—one capable of holding *enough* kerosene oil,—and properly roofed, be put around apple trees, would it not be a perfect guarantee against the ravages of canker worms?

T. W. S.

Remarks.—To answer our correspondent briefly on this point, we should say, "long enough *to* retain them." They are set; let them remain and operate with other stocks in other places. His question can only be answered intelligently by some nurseryman or orchardist, of much experience and observation. Perhaps some of our "knowing ones" will answer.

His views on mulching are undoubtedly correct. It will be more labor, but a better job.

Troughs filled with oil and properly roofed over have been repeatedly used to prevent the access of insects,—but where they are numerous, they bridge over the oil with their bodies and some of them pass on. If not carefully attended to, spiderwebs, leaves, sticks, dust, &c., sometimes afford the means of passing. Besides this, the operation is a very exact and expensive one, which few only could afford.

BEAN STRAW.

I asked some questions in your paper a few weeks since about this article as food for cattle. From your "reply" I gathered that it might be of some value when green, but worthless when dry. But notwithstanding this, I gathered all my pole bean straw and hung it in the barn to dry. I have just cut up some of it and boiled it. The water used for boiling I used partly to moisten shorts, and partly I mixed it with fresh water and gave to my cows, and they drank this water with great eagerness. The straw I gave moist to the cows and they eat it up clean with great relish. I don't know that it would be practicable for farmers to prepare this food for cattle in this way, but if it contains eight per cent. albumen, as it is said, it must be of considerable value. I shall certainly save my bean straw another year. Every little in the right direction helps, and every increase of cattle food from a source like this, when hay is $25 to $30, and shorts $35 to $40 per ton, must be of some value. Inquirer.

Massachusetts, Nov. 25, 1867.

Remarks.—Further allusion to the value of bean straw will be found in the article headed "Cooking Food for Animals" in another column of this paper.

GOOD STEERS.—CROPS AND PRICES IN RUTLAND, MASS.

I frequently notice in the Farmer accounts of good cattle which I take great pleasure in reading. There are a pair of yearling steers, raised and owned in this town, which I think deserve mention in your columns. They are grade Durhams, spotted red and white, nearly alike, well matched and of good form, and weighed at one year old 1430 lbs.; and at one year and seven months, (Oct. 8, 1867,) 2075 lbs. They never have had any but common keeping and are not fat.

I will give the prices of some articles of farm produce in this vicinity, commencing with good hay, which is worth, at the barn, $20 to $22 per ton; straw, $10 to $15; potatoes, $1 to $1.25 per bushel; corn, $1.50 to $1.62; oats, $1; pork, 10c per lb; apples, per bbl., $4 to $5; cattle, yearlings, $15 to $30; two-year-olds, $25 to $40. Cows and oxen are not as high as one year ago, there being more of them for sale.

Potatoes were poor, not more than half a crop. Corn not as good as last year. Oats light. Hay crop good. The above may interest some of your readers in other places.

A Reader of the Farmer.

Rutland, Mass., Nov. 25, 1867.

POULTRY.

The *Country Gentleman* has an article on "What Breed of Fowls shall we Keep?" and gives the experiments of the writer with various crosses. The conclusion arrived at is as follows: "After all, we came to the conclusion that for ordinary purposes, Dorking and Brahma hens, with a Dorking cock, gave us the best results. For eggs, the hens must be young; for mothers, rather older." We are never tired of reading all that is written on fowls, and now and then get some valuable hints therefrom; but after all, the poultry breeder must act on his own judgment as applied to his own particular case, and cannot govern his conduct by the experience of others in this particular unless he knows all the circumstances of the experiment. The Dorking is a good fowl, and makes a good cross with the Brahma, but we much prefer the grey or white Brahma, or the Marsh fowl, to any other breed. They are quiet heavy, thick feathered for winter, good layers, particularly in cold weather when eggs are most valuable, can be housed and kept contented as easily as cattle, and their eggs are large, and their meat is good for the table. The Leghorn is a good layer except in cold weather, but they are *birdy* in their nature, and love to roam. The Black Spanish are also good layers, but like the Leghorn, they are rather tender, we think, and like to have room enough. Most any hen, if kept clean and warm, and properly fed, will pay enormous interest on her cost. We have had many varieties, but we have come to the conclusion that the gray-necked Brahma or white Brahma, or the Marsh fowl which is like them, only of a speckled brown color, are the best for our purpose. They must have better accommodations than the lighter fowls which can fly easily

about the pen, for they always prefer to jump rather than depend on their wings, when leaving their roost or nest, and are therefore more apt to get injured than many other fowls. They prefer to use their legs for all purposes of locomotion, and if you give them a chance, always to do that by proper walks and ladders, they will seldom get hurt although they are so heavy and clumsy. When killed for the table they will always look well, and weigh well, and we have never found any trouble in *eating* them.

We may at some future time say a word or two upon the manner of keeping fowls. The essential rules in our opinion, are few and easily followed. It is pretty much all summed up in this—they must have a clean warm coop, always clean and fresh water, free and pure air, sound and pure food, plenty of shells and lime, occasionally vegetables and meat, and sand baths in abundance. Other treatment is medicinal, and will generally be but little required, if these other rules are strictly complied with. They will keep cleaner and healthier with less care, and do much towards their own support, if allowed to roam at large about the grounds. But if confined in pens, and the pens are always kept carefully cleansed and ventilated, and the droppings often removed, and the earth frequently renewed, they will do well enough anywhere. INQUIRER.

November, 1867.

SEASON IN WASHINGTON CO., VT.

Winter has set in with great severity up here among the mountains. November 5th, the ground was covered with snow followed by the most intense cold ever known, perhaps, so early in the season—thermometer falling below zero in many places. The snow has not all disappeared since, and we have been obliged to feed our cattle and sheep almost every day since. This will no doubt be for the benefit of the mowing lands, but some may need more fodder this winter than they anticipated. We had about a week good sleighing in November, since which time we have been obliged to use wheels till yesterday, December 10th, a little more snow allows us to venture on runners again. This morning, December 11th, the thermometer is twenty degrees below zero.

Roxbury, Vt., Dec. 7, 1867. W. I. SIMONDS.

AGRICULTURAL ITEMS.

—For chapped hands wash the hands, and without using the towel, apply a small quantity of honey once a day and rub in well.

—In Canada most of their pork is fatted on peas, six bushels of which are equal to ten bushels of corn, and more can be grown from an acre than of corn.

—Ireland sends large quantities of butter to England. Of 3500 firkins in the Cork market, 789 were of first quality, 1922, second, 729, third. The price of the best was about 35 cents a pound.

—There has been a considerable falling off the present year in the Irish flax crop. The total acreage under flax in Ireland in 1866 was 263,507 acres; in 1867, 253,105 acres: decrease in 1867, 10,402.

—"The California Live Stock Assurance Company," is the title of an association recently organized in San Francisco. Geo. Treat is President, and W. Augustus Knapp, of San Francisco, Secretary and Actuary. Capital stock, $200,000, with 2000 shares of $100 each. It is understood to be the object of the Company to insure animals against death from any cause, to the extent of three-fourths their actual cash value.

—As an evidence of the depression in wool and sheep matters, an Ohio farmer recently said: "Three years ago I put $2000 into Vermont sheep, and now I cannot get $500 for them.

—A San Francisco paper looks forward to the time when grapes from California, by the Pacific Railroad, will be retailed in the Atlantic States States for five cents a pound.

—Our emigrants from the Southern States to Brazil say that the country is good for cattle, sheep, sugar cane, coffee, cotton; in short, good for everything except one's family.

—A newspaper item says the worst cases of chilblains may be cured by covering the affected part with old linen, either by lining the stockings or otherwise.

—It may surprise many to learn, what is nevertheless a fact, that fully one-third of the whole amount of sugar consumed in the world is manufactured from beets.

—The French Minister of Agriculture has issued a decree regulating the practice of surgical operations on the living horse and reducing them considerably.

—The Hardin County, Iowa, *Ledger*, says that raising sorghum is "played out" in that section, as there is too much work and dirt for the little sweet. This season few crops of it have matured in this section.

—Dr. Boynton speaks of visiting, while in Texas, the lands of Herbert Langston, a wool grower, comparatively a new comer, who brings with him an Australian experience, which ensures his success in his chosen business in this country.

—A joint stock company has been established in Australia with a view of boiling 10,000 sheep per week into tallow. The increase of sheep and cattle in Australia has been immense since 1830. Then the number was under 400,000; the number is now nearly 35,000,000.

—Dr. J. R. Nichols, editor of the *Boston Journal of Chemistry*, says that lard is adulterated to an extent hardly suspected by dealers and consumers. He has recently examined specimens which contained 30 per cent. of water, terra alba, paraffine, and other substances.

—A short time since as some boys were playing hide and seek in the barn of Wm. B. Kennison, of Norridgewock, Me., one of them crawled in behind the hay mow to hide, and came upon a hen's nest containing one hundred and eight eggs, all good and sound.

—The Portland *Argus* says Maine furnishes beanpoles for all England, and Trenton and Ellsworth are her principal representatives in this

branch of commerce. During the current year over one million poles have been received in this city from those places. They sold at an average price of 30 cents a dozen.

—A farmer in Clinton county, Iowa, tells of cutting 35 tons of timothy hay from 15 acres—receiving $350 for this amount.

—A correspondent of the *Gardener's Monthly* says he tried six varieties of strawberries last season and found the Hovey's Seedling to produce the sweetest and highest flavored berry.

—An Ashtabula Co., Ohio, farmer is now engaged in buying sheep, believing they are a good investment at present prices. In one case recently he was allowed to pick 50 young ewes out of a good flock of several hundred, at $1.25 each.

—At the Government Experimental Farm, at Washington, 576 varieties of cereals and garden vegetables were tested this year. Among these were 109 varieties of wheat, 20 of oats, 10 of corn, 29 of grass seeds, and 36 of potatoes.

—A large deposit of phosphates has been discovered near Charleston, S. C., which it is believed is destined to add immensely to the wealth of that section, as it is said to be equal in value to Peruvian guano.

—Mr. A. Hoover, of Lockport, Indiana, counted the kernels on an eighteen-rowed ear of corn, which weighed a pound and two ounces, and found them to amount to 1142 sound and plump grains. Some, a thousand fold.

—To remove warts from horses, the *Maine Farmer* recommends passing a considerably large needle with two threads through the centre of the wart, and tie the threads securely on each side of its neck, and let the threads remain until the wart can be rubbed off.

—The New Orleans *Picayune* proposes to increase sugar culture in Louisiana by separating the business of cultivation from that of milling the cane. The land could then be divided into moderate farms, which should be united by tramways with sugar mills in the center of each district.

—A correspondent of the *Western Rural* says that crib-biting in horses is no "vicious habit," as generally believed, but simply an instinctive effort to relieve pain caused by the teeth of the animal being crowded together, and that the proper remedy is to run a very thin file between the teeth which press together.

—The reason why a man lost in the woods invariably travels in a circle, constantly veering to the left, is said to be because the right side of every human body, except in the case of left-handed people, is more developed than the left; consequently the muscles on that side are strongest, and tend to gradually throw the whole body round, unless the aim is directed to some particular point.

—The London *Globe* says a man named Charlier thinks the notion that horses need shoes entirely wrong. He himself does not cut a horse's hoof. He merely protects it against violent blows and accidents, and against the wear and tear of the city pavements, by inclosing it in a thin circle of iron, which wards it from danger without compressing it.

—A correspondent of the *Maine Farmer*, after travelling extensively in Europe, says that in Switzerland, Eastern France and Prussia, he was struck with the adaptation of the beech for a thin but effective hedge. It branches little, is stiff and keeps its place. He saw but little that was killed or injured by dry seasons. He thinks it may be used here with much success, making a beautiful hedge, if care is used in shortening in.

—A correspondent of the *Western Rural*, who has had experience in raising and feeding Hungarian grass, says that if cut as soon as it begins to blossom, it is prime hay for any kind of stock. If the seed is allowed to mature, it should never be fed to horses or colts. It will either kill or stiffen them up in a short time. It is a very exhaustive crop if allowed to ripen the seed, but makes fine feed for neat cattle.

—The committee on scoured fleeces appointed by the Illinois State Agricultural Society, have recently made a report of an elaborate trial of wool cleansing, with results which are but the repetition of those which have been reached by New York and Vermont trials. They think no new facts can be established or good accomplished by further trials—wool growing tests—and recommend the discontinuance of premiums on scoured wool.

—The Trustees of the Pennsylvania Agricultural College have decided to locate the Experimental College Farm in the county of Chester, provided the citizens thereof will give five thousand dollars as a bonus for this mark of preference. The *Germantown Telegraph* thinks this will please the Chester county people, but hints that unless the managers of the farm are wide awake they will be excelled in products and management by many of the farmers in that county.

—Between Cleveland and Sandusky, and within one-half mile to a mile of Lake Erie, and near to railroad stations, as good grape land as any in this grape region can be had for from $50 to $75 per acre, not wild land but improved, with some buildings, orchards, and, in some cases, several acres of grapes started. The soil is clay, mixed with slate—what is called shale—and is as good land for grapes as can be found this side of California.

—In France, milk is packed in small tin cans, easily moved by one man, and by a simple contrivance the stopper screws close down upon the contents of each can, so that the motion of the railway cannot churn the milk *in transitu*. The cans are then placed in covered wagons, and in summer are wrapped in cloths, which are watered

from time to time so as to promote coolness by evaporation. The result of this care, which costs but little, is that the milk supply of Paris is proverbially excellent.

—The Nashua, Iowa, *Post*, is responsible for the statement that Capt. O. O. Poppleton of Richland township, Chickasaw Co., raised four hundred and five and ¾ bushels of oats—thresher's measure—on six and a half acres of land. He used about twenty-one bushels of seed. He estimates that he fed at least eight bushels in the sheaf before threshing—making a total of 413¾ bushels, or a little over 63 bushels to the acre. The lard has been tilled over ten years constantly without any fertilizing whatever.

—A correspondent of the *Country Gentleman*, went through his orchard some time after the marketable fruit was gathered and picked up a large load of rotten apples—there was not among them a bushel that had anything sound upon them, and many of them had been rotten for weeks. These were made up as usual. The juice at first was quite bitter and unpleasant. It was put into the cellar where it remained until spring, then removed to an outhouse and left until fall, at which time the bitterness had all disappeared, and it was a pure, pleasant tasted vinegar.

—"Take this flower pot;" said the President of a meeting in France lately; "what is the meaning of this small hole at the bottom?—to renew the water. And why to renew the water?—because it gives life or death—life, when it is made only to pass through the bed of earth, for it leaves with the soil its productive principles, and renders soluble the nutritive properties destined to nourish the plant; death on the other hand, when it remains in the pot, for it soon becomes putrid, and rots the roots, and also prevents new water from penetrating." This is the real theory and illustration of draining.

SALT AND LIME FOR HAY.

On reproducing in the Boston *Journal of Chemistry* the letter which he wrote for our columns, last August, in reply to the inquiries of E. L. Metcalf, Esq., as to the chemical effects of the mixture in preserving hay, Dr. James R. Nichols, adds the following note:—

It will be understood from the above, that lime and salt are incompatible substances, so far as by their chemical changes any special preserving or antiseptic properties are secured. Partially cured hay, treated in the mow with these articles, is practically unaffected by their presence. How then does it happen that green hay is preserved, when it has been applied? In the experiments made, it is probable the hay would have cured equally as well if the mixture had been withheld. Two mows of the same hay, stored under precisely the same conditions, one with the salts, the other without, would undoubtedly be found alike in the spring. We have long entertained the idea that hay is cured too long in the field. If grass is mown in the morning, *after the dew is off*, it may with safety be stored in barns, in the afternoon, provided the day is clear and warm. The influence of dew upon grass after it is cut and lying in the swath, as affecting its preservation in the mow, is imperfectly understood. We intend to refer to this subject again.

ILLINOIS INDUSTRIAL UNIVERSITY.

The trustees of this institution met at the University buildings in Champaign, November 26. Perhaps the title of this institution is more expressive of the broad purpose of Congress in donating land than that of "Agricultural College," which most of the States have adopted as the name of the institution or "department" on which they have conferred the national bounty, inasmuch as that Act provides that the Legislature of each State shall use the fund for the endowment "of at least one college where the leading object shall be,—without excluding scientific and classical studies, and including military tactics,—to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the *industrial classes in the several pursuits and professions of life.*"

To show what the Trustees of the Illinois Industrial University are doing to accomplish this liberal and comprehensive purpose, we condense from the reports of their Finance and other committees, and from the general proceedings of the Board, as published in the *Prairie Farmer*, the following facts.

From the report on finance, we learn that from 280,000 acres of script sold, $160,192.41 have been realized,—a little over 50 cents per acre. The Treasurer was authorized to sell 100,000 acres more of the land script at the rate of 90 cents per acre. Of the 25,000 acres which have been located in Minnesota and Nebraska, at an expense of $1300, Mr. Emery Cobb, chairman of the committee, says it is believed that these lands will, in a few years, bring from $3 to $5 per acre. A vote to locate 25,000 more acres was also passed. The total expenditures made thus far for all purposes is $25,622.40.

Exclusive of the "University lot," the institution owns about one thousand acres, near the site of the college. The committee on Agriculture recommend the sale of 400 acres of these lands, leaving 410 acres for stock farm and tree planting, 160 for the experimental farm, and 35 for horticulture.

The committee on Library and Cabinets recommended the appropriation of $20,000 for these purposes, including the purchase of the collection of Prof. Bromley, of the college at Marietta, Ga., which was shipped to New York at the breaking out of the war, where it has remained in store until this time, when it is offered for sale at $6000—the best judges in the country estimating its real value at $15,000 to $20,000. It embraces some 30,000 specimens, correctly named and labeled. After discussion, however, only $4000 were appropriated for cabinet purpose.

During the discussion of the subject of appointing a Farm Superintendent, Mr. Dunlap proposed that the superintendency of the farm should be devolved on the Executive Committee, instead of the Regent and Professor of Agriculture, as recommended in the report of the Committee on Agriculture.

Mr. Dunlap said that the Regent was appointed to take charge of the educational interests of the institution. The Professor of Agriculture is, and always will be, a myth. There will be Professors in special departments, such as Chemistry, Geology, Entomology, &c. There will be something of Agriculture and Horticulture taught. All these together will make up the education. The Regent should attend to the educational interests alone. The Executive Committee was the proper authority to rule over this farm, and determine its management.

The Regent, the Rev. J. M. Gregory, replied by saying:—

The great aim of the institution is to teach agricultural science, and to advance it by means of the experimental farm. It has a double use in this way. There is such a thing as an Agricultural Professor. One has just been chosen for the Cornell University, New York. One had already been recommended to him for this University. If the farm is a wheel in the machinery of the whole education, it must be under the supervision of the head of the Institution. The farm must give illustrations if not practice.

Mr. Dunlap's views about restricting the duties and power of the Regent met with no support. It was argued that there must be one head to the institution; that the Regent was the chosen man for that position; that the farm was where a large part of the agricultural and horticultural education of students must be obtained; that its lessons would be as much a part of the instruction as the lectures in the school room; that it was to illustrate the theories taught from text-books and by lectures. It was further urged that the Executive Committee could not be in session but at stated intervals, while the Regent would be there at all times for counsel and assistance. It was thought by some of the members that the proper Professor of Agriculture could be found.

The question of manual labor by the students of the University was left for the decision of the Committee on Faculty and Courses of Study.

A farm Superintendent, with a salary of $1500, with house rent, was appointed. Prof. W. H. Baker, principal of the High School at Springfield, and Prof. G. W. Atherton, formerly at St. John's College, Annapolis, were elected to chairs hereafter to be named with salaries of $2000 each.

The opening ceremonies of the institution are to take place on the eleventh of March next.

ON EATING PORK.

About once each year, near the time when the farmer has dressed the swine which he has been feeding for a twelvemonth, some persons commence a tirade against the use of pork as food. Whether these persons have been using pork grown upon the garbage of city gutters, or whether they have indulged in a surfeit upon that which was good, does not appear, and the reasons why they declaim against its use are no more apparent.

Most swine in New England are fed upon grain of some kind, skim milk, buttermilk whey, boiled potatoes, scraps from the table, and, during all the growing season, with fresh weeds, and short, sweet grass. To these are added, during the season of fattening, pumpkins, squashes, carrots and other roots, boiled and mixed with various kinds of meal. Salt is occasionally given to them, and in some cases pork and beef scraps from which nearly all the fatty matter has been extracted by pressure. They have clean and comfortable sleeping places, and although they sometimes wallow in the mud in hot weather to get on a coat which protects them from the flies, they are neat in their habits when properly treated.

There is no reason apparent to us why their flesh is not as wholesome as that of any animal used as our food. We have always used it freely, and have found it just as easy of digestion as beef or mutton. The principal reason, we think, why many persons speak against it, is that they eat *too much* at once! It is so delicions when properly cooked, and well sustained with cranberry sauce or currant

jelly, that a pound or two at one meal, would be quite likely to bring on some *grunting*, or a night-mare during the hours of sleep. Taken sparingly, morning or noon, it will be found nutritious, easy of digestion, and exceedingly palatable to most persons. We have, more than once, expressed the opinion that our people eat too much meat in warm weather,—that once a day is often enough. There is, however, a great difference in persons in this respect; some, even in childhood, always preferring animal diet to vegetable, and others preferring the vegetable; and this preference continues through life, and if not gratified the health seems to suffer. Hall's *Journal of Health* has a sensible article on eating pork, in which our views are well expressed, as follows:—

"There is no trouble in eating pork in a cold climate. It is needed—or some fatty meat, for the support of life, while at the South vegetable diet is better. But whether the hog should be eaten, depends on the manner in which he is kept. If he be kept as a mere scavenger on filth and rottenness, the meat would be unfit to eat, as its food must enter into its composition. We see this in the difference between the hogs fed on acorns and those fed on corn. Any animal that lives upon the filth and waste of cities, should be rejected as food. But if the hog can be kept cleanly and on proper food, pork is as healthy as beef, or poultry, or fish.

For the New England Farmer.

JERSEY COWS.

AMOUNT OF BUTTER FROM "LADY MILTON."

MESSRS. EDITORS:—In the MONTHLY FARMER for December, I notice a communication from Mr. Barker, in which he compares the product in butter of one of his native cows with that of a Jersey owned by Mr. Brown of this town; and if I mistake not a slur is aimed at "blooded" stock. If the question of the superiority of breeds for yielding the largest profit in butter-making is to be decided by reports or comparisons of this sort, I wish to give the Jersey's a fair show, and am therefore induced to report the product of a full blood Jersey cow, *Lady Milton*, on my farm. She is six years old, and dropped her fourth calf, (a heifer,) on the 15th of May last. Her product in butter, from June 1st, was as follows: In June, 64½ lbs.; July, 79 lbs.; August, 70¾ lbs.; September, 65 lbs.; October, 1st week, 14¼ lbs. After the first week in October she was no longer tested, because the grass in pasture had become short and very poor. Her feed during the time of trial was, in June and July, grass in pasture only; afterwards she had, in addition, a feed of green fodder corn at night, pretty regularly, and sometimes in the morning. No grain of any kind was fed.

Thus much for quantity. But *quality*, as well as quantity, is to be considered, in getting at the profits. Some may, and doubtless do say that Jersey butter is no better than that of native cows, while others, (and their number is increasing,) think it much richer. Of course there will be more or less variation in this respect with all breeds, and much depends upon the feed; but in comparing the average, on the same feed, my experience and observation lead me to the belief that the cream and the butter of the Jerseys are decidedly the richer of the two. But there is no better criterion on this point than the price obtained in market. I have sold mine through the summer at 75 cts. per lb., and I know of others who have sold at this price for a long time, in close competition with the best native butter, at from 40c to 50c. It is, in my judgment, safe to say that all the pure Jersey butter, *well made*, will command a higher price than native, by 25 per cent., the year round.

I admit that Lady Milton is an extra Jersey cow for quantity, though not the only one around here by any means. I know of others about her equal. I have several others that will produce weekly more butter than Mr. Barker reports. The average, under the same treatment, would tell the truth, if we could get at it. And it ought, in some way, to be ascertained, for the question of the most profitable breed for butter is altogether too important to remain an open one, subjected to the fancy or whim of amateur farmers on the one hand, or to the flings and ridicule of those who wish to make the most of a cheap cow on the other. It seems strange to the writer, to say the least, that any intelligent, observing farmer can have failed to notice that where our native cows have been skilfully crossed with blooded sires, such as, for instance, the Shorthorns or Herefords for beef, the Devons for working oxen, the Dutch or Ayrshire for milk, or with the Jersey or Alderneys for butter, great improvement has taken place in the quality and value of the animals thus produced. I am not alone in this view, and if it is an erroneous one, it is important we should have the facts to prove it so. J. C. C.

Spring Hill Stock Farm, Arlington, Dec. 16, 1867.

For the New England Farmer.

TRIMMING PINE TREES.

GOV. BROWN:—Although unable to write, in consequence of lameness in my hand, I will attempt to dictate a few hints upon this subject, as you requested me to do when here a few weeks since.

In the first place, great care must be taken to avoid bleeding. While the circulation of

the tree is comparatively dormant, say from November to February, I have found to be the most favorable season for trimming. While the wood is frozen the saw runs easier and clogs less, and although some object to trimming trees when frozen, I regard this as the most favorable time, if done with care. When trimmed at this season, there will be but little flow of sap, and the ends of the limbs will be seared over in the spring, by the time the circulation is active, when fresh wounds bleed badly.

In the next place, great care should be taken to avoid wounding the tree unnecessarily. Rough usage is the main cause of the prejudice against trimming pine trees. The axe or hatchet should never be used, even when the limbs are dead and comparatively brittle, as the bark on one side or other of the limb knocked off is almost sure to be bruised. The limbs should be carefully sawed off in all cases.

From my experience, I find there is little use in trimming trees which stand alone and exposed to the sun and weather. The pine should grow in clusters, or the trunks be shaded by other trees.

The work of trimming pine trees should be commenced while they are quite young, but the limbs should not be removed until they show signs of decay, or, rather, evidence of having fulfilled the purpose for which the lower limbs were designed.

To illustrate the advantages resulting from judicious trimming, I will mention the following facts. Twenty years ago one of my sons trimmed a tree which was then about five inches in diameter. This fall ten boards from this tree were exhibited at the Mechanics' Fair in Lowell, which contained 100 feet, board measure. Six of these boards, three from each side, were clear stuff, worth at least $60 per 1000 feet. Rather more than one-half of the four inside boards was also clear stuff of the same value. The central part of these four boards was knotty and worth about $22 per 1000 feet. Consequently over three-fourths of the 100 feet were worth 6 cents per foot, and the remainder 2 cents and 2 mills per foot. If the tree had not been trimmed, nearly or quite the whole of the lumber would have been worth only the latter sum.

In this fast age, the rapid growth of pine timber on fair land is too much underrated. When a boy, I remember of going into the woods with an older sister, to get the top of a small pine for a distaff. My sister stepped upon a rock, near which pine trees were growing, and pulled the top of a straight, thrifty one towards her, for the purpose of cutting off the top; but finally concluded not to, as the tree was so handsome, and took her distaff from a smaller bush. That tree is still growing, and was recently estimated by good judges to be from 90 to 100 feet high, and to be sufficient to produce 1000 feet of good lumber and one cord of firewood.

In order to form an opinion of the time necessary to trim trees nine feet high, I once timed myself on a dozen, which were situated about 40 rods from the house, and found it took me fifty-five minutes to trim the twelve trees, including the time spent in going to and returning from the lot. B. F. CUTTER.

Pelham, N. H., Dec. 18, 1867.

For the New England Farmer.

THE CLOSING YEAR.

"Ring out the old—ring in the new."

The close of the year has been so often improved as a fit occasion for moralizing and sermonizing, that it is rather hazardous to attempt to write on a subject so worn and exhausted.

I have no sympathy with those writers who regard the later months of the year as gloomy and sad, and peculiarly admonitory, because it is the season of the faded and fallen leaf; because the birds and flowers have departed, and because we have so many tokens of approaching winter; greatly preferring the more cheerful and rational views of H. W. Beecher and "Essecker" of Salem.

It is true that the decline and passing away of succeeding years remind us of the decline and passing away of succeeding generations of men; but the established order of nature and of Providence, which ushers in new years and new beings, only on condition that the old shall pass onward, has in none of its operations aught that can properly be regarded with regret or sadness. The silent forces of nature, under the direction of our great Ruler and Benefactor, have lent their kindly aid and co-operation to man in elaborating an ample harvest, and now rest, because their work is done, and well done. To the husbandman who did not neglect to plough by reason of the cold, or to hoe by reason of the heat, there comes no unpleasant sequel to the fact that "The harvest is past, the summer is ended."

What though the dark clouds should lower, and the storm should come with angry, threatening winds, how impotent and harmless do they appear to those who have full barns, granaries and cellars, with secure defences for themselves and their herds.

Delightful in their season are the songs of birds and the trilling of insects; but the pleasure which their music affords is enhanced by its intermission, that its cadence and echo may linger on the ear and in the memory till it again returns. Beautiful in their season are the flowers of spring and early summer, but the essential beauties which they represent and shadow forth are confined to no season or place; and are as omnipresent and immortal as the Divine Mind in which they originated. We have seen nature in the graceful attire of spring, in the full dress of summer and the brilliancy of autumn; we may now, with more hallowed pleasure, enter her hyemal temple

and behold the sublimer beauties of her statuary.

Some of the last days of the year are its best days. Ardent summer, murmuring and resounding with busy life, has passed away, and is succeeded by many of those tranquil and lovely days that add such a grace and charm to the fading year. If the sensuous and material world seems to have receded, we are more than compensated by the proximity of the supersensuous and the spiritual. Whence is it, that when during one of these quiet days, we seek some favorite retreat where the world seems hushed to silence and attention most profound, as if in the presence of some mighty orator about to speak, whence comes to us that hallowed pleasure—that indescribable emotion? Are not the invisible drawing near in spiritual communion?

The year is passing away. Well, let it pass, and with it all that is effete and useless; and let the new year put on more freshness and vigor, and in due time let "Revived earth unfold new force and new delights." The year is expiring; and let ancient wrong and venerated error die with it; and let truth and right be the watch-words of the coming year.

"And Isaac went out to meditate in the field at the eventide." As to the day, so to the year there is an eventide; and who does not feel that neither the day, nor the year, nor the life of man, would be perfect without its eventide. Happy are they whose meditations at the eventide of life, are not embittered by the reflection that their seed-time and summer were unimproved. I. B. HARTWELL.

Wilkinsonville, Mass., Dec. 19, 1867.

WHITE CLOVER IN GEORGIA.

A correspondent of the Southern *Cultivator* writes as follows: "I have enjoyed the pleasure of a visit to one of the highest peaks of the Appalachian chain of mountains immediately on the line between East Tennessee and North Carolina. For miles along its summit, and far down its sides, the most luxuriant growth of white clover completely covered the ground, filling the air with its fragrance, and affording the richest and most abundant pasturage for hundreds of cattle, sheep and swine, literally "rolling in fat" without an ear of corn or anything, save the rich herbage upon which they luxuriated with all their native fondness, requiring only the care of a shepherd to keep them within proper bounds. Calves of but a few months old looked like "yearlings," and from one cow running at large with her calf, I milked at least two gallons per day, for our pleasure party, consisting of nearly a dozen ladies and gentlemen. One hundred miles farther South, I have had several acres well set in white clover, without sowing a seed, by simply letting the land lie out. My milch cows grazed on it until Christmas, yielding richer and more milk and butter than when fed as cows usually are. Nearly 100 miles still farther South, I now have white clover that grew in many places this summer "knee high" on pipe-clay land, springing up spontaneously, whenever allowed the privilege of doing so. The second growth salivates or "slabbers" horses, but does not cattle or hogs. It grows finely with herds grass, affording a heavy swath of hay at the ground."

From Hours at Home.

THE WEEK OF INDIAN SUMMER.

The earth now rests from all her fruitful works;
Her golden week of Indian Summer glows
O'er all the land—the Sabbath of the year.
The sun slants low along the Southern sky,
The fine gold of his summer beams grow dim.
The clouds no longer heave their Alp like forms,
But thinly o'er the pale blue heavens spread.
O'er viewless, Western verge the thickening haze
Pours slowly in the atmosphere of dreams.
The hills, upon whose russet-slopes now lie
The latticed shadows of the leafless woods,
Afar in cloudlike masses melt away;
The winding stream autumnal rains have filled
Through woodland, glade, and rural homes, and roads,
Through fields all brown, and Winter-during green,
Moves slowly on in gleams from curve to curve
Like languid opening of a dreamy eye.
Save muffled echoes of the distant gun,
And interrupted peck of bird on limb
And hollow trunk, a buzz of blundering bee,
No sound disturbs the deep repose of earth.
From height to height the crow flies heavily;
And o'er the valley's gulf of wavering haze
The hawk, slow-scanning farm and field below,
In dreamy circles floats. Against this steep
And wood-browed hill, the warm and mellow air,
As from the wind-swung curtains of a tent,
Beats fitfully. A pale and shimmering light—
A last sweet smile as of a dying saint,
Plays softly o'er the wan and quiet earth.
Nor hills, nor woods, nor fields, though bare and brown
Are sad, but all rejoice in works well done.
The leaves have builded for their race of trees
The measure of a genial Summer's growth,
And at their feet are mingling with the dust.
The orchard trees, droop low relaxed limbs,
Unstiffened yet against the wintry storm.
October winds have sown the winged seeds
Of weed and flower; and by the streamlet's marge
The golden rod still bends o'er aster blue,
But bloom and glory's gone, by beat and chill
Of dark October rains.
As once of old
"God saw that it was good," and took his rest,
So year by year, through Nature's work, he does
The same, and in some week of warmth and light
Earth dreams her fruitful Summer o'er again,
And rests in peace as of a day of heaven.

LIVE-FOR-EVER, FOR INFLAMMATION.—Live-for-Ever is invaluable for inflammation—such as broken breast, sore eyes, &c. It is simply crushed and laid on, covered with a soft cloth. Mixed with camphor and lard, it works wonders with inflamed or caked bags in cows. I have known an obstinate case relieved by one application, gently but thoroughly rubbed in, so that the next morning the milk was running from the teats.—*Mrs. R. U. Sherman, New Hartford, N. Y., in Country Gentleman.*

PEANUTS have been raised in several parts of Iowa this year. They are as easily raised as potatoes, and a much surer crop.

STRIPED JAPANESE MAIZE.

The above is perhaps as good a representation of this beautiful plant as can be made by mere printer's ink and white paper. Its long wavy and gracefully recurved leaves, however, striped with the clearest white and the brightest green, occasionally showing faint tinges of rose color at the edges, as painted by nature, are quite another thing, and for groups on the lawn or for a back row in the flower-border, few plants are more imposing, effective and grand than the ornamental Japanese Maize.

It is a native of Japan, and was obtained by Mr. Thomas Hogg, in the Japanese gardens, and sent to this country a few years ago. It has been exhibited at the shows of the Massachusetts Horticultural Society for the two or three years past. Though a variety of Maize, it differs in many other respects than beauty

of foliage from our common Indian corn. It grows from five to six feet high, and has alternate foliage; the leaves being about four feet long and two to three inches wide. Like our common corn, it is of easy cultivation. To produce, however, early plants, it is well to sow the seeds in a pot in the house, or in a hot-bed, planting out in the latter part of May. By July 1, the plants will attain the height of three or four feet, and show their magnificent foliage. If planted in the open air, it should be sown about the 20th of May, and in a warm and rich soil.

CURIOUS THINGS ABOUT FROST.

One morning in October, I found all the tomato and pumpkin vines used up and killed by frost. But the bean vines, the potatoes and the cabbages in my garden were in fine growing order still. Three weeks afterward, frost came again, and not finding any more tomatoes and pumpkins, he laid hold on my pole beans and my potatoes. They turned black and died, as if strangled. An old farmer said that this frost that killed the potatoes was a "real black frost."

"Ha!" said I, "black frost, white frost; do they ever mix?"

"You watch and you'll see the difference," said the old farmer.

And I began to watch. The cabbages in my garden were not killed yet. The chickens have a wonderful good time nipping off the thick edges of the big, tough leaves. Well, I watched, to see what the frost would do next. One morning I noticed that the bridges and board walks were white as snow, but the dirt roads, gravel walks, and stone sidewalks could not show a single fleck of frost. And I saw that there was no frost on or near the spikes in the board walk, but were spots instead.

Yet I remember, one winter day about noon, when things were thawing a little, that the board walks all dried off, leaving a spot of frost on every spike, and all the stone walks and dirt roads were cold and hard as ever with snow and ice! Every fall the boards are frosty, while the spikes and stones are warm and wet. Every spring the boards are warm and wet, while the spikes and stones are frosty! Funny frost!

One day the good woman who cooks for us made some doughnuts; some folks call them fried cakes, (they are good, no matter what they call them,) and when she had done frying them, she set the hot lard out at the door, along side of a basin of water to cool. The lard and the water both of them froze solid that night, and the next morning I saw that the frost had made a *hollow* in the lard and a *hump* on the water! Frozen lard shrinks, frozen water swells! Funny frost, how you do act. And out in the barn on a beam, I had one bottle with castor oil in it, to oil my carriage wheels, another with neat's-foot oil for my harness, and another bottle half full of water. They all froze up solid, one cold night, and the water bottle split. But the others did not.

Off the coast of Nova Scotia and the Newfoundland, sailors often meet icebergs a hundred feet high, and all the books say that there is nearly six times as much ice under water as there is above. But when I went skating on our canal, the ice lay, all of it, on top of the water, and none of it that I saw was under the water at all. And yet when I break off a piece of ice and put it in a pitcher of water, it floats just like an iceberg, six times as much under water as above it.

An Indian was found dead by the roadside, one very cold morning, with an empty rum bottle beside him. He was frozen stiff. The wise Indians came and examined to find what had killed him. They decided that there had been too much water in his rum, and the water had frozen hard and killed him. Rum never freezes, but men with rum in them freeze more easily than other men who drink cold water only. Queer, funny frost again.

These are only a few of the curious things that frost has set me to thinking of. If any one of the readers can explain all these curious things, they will be wiser than some professors in our colleges. And professors are the wisest people I know of.—*Thos. K. Beecher, in Little Corporal.*

A SWEET AND SOUR APPLE.

Capt. Benj. Allen of Greene, Me., raises in his orchard a variety of apples which is a great pomological curiosity, as well as a puzzle. It is made up of alternate sections of sweet and sour, each section including about one-eighth of the apple. When the apple is well grown, the sections are regular and vary but little, if any, in different apples, and they are always distinct. In size, form and keeping propensities, it resembles the Rhode Island Greening—in fact, the sour part is that kind of apple. When first picked, the whole apple is of a greenish color, and the sweet and sour sections are not easily distinguished; but as it matures, the sweet sections assume a rich yellow color, while the sour part is that greenish yellow, peculiar to the Greening.

My father obtained scions from Mr. Allen's orchard, and for many years raised some of the apples, but the tree was blown down, and now, I think, there are none to be found only in Mr. Allen's orchard. Many a time I have seen my father, when he had company, surprise them by cutting first a piece of sour apple for them to taste, and adjoining that a piece of sweet, from the same apple. The tree now in Mr. Allen's orchard was grafted many years

ago, but I think no one knows where the scions came from. How was such a variety produced? Was it a natural growth from the seed, or was it produced by artificial means? I think it must have been done by artificial means, but what those means were, would probably need some experiments to prove.—*Z. A. Gilbert, in Maine Farmer.*

AMERICAN WOOL AND ITS IMPROVEMENT.

H. D. Tellkampf of New York submitted a report at the late meeting of the National Wool Manufacturers' Association, November 7th, on the part of a Committee of that body appointed to consider the subject at our head. The author, it will be remembered, is at the head of the house of Tellkampf & Kitching, and is perhaps second to no one in the extent of his information as regards the wool trade, and in his ability to speak with authority as to the wants of our manufacturers, and the character of the wool now and heretofore supplied by our growers.—*Country Gentleman.*

E. B. Bigelow, Esq., *President, &c.*—As a member of the Committee on "Raw Materials," I beg leave, most respectfully, to submit some remarks in relation to the production of wool in the United States, considering the improvement of it of vital importance, both to manufacturers and wool growers, and the more so as the present high tariff operates seriously against a supply of several qualities of wool needed for various descriptions of woolen goods. The manufacturers have tested this year's clip sufficiently to tell whether they can acknowledge the force of the following observations, viz.:

Our fleece wool, as a general thing, has shown that too little care has been taken with the sheep—not even excepting our old wool growing States. It is evident, in fact, by the great number of fleeces being more or less matted and yellow, the staple of which is unhealthy, and causes a greater loss in working; such faulty wool, in spite of the great care, and much expense on the part of the manufacturer, will not render an article as good, as healthy or sound staple wool. The reason for such deficient or faulty fleeces is to be found generally in the fact that the sheep have been exposed to inclement weather, and been irregularly fed, etc., and an important objection to the exposure of the sheep in rainy seasons is the harshness of the points of staple produced by it. The well cared for flock will not only be healthier, and the mortality less, but the quantity of wool produced, larger and more valuable, than of the same flock if carelessly kept. A perfectly sound staple of the fleece is required for good fabrics and a perfect finish.

There is prevalent in this year's clip the influence of the Vermont breed, resembling the old Negretti Spanish breed, well known for many years for its heavy grease, causing in most cases the points or tops of the staple to become charged with a dark hard substance similar to pitch, and for this reason called, in Austria and Germany, *pitch tops*, which are dreaded by the manufacturers, who cannot scour this wool by the regular process, and have the trouble and expense of clipping the tops by hand, to say nothing of the loss of weight to them—seldom less than ten per cent. They have found, at the same time, that a wool without a perfect staple will not work or finish as well as that of a full or entire staple. Furthermore, the wool of this breed proved to be lacking the necessary *fulling* qualifications, and does not produce as valuable and saleable fabrics as that of Silesian and Saxony Escurial breed. Our next clip will be still more charged with "pitch tops," indicated already in the fleeces of yearlings and lambs this season, as, with the age of the sheep, the tops of the staple become more filled with the hard substance.

Vermont wool has never enjoyed in this country a reputation, as Silesia and Saxony wools have deservedly earned in Germany. It is, therefore, the more astonishing that the wool growers of Pennsylvania, Virginia, Ohio and New York, producing for years superior and higher priced wool than Vermont could be induced to venture upon an enterprise, without first considering the consequences, merely for the production of heavier fleeces. Should it have been recommended by Vermont breeders, "a single or double crossing," but no more, of the flocks in this country, it might have led to some good, similar in effect to that experienced in the superior Escurial breed of Saxony and Silesia, where the breeding-in for years had weakened the strength of the animals, and the fibre of the wool. But for this mixture of blood, nothing but the best breed of Negretti was considered advisable, or has proved beneficial.

It is very obvious that we have too much of the Negretti blood in our flocks, and to counterbalance it favorably, the Escurial breed of Silesia and Saxony has to be used without delay. The difference between those two breeds is "that the Escurials produce a compact, short stapled wool, superior for clothing. The Negrettis, however, grow a longer stapled wool, but not as compact a fleece. In Mecklenburg and Austria, more than in other parts of Germany, the Negrettis have been used, to a certain extent, for obtaining combing wool. In France, there are likewise good breeds for Delaine wool. The Negretti sheep is of larger size than Escurials. The best breeders in Silesia prefer the Escurial breed for its being a better traveller, healthier, and for consuming less food. Three Escurials will not need as much food, in short, as two Negrettis. Several years ago the Negrettis were introduced in various parts of Australia, but proving quite unsatisfactory, they are now called there Re-

grettis. It is evident that steps have to be taken, for the benefit of our wool growers, to produce the most desirable and valuable wool which our woolen industry needs.

The importation of Silesian and Saxony rams, either for account of the growers, or for account of a company of manufacturers, for distributing them at cost, adding a moderate commission, appears to be the most expedient measure for about three years, as that length of time is required before a good sized stock farm of the best breeds of these countries is in a position to furnish the needed rams to a certain number. There will be other breeders here who will join for the provision, by-and-by, of the demand and wants for Silesian or Saxony breed.

Allow me to say that nothing would speak plainer for the growers, and be of more advantage to them, than a material proof of the establishment of a stock farm by our largest manufacturers. Such could be accomplished with a capital of about $100,000, on a farm of about 400 or 500 acres, properly located in a healthy neighborhood near New York city. It would do to commence with a flock of about 200 ewes and eight or ten bucks of Silesian and Saxony full blood breed; but I would advocate under present circumstances, to begin with double that number, because the first year there would probably be only 350 lambs, of which one-half that number are males, and from them we have to deduct for mortality, &c., leaving only about 140 rams for sale when two and a half years old; consequently the income for the sale of rams would commence the third year, after which the yearly number would increase, and with it the entire value of the farm. Taking a moderate average value at $100 each, the first income for 140 rams would be equal to $14,000. As the expenses of a stock farm are heavier than of other farms, I will remark that all the produce, including the wool, might be taken for the expenses, leaving the revenue of rams as net profit, and increasing every year, would be a handsome return for the investment.

It is with this as with every business; its success depends upon a good selection of the best and healthiest breed, the proper lands and locality, good management, reliable help, etc. After inspecting a number of farms, some of them seem to be well adapted and reasonable in price, and to secure the success more fully of an enterprise of this nature, I would recommend the appointment of an able, reliable person, and trust to him rather than commit it to the care of shareholders who are unacquainted with it, or who might perhaps interfere to the detriment of other interested parties. A few large subscribers are preferable to many small ones.—*H. D. Tellkampf, New York, Nov. 6.*

The Buenos Ayres wool clip of last year amounted to 100,000,000 pounds.

For the New England Farmer.

A NEW YEAR SONG.

BY ANNE G. HALE.

A happy new year! A happy new year!
A happy new year to all!
We've naught to dread, we've naught to fear,
Whatever ill befall.
Ill—why should we call it thus?
Or *Good*? How dare we say
That aught is better, or worse, for us
While here below we stay?

O Earth, thy mysteries stand
Unsolved while the ages roll,
Mocking the wisest brain and hand,
And spurning all control!
And thus the years pass on,
Bringing the same to all,—
At times Life's bread, at times a stone—
The birth robe, and the pall.

The past with its pleading prayers
Unanswered flits away,
And out of its crumbling altar-stairs
We build our cross to-day:
Who knows but that it yet may rise
To a column of grace and strength,
Uprearing under smiling skies
A palace of joy at length?

We know Our Father's eye
Looks through earth's thickest clouds;
He sendeth peace from His throne on high,
Where wildest woe enshrouds;
And from the deepest grave,
And to lips the dumbest long,
His hand hath power to raise and save,
And give the sweetest song.

Then—up! up! every heart!
And—up! all voices here!
Sorrow and sighing shall depart
Before the glad new year.
A happy, happy new year!
A happy new year to all!
We've naught to dread, we've naught to fear,
Whatever may befall.

CHEMISTRY APPLIED TO THE WHEAT CROP.

We have just harvested and threshed our summer wheat, and find the yield to be a little rising thirty bushels to the acre. The berry is plump and full, and in color is not affected by the season. As we look upon our bins filled with the noble grain we ask ourselves, "Why is the cultivation of this cereal so generally neglected in New England?" Farmers have the impression that their lands have lost some element or elements essential to its growth, and therefore it must uniformly fail. This is true in part. Analysis of the wheat plant, both of the straw and berry, shows that it is peculiarly rich in lime, and also in the phosphatic and nitrogenous elements. These cannot be found in sufficient quantity in our worn-out soils, and therefore the wheat plant languishes. But we

can restore such soils to fertility, so as to get highly remunerative returns in wheat. We dressed our wheat field with pure bone dust, well rotted, 500 lbs. to the acre, and with it we mingled about 50 lbs. of nitrate of potassa. This gave us splendid results. Doubtless a thorough dressing of well-seasoned barn-yard manure would have furnished a sufficiency of the needed elements to have met the wants of a single crop; but we prefer the lime and salts, as being directly applicable to wheat on most lands, and rendering a crop certain. With flour at sixteen dollars a barrel, it is a pity farmers should not raise at least a home supply of wheat. We obtain the most delicious sweet bread from *our* wheat, ground fine, in an old-fashioned stone mill. We keep it out of the *bolt*, as it is certain we cannot improve upon nature in adjusting the parts of the grain to be used as food. More attention should manifestly be given to wheat-raising in this section of the country. So long as the high price of flour continues (we are of the opinion that the days of cheap flour are past,) it is the most profitable crop. The kind of seed that appears adapted to our soils is what is known as the "Black Sea" variety. This is a summer wheat. —*Dr. J. R. Nichols, in Journal of Chemistry.*

EXTRACTS AND REPLIES.

RELATIVE VALUE OF ROOTS AND CORN.—CROP OF POTATOES.

Will you please give me the relative value of early flat and ruta baga turnips, potatoes and corn for feeding animals. 1. Potatoes for horses that are not worked very hard; 2. turnips for cows; 3. potatoes for hogs. I estimate two bushels of steamed potatoes equal to three bushels of raw for all animals. Am I correct? Would you feed rye whole or ground to a fattening hog?

Lest you should think me rather ungenerous to ask so many questions without contributing any thing, I will say I have raised 260 bushels of extra potatoes from less than one and a half days' labor of self and hand, with horse and cultivator part of the time. The piece of land on which they grew is less than two acres, and no barn manure has been put upon it within the last fifty years. This year I used two casks of Bradley's Superphosphate. Unless on burnt land, who has done better? A SUBSCRIBER.

Plymouth, N. H., Nov., 1867.

REMARKS.—"A Subscriber" is referred to Johnson's Agricultural Chemistry. He will there find tables containing the nutritive elements of corn, potatoes, turnips, &c. He will find that corn contains about 93 per cent. of nutritive matter; potatoes from 11 to 21 per cent. according to variety; turnips somewhat less. From these data he can figure out answers to his questions. Roots, however, may possess a value not indicated by scientific analysis. During our many long winter months our stock are deprived of the succulent feed of the pasture, and confined to hay and other dry fodder. Men on shipboard are liable to diseases for which vegetables are the cheapest and surest preventives and cures. In the house we do not inquire into the exact amount of the nutritive value of a nice bowl of apples. We eat them and *feel* they do us good. In the barn, then, as well as on shipboard or in the family, the proof of vegetables—of anything green and juicy, even browse,—must, like "the pudding," be tested by "the eating." The farmer must not be a man of one idea. There is yet much in our philosophy that cannot be expressed dogmatically. We live and learn—one thing, at least, that circumstances alter cases. There is no doubt that roots are rendered more digestible by cooking. As to their increased nutritive value, see an extract from an English paper in the FARMER of the 7th inst.

TIGHT *vs.* OPEN BARNS.

Having noticed several communications in the FARMER on the above subject, in favor of open barns where hay is stored, I venture to oppose the theory, premising, however, that as I know whereof I write, what I say is '*practice* as well as pen and ink," with all deference to Mr. Bancroft, in the FARMER of Nov. 30.

I have two barns, one of which is shingled all over, and has a double floor; the other is old and open. I have for years been putting hay into the former, made at least from one-third to one-half less than that put into the latter, and never yet have taken any poor or smoky hay therefrom. While from the old barn the hay is always poor on the sides of the mow.

A neighbor of mine had an old house well shingled, lathed and plastered, which he filled with grass, cut and housed on a cloudy but dry day. In the spring it was taken out, when all but a few inches on the top was beautiful and much better perfumed than Lubin's Extract, called "New Mown Hay."

Col. ——, of New Bedford, filled some new oil casks with grass, green from the meadow. After a year had elapsed he found it in the same condition as when headed up. Keep the air from your hay as well as from the fruit which you put into cans, and it will keep.

Let those building barns think of these things and not go back to the days of their grandfather, "when grass was allowed to go to *seed* before mowed, and corn was planted *five feet apart* and the *plough was used* instead of the cultivator.

Somerset, Mass., Dec. 13, 1867. ANON.

LETTER FROM VERMONT.

When the mercury is forced to zero, and still down to 25 degrees below, by the power of the freezing cold, how can we improve a little time now and then to better advantage to ourselves and others, than by writing for our agricultural papers? The chores must be attended to as a matter of course. The colder the winds and the more severe the weather, the more careful should we be of the creatures entrusted to our care and protection; striving as far as we are able, to make them comfortable, and to keep them in a condition to thrive and grow.

"Billy Black" and "Fanny Grey" would fully appreciate an extra bedding of clean straw, and an additional rubbing down with the comb and brush; "Old Speck" and "Brindle" would gladly accept something of like treatment, with an extra nubbin of corn, these biting cold mornings; and they richly repay us for all our extra care in this direction.

The young stock out of doors, whose only shelter is the shed, the sheep in their yards, and the pigs in their pens, should not be forgotten as re-

gards the "extras" at such times. To keep our stock as comfortable as possible when the weather is unusually severe, is required of us as much for our own profit as for the comfort and growth of the stock. No considerate and human stock producer will allow his animals to suffer from a want of proper care and attention to these particulars. But when all this is done; when we and ours have been properly cared for these "bitter cold" days, let me repeat, how can we devote a portion of our time more profitably than by writing out our thoughts in regard to some matter of interest to ourselves and others for our FARMER or *Cultivator*?

Then, again, we have long evenings at this season of the year which we can improve very pleasantly, and, I think, profitably in this manner. In the first place, every man who owns a plot of ground of sufficient size for a garden, should take an agricultural journal. If he is not a farmer, he should feel and manifest an interest, to some extent, in farming and gardening, that he may be able to make the most of whatever land he may possess. Men are few who take no interest in agricultural or horticultural affairs, and are willing to be counted wholly ignorant in matters pertaining thereto. There is a charm in rural life which all appreciate; and I know of no better means of information; no purer, more elevating and instructive reading, for a family of boys and girls, whether they be farmer's sons and daughters, or not, than what the columns of our rural journals afford. I consider our agricultural and horticultural journals among the best and ablest published, and should receive "aid and comfort" from all interested in the sciences of which they treat.

Lyndon, Vt., Dec. 16, 1867. I. W. SANBORN.

ARSENIC AND UNGUENTUM.

Your correspondent, David Currier, of Peacham, Vt., cautions your readers against the use of "unguentum" for the cure of lice on cattle, and recommends as a substitute a solution of arsenic in soap and water. I have no doubt this will kill the lice, but as to its being less dangerous, I have much doubt. Indeed, I think it is much like cautioning against the use of a bow and arrow on account of its dangerous character, and recommending the Minie rifle in its stead. He says the soap neutralizes the poison, and renders it harmless to the cattle. The common white arsenic of commerce is arsenious acid. When added to boiling soap and water, it combines with the potash of the soap and becomes arsenate of potash. Of this a much greater quantity can be dissolved in a gallon of water, than of the simple arsenic. Hence the soap so far from neutralizing the poison, causes the water to dissolve a larger quantity than it would without it. Fowler's solution, which is the most common form in which arsenic is administered medicinally in this country, is a solution of equal parts of arsenic and carbonate of potash, in water, the carbonate potash being added to render the arsenic more soluble, and to enable the water to take up more of the arsenic. His application shows how much poison cattle will bear without fatal injury. I have been in the habit of using the unguentum for many years with success, and never with any perceptible injury. J. R.

Concord, Mass., Dec. 25, 1867.

WILL NATIVE COWS PAY?

Having seen several statements in the NEW ENGLAND FARMER of the products of different breeds of cows, I will give you a report of a small sized native cow I purchased last fall for $42. She gave a small quantity of milk to March 10, and calved April 20. I was obliged to milk her twice a day for a week previous to calving, though told by several that I should spoil the cow. I was, however, satisfied that it was a great relief to her, and did much to keep her udder free from inflammation. The calf was sold April 29, and from May 1, to Dec. 1, she had given 3643 quarts or 7741 pounds, at 8½ pounds to the gallon; being an average of seventeen quarts a day, or 10 quarts per day for the year. Dec. 1, she gave 11 quarts; and at one milking 12 quarts; 22½ quarts largest daily yield. Or, in more detail, from may 1, to 15, she averaged 16 quarts a day; from May 15 to 31, 21 quarts; during June she averaged 21 quarts; July, 20 quarts; August, 18 quarts; September, 16 quarts; October, 14 quarts; and November, 11½ quarts per day.

I think the quality of her milk full an average for Native's. Feed through the summer, grass and four quarts of fine feed. She now gets dry hay with the same amount of fine feed mixed with warm water. Is supposed to be with calf to come in May. H. C. FISK.

Fairmount, Mass., Dec. 20, 1867.

DOMESTIC TRAINING---NO. 3.

In reply to "Sarah," I would say, that it is not "modesty," but the consciousness of incapacity, that prevents me from "giving my experience in housekeeping." Most gladly would I do so, if I were as good a housekeeper as some ladies whom I have known. As it is, the less said, the better

Yet all the more for that very consciousness, would I urge it upon those having the care of the young, to make instruction in such matters a *speciality*. When the young lady leaves the parental roof for a home of her own, she should be able to meet her household duties not as an ignorant apprentice but as a skilled master. Life has an abundance of inevitable cares, without adding thereto those which might easily have been avoided.

The sewing and knitting department should also receive due attention. The latter accomplishment has been much neglected of late, and perhaps with some show of reason. Yet on one account, at least, it should be learned,—because it is the most suitable work for the aged. If the young lady will just imagine herself a matron of fourscore, in cap and spectacles, she will doubtless think, as a lady once said to me, "I shall certainly learn to knit before I get to be old."

"Practice makes perfect," in housekeeping as in everything else; but that practice should be secured, and that perfection, as far as may be attained, in the sunny days of youth, while care and weariness are yet far in the future. MATTIE.

Marlboro', Mass., Dec. 17, 1867.

LAUREL POISONING.

I wish to inquire whether there is any remedy or cure for sheep that are poisoned with Laurel. If so, what is the remedy, and is it sure cure?

E. L. METCALF.

Franklin, Mass., Dec. 16, 1867.

REMARKS.—In the early spring, before the grass has sufficiently started to give the lambs a good bite they are most liable to eat the laurel, although they are occasionally poisoned by it at other seasons. In his "American Shepherd," Mr. Morrill says:—

In the early stages, if the greenish fluid be suffered to escape from the stomach, the animal most generally recovers. To effect his, gag the sheep; which may be done in this manner: Take a stick of the size of your wrist and six inches long—place it in the animal's mouth—tie a string to one end of it, pass it over the head and down to the other end, and there make it fast. The fluid will then run from the mouth as fast as thrown up from the

stomach. In addition to this, give roasted onions and sweetened milk freely.

In a communication in our columns some three years ago, Mr. A. W. Valentine, of Bethel, Me., said:—

Last spring we had ten or twelve sheep poisoned at one time, and succeeded in curing all of them by making use of the following remedy: bruise well the green twigs of white ash; boil them one hour in water enough to cover them when pressed down. Two tablespoonfuls will generally cure, if given within twenty-four hours of the poisoning. The sheep like it, and after the above trial I used often to give it to them. A neighbor has always succeed by giving a gill of lard or fresh butter in a pint of new milk.

A correspondent of the *Rural New Yorker* says he once had five valuable sheep poisoned with laurel. He gave them melted lard and milk, without any apparent effect. Two of them died. He then applied crushed onions under the fore legs of the others, where they join the body. Two which appeared to be in the worst condition recovered. The other, which lost off the onion, died.

Two or three doses of Thompsonian Composition Powders, and the seeds of the common Plantain mixed with a tablespoonful of molasses, have also been administered with apparent benefit.

WARTS ON CATTLE.

In your issue of the 14th inst., you say, "We think we have never seen so many warts on cattle as this year. Whether the unusual amount of rain which has fallen the past season in New England has any connection with their production we cannot say." In the West, we have had a drought the past summer, as you are aware. Still a very common question here, is, What is the cause of so many warts on cattle this fall? and how can we get rid of them? Yesterday I saw a herd of thoroughbred and grade Jersey cows, on every one of which were more or less warts. In this section they appear to fasten on a herd and reproduce themselves on each of the animals. What can be the cause of these warts? Clearly it is not, in this section, on account of much rain.

W. P. Anderson.

Cincinnati, Ohio, Dec. 16, 1867.

Remarks.—These are certainly interesting inquiries, and we invite communications from stock raisers and farriers.

A correspondent, "Yeoman," of Norfolk county, Mass., writes us that he has frequently had cattle troubled by warts, and has always cured them by applying a few times, with a swab, a wash made by boiling the branches of the Fever Bush, (*Benzoin odoriferum.*) The same wash is also, he says, a sure cure for the Mad Itch.

INFORMATION WANTED.

In your paper of the 14th inst., we have some excellent remarks intended for the benefit of a person you call "dear young farmer—Y. F."

Some of the dirty work he refers to, I suppose, may be the making of *manure*, by keeping cattle or by composting. It is in this part of farming that we find our dirty work, to lessen which some hope to find a way by the aid of agricultural chemistry. "Y. F." seems to think agricultural colleges will help those who can go there, to learn how to avoid the dirty, drudging, hard work of a farmer's life. Well, one of the principal things we want is knowledge of a way to make manure, and if our friend "Y. F." could content himself with so understanding agricultural chemistry, as to be able to find manure "everywhere plenty and adequate to the demand, so that by expending $1.50 he can always produce an extra ton of hay, and can keep mowing and pasture land in a fertile state without recourse to animal manures, and even bring back old pastures to their original fertility, he need not go to any agricultural college to do this. Now, if he wishes to understand chemistry so as to grow apples, peaches, pears and plums, without the use of spade or plough, and make the trees as healthy and the fruit as perfect as when the country was new," he need not go to college, as it is proposed to teach all this, and also how to prevent potato rot, in a school to be instructed by a professor of agricultural chemistry,—charge for tuition $3. The school is in Sherborn, Massachusetts

I headed this "Information wanted." The information we need is this:—Can any person inform the many subscribers to the New England Farmer, how far the scholars of Professor Dodge Hayward have succeeded by the aid of his instruction in agricultural chemistry in producing hay and grass, fruit and potatoes, as I have promised above, in the professor's words, though not by his request. My use of the article in the New England Farmer of the 14th inst. I hope I will be excused by the editors and by "Y. F."

Sherborn, Mass., Dec. 20, 1867. J. F.

THE STOCK IN WINTER.

While cattle require especial care and daily attention during the winter season, the cold weather is apt to induce carelessness and neglect on our part. Animals should be well watered, equally foddered, and systematically carded or cleaned. Salt should be kept before horses, cattle and sheep. They should have a daily airing of two or three hours. Young cattle and sheep may have much more liberty. No class of stock should be allowed to run down in flesh, as it is hard work to bring them up again. Keep the young stock growing. However abundant fodder may be, its waste is criminal. Those who throw out hay, straw or stalks to be trampled upon and trod into the ground by cattle and sheep do a very foolish thing, for if properly used as bedding, even, it would be worth a good deal for manure. Racks ought to be provided for the yards and sheds as well as for stalls. O. T.

Lakeville, Mass., 1867.

CURE FOR SCRATCHES ON HORSES.

Take Balm of Gilead buds, say enough to fill a quart bottle, then cover the buds with alcohol and in a few days it will be fit for use. Add an equal amount of chamber-lye to the liquid and wash the parts affected twice a day. This will take the soreness out, and soon effect a cure, if the case is not a severe one. The horse can be kept in use by making the application upon putting him up, as it will prevent him from taking cold.

Every man that has a horse should secure a quantity of the buds in the spring of the year when they are large and full, as the wash is excellent for galls, wounds and bruises. M. M. Tallant.

East Concord, N. H., Dec. 26, 1867.

HOW TO GET RID OF RATS.

Last spring rats were so plenty about my buildings that I often counted a dozen in a drove. I tried many ways to get rid of them without effect, until at last I caught one alive in a steel trap. I

smeared him well from nose to tail with kerosene oil and let him go. In a short time every rat disappeared, and I have not seen one, or any signs of one, about my premises since. Perhaps my success in routing these "enormous pests" may encourage "E. M. E." to persevere in his battle with the "varmints." H. T. BERRY.

South Bombay, N. Y., Dec. 10, 1867.

REMARKS.—An "exchange" says that a little soft potash spread near their holes will make their feet smart, and as they seek relief by licking them, both mouth and feet will become sore, and the rats will abandon the premises in disgust, and warn all the rats in the neighborhood not to "put their foot in it."

STIFLED COLT.

What is the best treatment for a colt, six months old, whose stifle joint easily gets out of place? Can a stifle shoe be safely used; or, can straps, to keep the parts in place, be safely used in colts, so young, without inducing deformity in growth?

Paris, Me., Dec., 1867. E.

REMARKS.—Dr. Dadd says that in days of yore, it was customary to apply the stifle-shoe, but he thinks the practice is injudicious, highly injurious, and at the present time is scarcely ever advocated by men who do their own thinking, and who practice in accordance with the principles of common sense. He recommends bathing constantly with some astringent, a solution of alum will answer. Sometimes, however, it will be necessary to shave the hair from the part and apply a strengthening plaster composed of pitch, tar and rosin—equal parts; these are to be melted in a tin or iron vessel; and when the mixture is sufficiently cool, it may be spread on the region of the stifle by means of a knife, and then covered with a thin layer of wool or cotton batting.

On page 495 of the MONTHLY FARMER for 1867, we replied more at length to a similar inquiry.

PLOUGHING IN MANURE.

In a communication to a late number of the FARMER, signed H. Poor, I find an endorsement of the old fogy doctrine, that "harrowing in manure is a fatal error." I would like to ask Mr. P. if he has had as much experience in harrowing in manure as in ploughing? Those who have, are staunch friends of the *harrow*. The idea that it *dries* up is a "fatal error."

Does he know of any way by which land can be manured higher than by putting a pile of manure on it and letting it lay over winter? Men familiar with the lands at the west say that the Lord grows taller grass and keeps his land in better condition than we overwise mortals do, but that he never owned a plough, and does it by top-dressing. H.

November 5, 1867.

MILK FOR BUTTER, FOR CHEESE, AND THE CITY.

At the meeting of the Milk Producers' Association, the question was asked, What quantity of milk was required to make a pound of cheese? By a published statement, I learn that from nearly 100 trials, it was found that two gallons of milk produced one pound of butter, or two pounds of cheese, as the average for the season. If this statement is correct, will it not pay the farmers better to build butter and cheese factories, than to make milk for Boston market, as good butter has averaged about 40 cents per pound, and cheese about 15 cents, the past season? There are some advantages to the farmer in favor of factories. As the milk is all produced from the farm, and mostly in the summer, no extra feed is required, as in making milk in the winter; and there will not be any sour milk returned to the farmer, as is done on milk routes for the city, when milk is too plenty at market, and no neglect to furnish more than two-thirds of the number of empty cans required, whenever it suits the middle-men so to do, and no cans to wash and keep clean, when cleansed at the factory. This will, I think, pay the farmer as well as selling the milk to the middle-man at whatever price he is pleased to name. But as there are two sides to every story, will those who see the opposite side of this please give it as it appears to them.

A MILK FARMER.

Roxbury, Mass., Dec. 30, 1867.

REMARKS.—A table of the statistics of forty-one factories, which used the milk of 18,779 cows, yielding 6,356,412 lbs. of milk, showing an average of 9.68 lbs. of milk to one lb. of cheese, is given in the Second Annual Report of the American Dairyman's Association, for 1866. A gallon of milk, large measure, is equal, we believe, to about 10 lbs., and of wine measure about 8 lbs.

In his address before this association, in 1865, Mr. X. A. Willard says, that from experiments made at the Orange County Milk Association, where butter and skim cheese are made from the same milk, it appears that 28 pounds of milk, during the summer, yield one pound of butter and two pounds of skim cheese.

THE ORWELL, VT., CHEESE FACTORY.

I noticed in a late number of the FARMER inquiries of A. J. Mitchell, of Lempster, N. H., about cheese factories. As we in Acworth are contemplating building one the next season, it was just the thing we wished to see. In your remarks in regard to the cheese factory in Orwell, you stated that from 300 cows, this season, were made 60,000 pounds of cheese, which is only 200 pounds of cheese to each cow, from June 17, to October 22. Now, as my New York friends tell me that one gallon of milk will make one pound of cheese, those cows would hardly average seven quarts of milk daily. Is there not some mistake? For, at eleven cents and seven mills per pound, there would be an income of only $23.40 to each cow, which is not $40 to $80 each, as my New York friends talked to me. Please to inform us through your columns if there is not some mistake, for we are desirous to know the truth, which ought to prevail. JOSEPH HAYWARD.

Acworth, N. H., Dec. 24, 1867.

REMARKS.—As the statements alluded to were those of a correspondent of another paper we are unable to verify them. But it appears to us that you have overlooked some of the facts, which are plainly stated in the article criticised. In the Report of the American Dairyman's Association, for 1866, it appears that of the three factories in Oneida County, which mention the date of commencing and closing operations, one began April 1, and closed Nov. 25, another April 9, to Nov. 3, and the third April 10, to Oct. 30. In Herkimer County, the factory at Frankfort commenced making cheese March 26, and closed November 23. In Lewis County, one factory began March 16. Perhaps the average of those reported would be

rather earlier than the middle of April, for commencing, and November 10, for closing. The Orwell factory, for reasons not stated,—unless the fact of its being the first year may be taken as one of those reasons,—commenced June 17, and ended October 22—about one month more than one-half the time the factories in New York are run.

Then, again, instead of 11 7-10c per lb., the cheese made at this factory,—being an imitation of the Cheddar cheese of England, and "made to resemble, in color, good butter in June,"—we are expressly told was sold for "15 to 15½c per lb.," giving over $30 per cow for four months and five days. The Cheddar cheese is the richest of any made in England, and contains over 30 per cent. of butter, while skim milk cheese has less than 6 per cent.

It is said that the milk from 300 cows was used at the Orwell factory; but we are not told that none of the milk from any of these cows was retained at home, or whether that given on Sunday was used or not.

These considerations seem to us to place the operations of the Vermont factory in a better light than that in which it was looked upon by our correspondent.

From the Report already alluded to, it appears that the De Witt factory in Onondaga County, with 300 cows, made 103,453 lbs. of cheese, and the remark is made that many small dairies made butter in the spring and fall, and put milk in the factory only through the hot weather. The time of commencing or ending is not stated.

Brant Centre factory, in Brant, Pa., with 300 cows, made 105,466 lbs. of cheese. Time not given.

Excelsior Factory, Brookfield, Madison County, N. Y., with 300 cows made 97,000 lbs. cheese the first year. Time not stated.

JERSEY, ALDERNEY AND GUERNSEY CATTLE.

Are these three varieties of Channel Island cattle, viz: Alderney, Jersey, and Guernsey, all one and the same? Or are either two of them the same? There appears to be a distinction between the first two and the Guernsey, but I can find no place where the difference is described, and Alderney and Jersey appear to be used synonymously. Who is the publisher of the new Alderney Herd Book? W. R. ANDERSON.

Cincinnati, Ohio, Dec. 16, 1867.

REMARKS.—Not being able to answer these questions satisfactorily to ourselves, we requested a gentleman to do so whom we knew to be as well qualified, both from his experience as a breeder of the Jerseys, and from his general intelligence, as any individual in the country. We are very happy, therefore, in publishing the following valuable paper from Mr. Converse, and are sure he will receive the thanks of many of the readers of the FARMER who are interested in Jersey cattle, as well as of Mr. Anderson, at whose request it was written.

MESSRS. R. P. EATON & CO.,—*Gentlemen:*—Your favor of the 21st came duly to hand. The names *Jersey* and *Alderney* are used in England and in this country to designate one and the same breed of cattle. Of the entire propriety of this usage there can be little or no doubt, because the cattle from the two islands of Jersey and Alderney have so long been bred together as one breed, both in England and here, that they are now pretty thoroughly mixed. At home, however, on their native islands, their owners regard them differently; the breeders upon each island being very naturally more or less partial to their own animals; but after they have been transported to new homes they usually pass for one family. The supply comes mainly from the Island of Jersey, where they are bred extensively. The island of Alderney, being much smaller, furnishes comparatively few,—probably not over about two hundred cows are raised there annually. Liverpool vessels trading with the Channel Islands, usually make Alderney their last stopping place on the way home, and perhaps may there take on a few head of cattle in addition to the larger number they took at Jersey, and on their arrival home are reported as from Alderney with cattle; consequently, many cattle really from Jersey, are reported as from Alderney. They are so nearly alike in size and form, in color, and in their appearance in all respects, that, when together in herds, no marked difference is discernible, except perhaps, to a very skilful eye.

The Guernseys are regarded as a distinct breed. The difference between them and the Jerseys and Alderneys is sufficiently marked to be easily perceptible. The color of the Guernsey cows is, for the most part, red or a light reddish brown; the bulls darker; whereas that of the Jersey or Alderney cows is usually fawn and white, dun, mouse or French grey, mixed with fawn and white,—the bulls being generally darker about the head and neck. The Guernseys are also somewhat larger in size and coarser, and lack some of those peculiarly striking marks about the eye and muzzle so much admired in the Jerseys and Alderneys, They are, however, very highly esteemed as a breed, and the cows are regarded as excellent for butter.

Mr. Brooks, of Princeton, Mass., proposes to edit a new and enlarged edition of the Jersey herd record, to be published the first of June next, provided a sufficient number of entries are previously made to warrant its publication. About one hundred pedigrees have already been received since last publication.

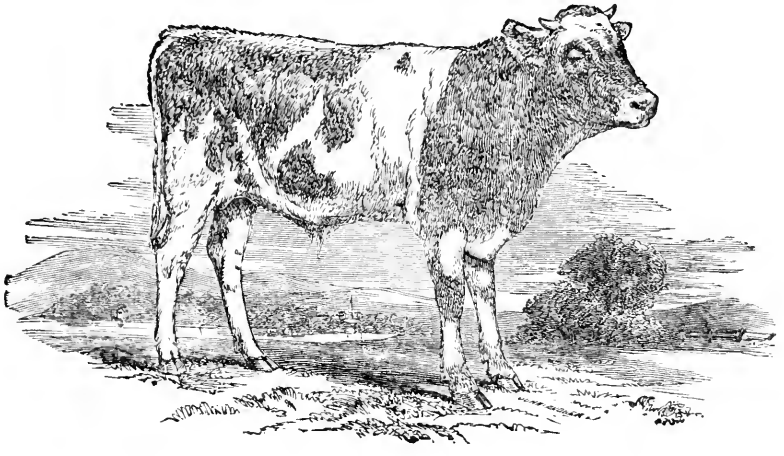
Suppose you give breeders a hint to send in their records. Very truly, J. C. CONVERSE.

Arlington, Mass., Dec. 27, 1867.

WARTS.—BARN ITCH.

From my own trials I can confidently recommend the following ointment as a sure cure for small Warts and also for the Barn Itch. Take equal parts of Tar, Sulphur, and Lard, heat them over a slow fire until all are melted; then stir until cold to prevent the separation of the ingredients. Apply the ointment freely, daily. C.

Surry, N. H., Dec. 8, 1867.



CALF OF AN IMPORTED JERSEY COW.

The above illustration was drawn of a calf of the imported Jersey cow Flora, whose likeness adorns the 436th page of the MONTHLY FARMER for 1867. Perhaps to indicate its foreign origin or royal blood, this little bossy was called "Czar." At eight months of age he weighed 500 pounds.

In a late number of the *Farm and Fireside*, Mr. Giles, of Woodstock, Conn., in an article on Jersey Cattle, gives the following characteristics or marks of a Jersey cow; and adds, if any one buys such a Jersey cow as he describes, if she does not prove good he will take her at cost price.

The following is his description:—

"She should have thin jaws, a small muzzle, with a white rim around it, wide between the horns, a full eye, and horns small, yellow and waxy looking at the root, tapering off to black on the tip of the horn; inside of ears, a deep orange color; neck, long and slim, well filled out behind the shoulders, straight back, and round, full barrel; small tail; tip of tail a bright, deep orange color; deer-like legs, with square bag, running well forward, and well up behind; teats of medium size, well set apart; bag and teats of orange color, no matter how deep that color is."

NEW PUBLICATIONS.

HORSE PORTRAITURE; Embracing Breeding, Rearing, and Training Trotters, with their management in the Stable and on the Track, and Preparation for Races: including Histories of the Horse and Horsemen. With an Appendix containing the Performances of Dexter, and a Portrait by Scott. By Joseph Cairn Simpson. New York: W. A. Townsend & Adams. 1868. Boston: A. Williams & Co., 100 Washington Street. Copies sent by mail free on receipt of $3.

This is the full title of a gay but neat volume of 458 pages. It is also, we think, an honest advertisement of a work devoted to "training trotters," the "preparation for races," and the display of the author's skill in fine writing. The style of the work is the high-flown colloquial,—a dialogue between a Preceptor and a Pupil of the henceforth classical profession of "training trotters" and "preparation for races." The first sentence that falls from the lips of the "esteemed" Preceptor closes with a proposition to "wager a dozen of wine." And throughout the whole volume, the "literature" of smoking, drinking and eating is made altogether too prominent for our taste. We cannot refrain from an example:—

Preceptor.—Good day, scholar. You will perceive I have dropped in in time for dinner, which, I am free to acknowledge, will come very acceptable. I have "occasion," and shall do justice to the good cheer your hostess always prepares for us. I will also admit that the "pleasures of hope"

are likely to be fully realized, as I anticipated "blowing a cloud" with you, for I find no other cigars the equals of those Principes.

Pupil.—I am delighted to see you, and better pleased that you have timed your visit just as you have, when we can have a good talk without being interrupted with the driving. Please to step into my room, as I have another evidence of Western liberality to show you.

Preceptor.—True enough, you have a goodly "lay out," and I would suppose, from the exhibition of this paraphernalia, that you have foregone your strict temperance principles, and become a votary of the vine-clad, jolly god, as well as a disciple of the Indian weed.

Pupil.—I have no intention of indulging in any of these enticements, and my vow of strict total abstinence from spirits, wine, or beer, is no more likely to be broken than if this nectar were a hundred miles off. But test it, fill up a bumper of what you like best; I will warrant it of the true quality, and after you have imbibed, will read you a letter that accompanied it.

Preceptor.—"That good wine needs no bush," is an old and true adage. I hardly ever drink till after dinner, and do not feel capable of giving an opinion that would be worthy of much weight, but that brandy I took the thimbleful of is as smooth as oil, and nearly as fragrant as the breath of the morning.

Pupil.—I want you to try a bottle of that sherry at dinner. If you praise the odor of the brandy, you will be completely carried away with the aroma—but the letter will say better than I what needs to be said:—

CHICAGO, June 1st, 18—.

* * * * * *

Tell the old man not to be vexed, that I have sent a basket of champaigne for Misses Jane and Susan; and I believe you would have been *omadhaun* enough to have gone to the races at Jerome Park with them, and never have thought of clapping a few bottles in the carriage. The poetry of motion, as you call it, in seeing a half score of thoroughbreds rattling over a dirty track is rather a dry sight; about as bad as smoking with only tasteless water to wash out the *gout.*

* * * * * *

Don't forget to get a sideboard, *and keep the bottles always in sight.* Remember, every one does not smoke, and the only good in a cigar is the relish it gives to the drink.

* * * * * *

In contrast with the above we might cite many paragraphs not only unobjectionable but highly meritorious. The following, for instance, we wish every jockey in the land would read and ponder.

There is a subtle fluid, magnetism we will call it, between the horse and driver, the reins being the medium through which it is conveyed. How angry I become when I see a big brute tugging away for dear life at these leathern straps, his body braced as if a yoke of oxen were hitched to him to pull him from his seat, yelling at the top of his voice, self-satisfied that he is an expert. The horse has ten times more sense than he, and has learned that he must pull against the bit still harder, to stop the circulation of the blood in the sensitive bars, numbing them till the torture is unheeded. After a while the delicacy of feeling is gone, large calluses are formed, and the horse becomes perfectly useless. The knife is resorted to, the "bags" are cut out. A brief respite, while the ugly wounds are healing; then again to be tugged at and spoiled. The reins should be handled as if they were a part of the animal endowed with sensitiveness, which would be destroyed by a continuous pull. A slight motion of them shifting the bit has often a magical effect in rousing the horse, when whip and spur would fail.

On the whole, we presume that all engaged in "breeding, rearing and training trotters," and all employed in "the stable and on the track" of our race courses, will find in this volume that information and those directions which are applicable to their respective work and profession. But they will be obliged to read the whole book, as there is no alphabetical index to assist one in finding the particular subject of inquiry.

IMPROVEMENT OF AMERICAN WOOL.

MESSRS. EDITORS:—I have read with much interest a communication from H. D. Tellkampf, of New York, upon "American Wool and its Improvement," and have to acknowledge my inability to agree with him, as to the manner of procedure, in order to render the clips of American growth more inviting to the manufacturing industry of our country. I cannot think it necessary to send to Saxony or any other country to improve the wool of American growth. There is abundant material in this country to produce all of the different varieties of wool that would be necessary to manufacture every kind and quality of cloth, by a judicious selection of rams, from the purest flocks in the United States.

Had the manufacturers of broadcloths in 1835, 1836 and after years, made a proper distinction between Saxony and Merino wool, we never should have heard of the complaint that now salutes our ears. The writer of this, grew Saxony wool from 1834 up to 1850, and knows from actual experience that Saxony wool cannot be grown at this date for so low a figure as the quotations are, from week to week, without an absolute loss.

In 1834, '35 and '36, our Saxony wool sold for eighty cents a pound, average weight 2 lbs. 14 oz. and would not shrink more than 25 per cent., for the leggings were not put in, and many times the bellies were thrown out also, but at the same time and in the same years Merino wool sold in the same neighborhood for seventy cents per pound, with all of the leggings put in, bringing the weight of the fleeces up to four pounds and upwards. Cannot any man see that, in the palmy days of the Saxony fever, it was much less profitable to grow Saxony wool than Merino? and, unless the American wool-grower can be assured of an equally remunerating price for growing Saxony wool, as his neighbor who grows Merino, it will be a disastrous business to any one who undertakes to establish a flock of Saxony or Escurials in this country, with the expectation of selling stock rams for the purpose of improving the clothing wools of the country. —*A. G. Percey, Newark, N. J., in Country Gentleman.*

OUR SCHOOLS.

OUR Common Schools have been often called the glory of New England, and truly they lie at the foundation of our New England character. It is the quickened intellect which gives to the men and women of New England the activity and energy and self-reliance by which they are distinguished wherever they are found. They are conscious of power and of resources which enable them to meet the emergencies and encounter the difficulties of life. The training which our children receive in mental arithmetic, by which they are taught to analyze intricate combinations of numbers, and reduce them to their simple elements, is an admirable foundation for the future study of the higher problems of language, physics and mental philosophy.

When we see young lads and girls working out with nimble fingers difficult questions, by means of algebraic symbols, and reaching results in geometry and natural philosophy by the closest applications of logic, we are convinced that they are acquiring a power that will fit them to wrestle with the dangers and difficulties that lie in the pathway of life. They feel like well armed soldiers, inspired with conscious strength and courage to face every enemy that may cross their path. The undeveloped and unfurnished intellect yields to difficulties, and sits down in despondency; but the thinking person, who has been taught to look into the causes of things, instead of lying supine, will carefully examine the circumstances by which he is surrounded, and find or contrive the means to control them or turn them to his advantage. A young person who has learned to make the effort necessary to comprehend and apply the principles embraced in the several branches of learning taught in our schools has acquired a command of his faculties that will be of inestimable value to him through life. He has learned to fix his attention, to reason from antecedent to consequence,—from cause to effect. He is like the artist who has acquired the command of the implements of his art. He is no longer a mere theorist, but a skilled workman as well.

The good teacher aims to teach each pupil to reach results for himself, without seeking assistance from another. In the power to do this, more than in anything else, the true genius for teaching is manifested.

And so of the pupil. The habit, early acquired, of relying upon his own resources, and his own exertions, more than anything else, ensures success.

More than forty years ago, we were teaching school in a town in this State. A boy about twelve years old was studying arithmetic and Virgil. One Friday afternoon, he came to us with a difficult sum and said he did not see how to do it. We looked at it, and said to him "You can do it if you think closely." He went to his seat and worked the remainder of the afternoon. The next forenoon he worked all the time he had after reciting his lesson in Virgil. Saturday afternoon he spent chiefly in his chamber, instead of at play. Sunday morning, after breakfast, he was missing until just before the second bell rang for meeting, when he came running into the room, slate in hand, and with an exultant smile on his face, exclaimed, "I have done it." We then felt sure that he would succeed in life. He had fought a hard battle, and achieved a victory. He has since occupied a distinguished place as a man and a scholar. That one victory taught him the value of self-reliance and perseverance.

The amount of knowledge actually acquired may not be very considerable, or of much real value. But the learning to think, to investigate, to reason, to adapt means to the end sought; in short, the learning how to learn, is the great thing to be had in view.

The scholars in our Normal Schools, who have well improved their advantages, are prepared to apply themselves to any branch of study, because they have been taught to examine, to analyze, to reason. The great object in these schools is to teach how to teach. But the foundation of the art of teaching is a comprehension of the way in which the mind acts in

acquiring knowledge, of the faculties brought into activity, and the order in which they act. In other words, one must understand how to learn before he can teach. The success of Normal teachers is owing not so much to the amount of knowledge they have acquired of the elementary branches which they study in these schools, as to their skill in developing the faculties of their pupils, and thus bringing their minds into a receptive state. The method of teaching mathematics in these schools is nearly perfect, and the success of Normal teachers in this department is all that can be desired. If they were as successful in teaching language, a new era in the history of education would dawn upon us. Mathematics may be studied successfully in early life, but to master the philosophy of language requires maturity of mind and an extensive acquaintance with words and their origin, powers and uses. Hence, most young persons are but partially successful in teaching language. But the multitude of books and papers in the hands of our youth, and the general habit of reading which they acquire, enable them to use the current language of the day, readily and correctly. The compositions which are weekly read in our district and high schools indicate the degrees of mental improvement made by the pupils, and are the most useful exercises in language in which they engage. They are thus taught to study the meanings of words and select those that will most clearly and most gracefully express the thought which they are striving to utter.

The methods of instruction in our schools are improving in many respects. The blackboard has given a new impulse to many branches of education, and its use can hardly become too extensive. One who has used it in teaching geography and natural philosophy will never dispense with it. We have seen, within a week, a boy less than twelve years old, go to the blackboard and draw a well-proportioned map of our State, divide it into its several counties, mark in their proper places the principal towns, and the mountains and streams, and then name and bound the counties, and tell their shire towns, and describe the natural features of the State. He was taught by a teacher who thought it best to teach children what they need to know. This boy will understand the interests and occupations and wants of the people of his State, when he comes into its Legislature, better than he would if he had spent the same amount of time committing to memory long lists of the hard names of South America and Central Asia. On another day, a boy of fifteen went to the board and drew an outline of a railroad engine, with its bearing and driving wheels, connecting-rods and pipes, and named the several parts and showed their use and how to move the engine backward and forward. This boy has already laid the foundation of a useful and respectable business.

Too many of our schools are deficient in this practical teaching, in which principles are not only taught, but also their practical application to the arts and business of life. There needs to be an impulse in this direction, given to all our schools, and it is to be hoped that the Board of Education will take the subject into serious consideration. What is wanting, is, not more attention to special studies, as engineering, agriculture, painting, &c., of the expediency of which in our common schools, we have much doubt, but a better method of illustrating general principles by showing their applicability to the arts and common pursuits of life.

No class of persons among us is more deserving of support and encouragement than intelligent, faithful, earnest teachers. They are entitled, not only to the wages they receive, but to the countenance, the sympathy and the respect of the entire community.

ANGORA GOAT.

Some twenty years ago we saw considerable in the papers about some Cashmere goats which a gentleman by the name of Peters had imported and was breeding in the vicinity of Atlanta, Georgia. But we believe that it was generally supposed that these goats were not the Cashmere but simply the Angora. Some of these animals we believe went to Texas and some to Ohio, and we saw statements of their being valued at $600 to $1000 each, and their fleece from six to eight dollars per pound. Other accounts represented the whole thing as a speculation or "sell." The past season Hon. Israel S. Diehl received a commission from the Agricultural Department to proceed to Asia and purchase the best varieties of the goat that could be found. This,

too, has been sneered at by some as "a pleasant thing to go abroad at government expense in pursuit of zoological curiosities;" others regard it as a movement which may prove of as great advantage to the country as the introduction of the merino sheep. Mr. Diehl, after a journey of 1500 miles in Asia, has returned with 118 goats, and he says he has also "collected many valuable seeds for distribution, as well as some of the celebrated Angora cats, rabbits and shepherd dogs, all white." As to the agricultural value of the cats, rabbits and dogs we have no information.

In relation to the Angora goat we find the following valuable communication from Geo. W. Bond, a wool merchant of this city, in the *Thursday Spectator*:—

I am most happy to furnish you with any information in my power which shall help to prevent the farmers of the country from being imposed upon by any erroneous statements and delusive hopes, respecting the Angora or so-called Cashmere goat, and at the same time to encourage the growth of goat's wool in this country, if it can be profitably prosecuted.

I have received frequent inquiries respecting the value of the article and the probable demand, to which I have invariably replied, that if it could be obtained here in sufficient quantities to warrant the starting of machinery suitable to its manufacture, and could be afforded at about $1 per pound, a steady and permanent demand for it would be created. There are machines at Lowell and elsewhere prepared for wool combing, on which it can be worked, and where some experiments have been made. For the manufacture of furniture plushes and many articles of ladies' dress goods it is very valuable. A gentleman of much experience in the wool trade and its collaterals informs me that it is consumed by less than a dozen houses in Europe, and that in fact one firm consumes about one-third of the whole supply, and has agents in Turkey, purchasing the same. Nearly the whole supply comes from Asia Minor, whence the exports for the past three years have averaged about 4,000,000 pounds per annum. Some is raised and exported from South Africa, but the samples which have been sent to this country have been of a very inferior character, lacking the required lustre and being full of kempy hairs.

Of the specimens raised in this country, which I have seen, some fleeces have been very handsome, but there has been a great want of uniformity in the various lots; some fleeces being very poor and kempy, probably being crosses on the common goat, while others have been as handsome as any that I have ever seen from any quarter. The value in England has I believe at no time exceeded 4s. or $1 per pound, unless it may have been for some exceptional parcels of great beauty and desired for some fancy manufacture in small quantities. The highest quotations in England to-day are 2s. 7d. or 62 cents for the choicest quality, down to 2s. or 48 cents for good.

It was formerly imported into this country, in moderate quantities, when we were manufacturers of broadcloths, and used for head ends and listing, bringing generally about 50 to 60 cents per pound. The introduction of it into Europe for the purposes before named gave it a value too great to allow it to be longer used for such purposes. I doubt whether there ever was a time when 1000 pounds of it could have been sold here for $1 in gold per pound, but a short time since, when fringes and tassels made of it became so fashionable, it is possible that a few of the choicest and most beautiful fleeces might have been sold at $4 and $6 per pound, but even then a well dressed pelt, with long lustrous hair, would have been preferred. Indeed, the manufacturers of such articles in this city expressed their preference of a handsome, lustrous haired sheepskin to a fleece of Angora goat's wool, though the lustre of the latter was more brilliant.

Why is not the mountainous portion of the Southern States well adapted to the production of goat's wool?

CHECK VALVES FOR FURNACES.

In conversing with a friend, recently, upon the different modes of warming houses, he gave us a bit of information which is valuable, and which he has kindly written out as follows:

My hot-air furnace used for warming the house, had a trick common to furnaces, of occasionally drawing the wrong way. In many cases it will be found, by standing out of doors, at the end of the cold-air box, that the heat, especially in windy weather, passes outward. I have learned from one skilled in such matters, how to cure this defect, and with my own hands applied an effectual remedy. What is wanted is a valve in the cold-air box, playing horizontally, which instantly closes with an outward current, and keeps open with an inward current. I made mine and put it in successful operation in less than two hours, and this is how it was done.

The inside of the air-box is 11x28 inches. I made a frame of light pine stuff an inch square of that size, and covered it with cotton sheeting, tacked on. Then it was hung in this way in the box. Measuring one-third the width from the bottom of the frame two holes, one each side, were bored through it, into which were turned flush, two brass wood-screws, into the heads of which had been counter-sunk with a common tool in a bit-stock, holes about a quarter of an inch deep for the gudgeons to turn in. Then making the valve to fit loosely in the box, another brass screw, the point of which had been filed smooth, was put through each side of the box, forming gudgeons resting in the holes in the heads of the other screws.

This completes the valve, except the stops; as two-thirds the width of the valve is above the gudgeons, it turns outward, on the same principle as a weather-cock turns, and a strip must be nailed across the inside of the top of the box, to stop the valve at a perpendicular.

In order that the out-coming air may catch the valve and close it, the valve must not be allowed to open quite full width. A nail driven through the side of the box will stop it at a slight angle, so that the outward current will strike under it.

One thing has been omitted. The valve, before it is hung, must be exactly balanced with lead tacked on to the lower side. With this arrangement no hot air can escape from the furnace. Finally, if this description is not intelligible, it is because I cannot conveniently print a diagram to show this excellent little contrivance to the bodily vision.

ORANGE COUNTY, N. Y., MILK.

In New York city the superlative for good butter and milk is "Orange County." One reason for the superiority of these articles from that section is undoubtedly the good price which has resulted to the producer from a system of marketing by which the middlemen have been *agents* instead of *principals* in the traffic. A writer in the last number of the *Country Gentleman* says:

The milk is delivered at the station in cans furnished by the farmers, containing mostly forty quarts each The purchaser in New York pays the freight, (five and one-half cents per gallon,) and pays us the market price as near as may be determined. The price, last month, (November) was six cents for the first half and seven cents for the last half of the month.

Much of the success of a dairy depends upon the degree of jndgment used in the selection of the cows, many men basing their judgment upon the milk mirror, (M. Guenon's theory,) taken into connection with the general form and size of the cow. In the choice of cows, the best are cheapest, whatever their price may be. The aim being to keep your supply of milk as nearly as possible the same during the whole year, it is not desirable to have any great number of cows calve at any one time. Those coming to milk during the autumn and early winter are the most profitable, as the milk commands a higher price, and the cow, well fed during the winter, milks finely when turned to grass in the spring. Those calving during the winter should receive about one quart of corn meal per day for ten days previous to calving—should be turned into a box stall for calving—should have their drink slightly warmed for a day or two, and carefully, and not too highly fed for the first week. After the second day, the calf should be kept away from the cow—the milk partly drawn before the calf is allowed to feed.

In winter the cows are kept as carefully housed as possible. A barn cellar, one side of which at least should be above ground, is preferred for stables, and the cows are kept in them most of the time, excepting when turned out for water, and in pleasant weather, when they are given two or three hours in the sun. (My own have not been out for two days on account of a violent storm prevailing.) They are milked at regular hours, each one by the same milker, and as near as may be in the same rotation. In short everything which can promote the comfort of his cows adds to the profits of the dairyman.

From the People's Magazine.

SWORD AND PLOUGH.

FROM THE GERMAN OF WOLFGANG MULLER.

There once was a Count, so I've heard it said—
Who felt that his end drew near;
And he called his sons before his bed,
To part them his goods and gear.

He called for his plough, he called for his sword,
That gallant good and brave;
They brought him both at their father's word,
And thus he his blessing gave.

"My first-born son, my pride and might,
Do thou my sword retain;
My cattle on the lordly height
And all my broad domain."

"On thee, my well loved younger boy,
My plough I here bestow,
A peaceful life shalt thou enjoy
In the quiet vale below."

Contented sank the sire to rest,
Now all was given away;
The sons held true his last behest,
E'en on their dying day.

"Now tell us what came of the steel of flame,
Of the castle and its knight;
And tell us what came of the vale so tame,
And the humble peasant wight?"

O ask not of me what the end may be!
Ask of the country round!
The cattle are dust, the sword is rust,
The height is but desert ground.

But the vale spreads wide, in the golden pride
Of the autumn sunlight now;
It teems and it ripens far and wide,
And the honor abides with the plough!

MOVEMENT OF STOCK.—A. M. Winslow & Sons, Putney, Vt., have recently sold the following Short-Horns: the bull calf Rising Star 2d, by Rising Star 5129, out of Pocahontas 5th, and the heifer calf Madonna 11th, by Rising Star 5129, out of Madonna 6th, to John Campbell, Montgomery, Vt. Also, the bull Young Marmion, by Marmion 1843, out of Starlight, and the cow Madonna, 5th, by 2d Prince of Orange 2183, out of Madonna 3d, and the heifer Madonna 8th, by Rising Star 5129, out of Madonna 6th, to H. A. Rice, Henniker, N. H. Also, the heifer calf Wallflower, by Rising Star 5129, out of Lady Sale 7th, to D. S. Pratt, Brattleboro', Vt.

Mr. L. A. Dow, Waterville, Me., has sold the Short-horn bull calf Gen. Warren, five

months old, to Mr. Eben Galucia, of Clinton. His pedigree is recorded in the 8th volume A. H. B.—*Country Gentleman.*

For the New England Farmer.

DEEP OR SHALLOW MANURING.

I was very glad to see a discussion in your columns between "H." and "H. P." on the all-important subject of the mode of applying manure. But as these writers do not agree whether it should be covered with the harrow or the plow, we seem to be left just as much in the dark as before. True, each one gives some reasons for his peculiar practice; but while one argues that rain washes the essential parts of manure into the soil, whence it is taken up by the crops; the other, with equal confidence, affirms that if plowed in, the gases rise and are principally saved by the soil, from evaporation. Now, both of these propositions can be true only in part, and exactly where the truth lies is the great question that needs to be discussed until farmers *know* how deep manure should be buried to give the best results and in the shortest time.

If manure evaporates by being exposed to the air, then the quicker it is covered the better; but if its best qualities are taken out by rain or water, and in that state can best be taken up by roots of crops, then we might almost say that no covering was needed. Until this point is pretty thoroughly settled, I hope that farmers will continue to discuss it, and that chemists will not withold their aid.

And now, dear FARMER, lest I should be thought a mere critic, I will give some of my own views on this important subject, although I confess it is beyond my comprehension. Perhaps your readers will think that the more I say about it, the more I expose my ignorance; yet, in the hopes that what I say may induce wiser heads to add a word or more on the subject, I venture out.

Well, then, in the first place, I think no roots of grass, grain or any vegetable will run its nose against a piece of *raw* manure, any more than it would against a coal of fire; and that until it is diluted with water and mixed with earth, it cannot be taken up and appropriated by any plant or tree, shrub or vine,—that water is about the only thing that can take the real growing or producing properties out of manure and convey it to plants. I also think that the tendency of water is downward, and that the earth is so made as to absorb or take up all the essential fertilizing properties of the manure as it passes through it in less or greater distance. Of course, if manure is plowed under, say one foot, it is buried, not only out of sight, but out of the reach of any grain or grass grown in this land, but may be reached by the roots of some tree or vine, and so brought back again to the surface. It is undoubtedly true that some soils will take up all the fertilizing properties of manure in a much shorter distance than others. Still the soil is what holds and imparts the life-giving food for vegetation. But whether *coarse* manure is best plowed in, or well composted in the barn-yard or some other place, and harrowed in, or applied as a top-dressing, is yet an open question, the right side of which farmers ought to know and practice, for the right application of manure is as important as any part of a farmer's business. I find that many farmers are practicing top-dressing with good success and perfect satisfaction. There is a neighborhood of farmers in Glover, Vt., who plow their land in the fall, harrow and spread on their fall manure, and harrow again, and early in the spring sow wheat and stock down, with the very best results, both for wheat and grass. This practice is extending, whether it is the best or not. I have known other farmers plow in a heavy dressing of manure so deep that they said they never heard from it afterwards. Now as both ways are practiced, and as one is most likely better than the other, let the matter be so fully discussed these long winter evenings, that farmers may go to work the coming spring with more confidence than heretofore.

A READER.

Fairlee, Vt., Dec. 21, 1867.

For the New England Farmer.

A WORD TO FARMERS' SONS.

To every farmer's son I would say, get an education. Do not be content with what is taught in a district school alone,—mere reading, writing and ciphering,—which are not an education. Rather aim higher, but be sure you aim with a weapon that will hit the mark. I will not advise you to leave the paternal roof as soon as you are old enough, for the sake of completing a course at one of the many so called business *colleges*, then to be a clerk in some house at a fixed salary per annum. To many, the life of a merchant seems nought but a season of golden pleasure, so the farm and the home, with their many pleasing memories, are left behind for the attainment of their ideal life.

Such a course and such a life I would not recommend. Some may be needed for clerks, salesmen, apprentices, and tradesmen, but not all. Some few may be called to a professional sphere, but not the majority. The farm needs you, and should you heed its call, then fit yourself for the place you have chosen. Farming is ranked among the professions, and the members of each profession need and must have study, else their attempt will be an utter failure.

Do not merely "go to school,"—that does not imply getting an education. To be *a graduate* of any institution, whether agricultural, mercantile, scientific, or literary is an empty honor—the palm is for the application of theory to practice. Our institutions send

forth too many young men, who, having remained three, four, or more years, as the case may be, *at* or *in the vicinity of* the institute, are labelled as graduates and sent away. Agriculture demands young men of a different education and of different habits. It needs theory and practice, education and labor.

Now you may ask, of what shall my education consist, and where can it be obtained? I would answer the question by asking another: Of what good are our agricultural colleges? Two classes of objectors against them will arise: the one, the stolid, old, time-forgotten farmer, who is opposed to "book learning;" the other, the over-dressed sneerer at his superior, the laborer. He may, perchance, ask if you can trace the lineage of a Durham calf,—he *might* go further and solicit inquiries concerning his own ancestors. Many are really ignorant of the purport of an agricultural college.

It is a place where an *energetic* young man can learn the theory of agriculture, and also its practice, and thus by combining the two, become a model, profitable and successful farmer. It is a place where he can, if he will, fit himself for one of the four great professions. Among the first things learned will be a course in mathematics, by which you will be fitted as your own surveyors. You will learn chemistry,—chemistry, as applied to agriculture; then cultivation of the soil; fruit, grain, and root raising; a complete nursery culture; market and landscape gardening; horticulture, forestry, animal anatomy, physiology, and hygeine, all kinds of stock-raising, orcharding and fruit culture, and many other things. Instruction will also be given in writing and composition, so that you may not only keep your own books, but be able to write a statement for the farmer's club, or report its proceedings and its doings, and, it may be, to edit a farming paper. You will also be taught how to be your own architect, mechanic, lawyer, physician,—in fine, it will teach you how to become a perfect professional man, independent of your neighbor.

Would you become all this, you must not only learn, but carry into practice what you have learned. Some may say all this book learning will not make a good farmer of you. *They are right*,—it will not. Theory will not make a farmer, neither will labor alone,—success demands and cannot be obtained without both. If you think an agricultural college alone will make you a "lord of the soil," time will reveal your error. If you think you can be a successful farmer without some such educational course, another error will be shown. It is only a combination of both which can bring success as a result.

We speak of "the top of the heap," in a colloquial way. You never can attain it if you labor under the impression that you can be successful in any profession without energy in the preparation. Do the foundation work well, then the superstructure may be more easily reared.

Concerning the professions, I would also say a word. Let every farmer's son look at the statistics of every graduating class of our colleges, and see what numbers take up the study of law and medicine, and consider what chance there is for an individual man among such numbers, unless he be determined to reach the "top of the heap." The law is now crowded, and, fortunately for us, our physique is such that but a small proportion of our young men can find occupation as guardians of the public health.

Then let every farmer's boy look at the "old place,"—not as if distance was the only enchantment,—but impartially. It will have a new tie for him. Let him think what his father has done, and see if he cannot do better. Let him think what the times are. Let him weigh his chances among the professions, among the merchants, the mechanics, and among agriculturists. Let him think what farmers can do, what rank they may attain, and what preparation is needed.

CHAS. E. HALL.

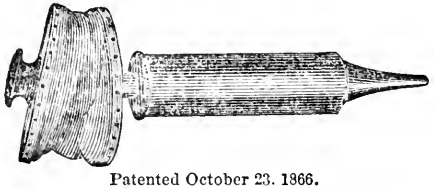
Hanover, N. H., Dec., 1867.

REMARKS.—The writer of the foregoing communication modestly offers it as the production of a farmer's son. The course of study he has sketched for the students of our agricultural colleges is certainly quite comprehensive; but as it may be no more so than that marked out by many other minds, we most willingly submit his views and expectations to the consideration of the public and of the managers of these institutions, although we may be less sanguine than himself of attaining entire "independence of one's neighbor" by any combination of education, theory and practice in agriculture.

THE HEN FEVER.—There are unmistakable symptoms that this epidemic is about to rage with fearful violence. Already there is a good deal of hen talk in the cars, and sober merchants as they pass to and from their business discuss earnestly the merits of improved coops, and talk learnedly of the varieties of feed most conducive to the health of growing fowls. Poultry shows in various sections give ample promise that the wants of fanciers can be met both as to price and name, and although the high priced fowls are called by names that were unknown to Burnham, yet the birds, as formerly, seem to be noted chiefly for depth of voice and length of leg. At a recent show in New York, a pair of Houdan, which is the favorite variety this season, were held at $1000, and a pair of Creve Cœurs were ticketed at $250. Other fowls were held at lower prices, down to the insignificant

sum of $25, which was the price asked for a cross-eyed bantam. As voice and gait are the most desirable qualities in fancy fowls, we were not surprised to learn that a Houdan with a powerful falsetto voice, could not be bought at any price, although Commodore Vanderbilt or Bonner will eventually secure him, even if it takes the New York *Ledger* or Erie Railroad to pay the bill.—*Bos. Spectator.*

HUTCHINS' IMPROVED FUMIGATOR.



Patented October 23, 1866.

This instrument is used for the purpose of blowing tobacco smoke into the wool of sheep, to kill ticks; also, to destroy lice and other vermin on cattle, plants and trees.

BELGIAN DOGS.

The dogs of Belgium perform so important a part in the every-day traffic of the city, being, in fact, the "beasts of burden" of the common people, that we cannot omit a brief notice of them. All the milk used in Antwerp is brought hither in dog carts, filled with rows of shining brass cans, which are conveyed from house to house until their contents are exhausted; then the milk woman supplies the absence of the weight of the lacteal fluid with her own substantial person, and the little team goes jogging homeward to the country. These carts are sometimes of a very considerable size, and may be seen, filled with barrels, or bundles of wood, under which circumstances the motive power is increased to six or seven dogs, three and four abreast, tugging and pulling at their great burden, their poor little bodies swaying to and fro in their efforts, and their general appearance and expression—for dogs have expressive faces—exciting the sympathies of every humane person. When overcome by fatigue, hunger and thirst, they lie down in harness and resolutely refuse to move until they are fed; an instance of which we had an opportunity for witnessing one evening as we were riding on the Longchamps. A laden team was coming in from the country to attend the next day's market, when, just as we were passing, a most piteous howl broke from one of the dogs, which was echoed by the others, and all stood still in the middle of the road, some crouching on their haunches and some prostrating themselves on the ground, with their tongues lolling from their heated mouths. The man who had them in charge cracked his whip in vain, and then, finding all efforts useless, unharnessed them, when, in an instant, the whole line bounded down the grassy bank of the rampart, and plunged into the cool water of the moat. Here they stood for some moments refreshing their heated bodies, catching at the water with their mouths, and seeming to toss it above their heads, when a shrill, prolonged whistle from their master caused them to rush suddenly up the bank, and ere long the team appeared again in sight, trotting merrily onward toward the bridge. Their owner, on the occasion of their hungry demands, supplies them with pieces of coarse brown bread, which he carries on the cart, and it is a common sight to see him standing in front of his team, dealing to one and another the mouthful which they eagerly devour.—*Correspondence of N. Y. Citizen.*

WOOL GROWERS' MEETING.

The annual meeting of the New York State Sheep Breeders' and Wool Growers' Association was held at Syracuse, Dec. 12, 1867.

President Randall, on calling the meeting to order, announced the death of Victor Wright, Esq., of Middlebury, Vt., with an eulogy on his character as a man, a breeder of sheep and an efficient friend of the National and other Wool Growers' Associations.

A resolution was adopted that the usual Fair of the Association will not be held next spring, that members may co-operate with the proposed National Wool and Woolen Exposition.

The opinion of the convention upon the condition and prospects of the business of wool growing in this and in other countries was expressed in a series of resolutions, for which we have not room in our columns this week.

Hon. H. S. Randall was re-elected President; E. B. Pottle, Naples, Corresponding Secretary; H. D. L. Sweet, Recording Secretary; with the usual Board of Vice Presidents and Executive Committee.

TRICHINÆ.

Having had trichinæ in my family last spring, and knowing its terrible effects (having lost my wife and one child with it), I thought to write an account of the workings of the disease in its early stages; thinking, perhaps, others may be profited by a knowledge of it, for, if taken in time, it may be cured by active cathartics, often repeated, so as to carry them out of the stomach. I purchased on the 1st of March, a ham of a grocer, of which we all ate raw. I ate a piece about as large as an old-fashioned cent; the first effects were felt in four or five days in soreness in the muscles, with no pain, except when we moved, then nausea and vom-

iting, with some diarrhœa. These are the first symptoms; after these, in the course of as many more days, the eyes will become much swelled and sore, and painful upon coming to the light. My wife lived only two weeks after the swelling of the eyes; a son, 4½ years old, lived a day or two longer; another son, 8 years old, began to recover at the end of about four weeks, and is now nearly well. My soreness left me in about forty days, and now I am nearly well. Another son of 13 years has been exceedingly sore for two months; it has not entirely left him yet; and he is very weak and emaciated, but is better; his soreness is not all gone yet. Cooked meat will not give the trichinæ, as our school teacher eat of it four or five times, and was not affected. for it was cooked.—*J. M. Haight, Iowa, Mich., in N. Y. Tribune.*

HAULING WOOD.

While the first snow was pearly under feet,
A team crawled creaking down Quompegan Street;
Two cords of oak weighed down the grinding sled,
And corn-stalk fodder rustled overhead;
The oxen's muzzles, as they shouldered through,
Were silver fringed; the driver's own was blue
As the coarse frock that swung below his knee.
Behind his load of shelter waded he;
His mittened hands now on his chest he beat,
Now stamped the stiffened cowhides on his feet.
Hushed as a ghost's; his armpit scarce could hold
The walnut whipstalk slippery bright with cold.
—*J. R. Lowell.*

Beet Sugar in Germany.—A German agricultural journal gives an interesting account of the beet sugar business in that country. Fields of beets of from two to three hundred acres are often seen there. The beets are drilled in rows about fifteen inches apart and the whole labor of cultivation performed by the hoe. The women and men work in gangs of twenty or more. The men get from sixteen to nineteen cents per day and the women from thirteen to fifteen—working fourteen hours. The manufactories for this sugar are on a correspondingly large scale, some of them employing a thousand hands. The beets are brought from the field and elevated to the upper story of a high building, where they are cleaned, crushed and filtered, the juice descending from story to story, undergoing a refining process by the way till it reaches the lower one in the shape of a sugar cone two and a half feet in length. It is a very nice article and worth at the factory about ten cents per pound. It takes eight days from the time of crushing the beets till the sugar is dried sufficiently for market. One of these establishments turned out six millions of pounds last year with the help of six hundred hands.

A Texan Sheep Farm.—Out on a broad and glorious prairie, between the creeks of San Gabriel and Brusky, in Williamson county, I found Messrs. Voorhees & Crouch, living in a very plain and patriarchal style, on one of the finest ranges I have seen in the State. Over hundreds of acres of their grazing lands, there is not a bush large enough to hide a hen. Their flocks go off in the morning over the beautiful slopes, and from many single points the shepherd can overlook his herd of ten or twelve hundred head, for two or three hours, without changing his position. For such as choose an open range, I have never seen a finer one. I found their flocks in a thriving condition, and numbering between three and four thousand. They are being rapidly graded up by the use of imported bucks, and their clip of wool will soon be among the first in the State. These gentlemen incorporate in themselves the elements of success, for they both understand the nature, habits and wants of sheep, and have the patience and skill to give their flocks just the treatment they need.—*Dr. Boynton, in Mirror and Farmer.*

The Teeth of the Horse.—A horse has forty teeth—twenty-four double teeth, or grinders, four tushes, or single file teeth, and twelve front teeth, called gatherers. As a general thing, mares have no tushes. Between two and three years old, the colt sheds his four middle teeth—two above, and two below. After three years old, two other teeth are changed, one on each side of those formerly shed; he now has eight colt's teeth, and eight horse's teeth. When four years of age he cuts four new teeth. At five years old the horse sheds his remaining colt's teeth, four in number, when his tushes appear. At six years of age his tushes are up, appearing white, small and sharp, while a small circle of young growing teeth is observable. The mouth is now complete. At eight years of age the teeth have filled up, the horse is aged, and his mouth is said to be full.—*Turf, Field and Farm.*

Massachusetts State Statistics.—The Secretary of the State of Massachusetts has recently published the abstract of the census of 1865, by which it appears that this State is still first among the States of the Union as regards population per square mile. The population of the State to-day is 1,281,700; in 1865 it was 1,267,031. Males, 602,050; females, 665,021—showing an excess of 63,000 females over the number of males. Of the total population, 828,158 are natives of the State. The foreign element is relatively most numerous in Suffolk County, where 33.12 per cent. of the whole population are foreign born. The number of dwellings was returned as 208,698. Of the 10,167 colored persons in Massachusetts, 2,348 are found in Boston and 1,517 in New Bedford, and in fifty-eight towns there is no colored person. The largest numbers in the table of occupations of females are: Domestics, 27,393; operatives, 20,152, and teachers, 6050.

Ladies' Department.

From Blackwood's Magazine.

LITTLE ROSE.

She comes with fairy footsteps—
Softly their echoes fall—
And her shadow plays like summer shade
Across the garden wall.
The golden light is dancing bright
'Mid the mazes of her hair,
And her fair young locks are waving free
To the wooing of her hair.

Like a sportful fawn she boundeth
So gleefully along;
As a wild young bird she caroleth
The burden of a song.
The summer flowers are clustering thick
Around her dancing feet,
And on her cheek the summer breeze
Is breathing soft and sweet.

The very sunbeams seem to linger
Above the holy head,
And the wild flowers at her coming
Their richest fragrance shed,
And Oh! how lovely light and fragrance
Mingle in the life within;
Oh! how fondly do they nestle
Round the soul that knows no sin.

She comes—the spirit of our childhood—
A thing of mortal birth,
Yet bearing still the breath of Heaven
To redeem her from the earth.
She comes in bright robed innocence,
Unsoiled by blot or blight,
And passeth by our wayward path,
A gleam of angel light.

Oh! blessed things are children—
The gifts of heavenly love;
They stand betwixt our world-hearts
And better things above;
They link us with the spirit-world
Of purity and truth,
And keep our hearts still fresh and young
With the presence of their youth.

DOMESTIC ECONOMY;

OR,

HOW TO MAKE HOME PLEASANT.

BY ANNE G. HALE.

CHAPTER VII.

MAKING AND MENDING MEN'S CLOTHING.

[CONTINUED.]

In the choice of materials for outer garments men generally like to consult a woman's taste and judgment. If she is not commissioned to purchase, as she generally is for the clothing we have already considered, her *opinion* is of great consequence in the matter; and she is so well aware of it that she does not hesitate to express it freely—even if it be uncalled for. (In performing which benevolent service the writer of these chapters is not at all backward,—as her readers have probably discovered before this time.)

Ready-made clothing can be bought so low that many persons prefer buying to having the trouble of making, or getting it made. But a good fit is seldom obtained in a ready-made garment, and there is great risk of being deceived in the quality of its materials; while the making is never very good—seams rip, linings sag, buttons come off, and button-holes break down. It is very much more economical to employ a tailor whom you can trust to make it. Or, if you cannot afford that, get a good pattern of him, and make it yourself. In getting patterns, don't be hasty to adopt new fashions, neither be the last to hold to the old styles. Above all things avoid all fanciful designs, either in the cut of a garment or its trimmings, and remember that a well-dressed person is one whose dress never attracts attention.

If you decide to make coat, vest, or pants yourself, and the material of the outside is woolen, take off its selvage, and shrink the cloth.

The advantage of this is that very little cloth being water-proof, this dampening, evenly done, prepares the nap to receive all subsequent wettings without being spotted. And, also, as woolen cloth always shrinks in wetting, it is better to have it over before it is attached to linings that will probably always remain the same.

To accomplish this well, wring a sheet through warm water. Fold it, its whole length, through the middle. Spread it on a table, and lay upon it the cloth, very smoothly. Then fold cloth and sheet together, across their width. Let them lie thus an hour; if the cloth be very thick, two hours. At the end of that time remove the sheet, and hang up the cloth where it may dry smooth and straight.

For cutting: having procured patterns from a tailor, or, as directed for a shirt, use the same measures; adding to them one around the waist, and another down the waist, just under the arm;—for the length of pants a measure from the waist to the heel of the boot; and with these calculate what variations the patterns need.

In passing your hand over dressed cloth you will notice that a down-stroke keeps the nap smooth, an upward one ronghens it; so, in cutting, be sure that all parts lie the same way. Not only would a mistake in this cause portions of the garment to feel disagreeable to the touch, but make a difference in the shade of the color.

It is sometimes necessary to piece the cloth. This is called ranting; it is very careful work. See that the nap of each piece to be joined falls the right way. Baste the edges of the two together, in overstitch. Flatten this loose seam, and with a fine needle and silk pass close, short stitches across from edge to edge, below the nap;—no stitch, not a speck of the silk should be visible. It is slow, nice work; but with little practice it can be skillfully done. Dampen the seam and press it on the wrong side. A stronger way (it is generally done with thinner cloth) is to stitch the seam on the

wrong side, like the usual seams, and then do the pass-stitches on the right side, as described above.

All buttons, button-holes, and pocket corners must be stayed with strips of stout linen, or silesia, laid between the lining and the outside, through which the stitches are taken. Beside this, the corners of pockets should be stitched across twice, strongly, and barred in button-hole stitch.

You will need drilling, silesia, or linen for pockets and linings; also padding and canvass, to shape the coat and the vest,—as you will see by ripping an old one. Facings are strongest of alpaca; likewise bindings. Don't omit to sew leather shields—narrow strips of thin leather or thick kid—inside the hems of pantaloons; and along the lower edge, inside, of vest-fronts. These give a stiffness to those parts, and also protect the cloth from too great wear.

All seams are rubbed as flat as possible, dampened, and then pressed with a hot iron on the wrong side. If you do not wish a seam to show, scratch the nap in its channel, on the right side of the cloth, (using the point of your needle) till the seam is hidden. This before pressing. It will look well for some time, but is not so good a way as ranting.

When a garment is torn, mend it as soon as possible. Don't say it looks like an accident just met with,—as I have heard some say, for weeks. A tidy patch is better than a hole any time. I don't know a more pitiable object than a man with rents pinned up; or, elbows out, buttons off and edges frayed.

In mending, always match the exact shade of the cloth with the silk or thread you use. If the cloth be thin, and worn, around the hole, cut it out to form a square, and in each corner of this aperture make a short, oblique gash; this is to prevent puckers in the seam of the piece to be inserted. If the cloth is ribbed, striped, checked, or plaided, it must be correctly joined in these respects by the piece; also, whether plain or variegated, the shade of the color must be the same, if to procure it you are obliged to wash, or to fade some of the material. Very often, exposure to sun and air so alters the color of some parts of a garment that it is totally unlike the original tint of the cloth.

If the cloth is good, and you have only a new rent to mend, line it with some thin material, similar in color; and, if possible, darn it with threads ravelled from cloth from which the garment was made. In threading your needle with a woolen ravelling use very fine cotton, or a hair, to draw it into the eye. Take very small, even stitches over and through the torn and frayed edges;—it must be done slowly and carefully;—the darn ought not to look unlike a rough place in weaving. After you have sewed it to look as neat as possible (the extreme edges in overstitch) dampen and press on the wrong side.

Never sew up any hole carelessly,—"just for the present,"—mend it well, at once. The longer it is left, the more difficult it is to make it look nice; because the loose threads get broken, and the rent stretched out of shape.

When bindings are worn through sew them in overstitch, or darn them, if you can make them look well by so doing; if not, replace them by new. If the hems of pantaloons, or the turned back cuffs of coatsleeves, are in the same condition, cut them smooth and then turn the edge of the outside as narrow as possible for a seam. To this fell the hem or facing;—if the cloth be thick, this need not be turned in, the raw edge will make a neater seam;—if it be thin, turn in as narrow a portion as of the outside. Some persons bind such edges with wide worsted braid; but, unless the garments are short, don't adopt that method, it is apt to look clumsy.

A man's clothes may be made to last double their time by careful repairing. When coat, vest, or trousers looks wrinkled, and out of proper shape; elbows and shoulders and knees, of black or blue cloth, threadbare and *whitish*; buttons off, loose, or bursting their coverings; button-holes stretched, or broken; sleeve linings out at the cuff, or worn away from the arm-size, and seams and edges frayed—a bad case, with such a complication of disorders—but, nevertheless, such as is frequently met with in the best of families—you must give it a good day's work. Brush it thoroughly, in the first place. Put on buttons where needed, and strengthen those that remain, in the next. Pare delicately the edge of worn button-holes, pick out all the stitches, and make them as if new. Put in new sleeve linings, or mend with new around the arm-size. Make everything firm, and strong, and neat about the pockets. Line all thin places: knees and elbows with pieces wide enough to be attached to each side seam; and cross-stitch the other two ends to the main cloth by needle and silk so fine that no print of the stitches shall be seen on the outside. If elbows and knees are stretched into a swelling shape, after all sewing is done lay a damp cloth upon them, fold them up, and let them remain thus an hour. Then lay them on a table; smooth them with the palm of the hand; pull them gently, all ways. Continue this till the swelling is reduced—elbows and knees straight and flat. Then press the whole garment on the wrong side, finishing those places first.

If a black article of clothing gets rusty, dilute a little ink with warm water, and sponge it well with this,—for seams and edges use a pen: button-holes often need this treatment. If the shoulders look quite grey take the ink undiluted, and be sure to rub it in well. Then press it. For blue proceed in the same way, using blue ink. Cashmerette and alpaca, when faded, are much improved by this process.

Never throw any article of dress aside, that is considered worn out, without examining it to see if some portion of it may not be used again.

Backs of vests will often outlast two new fronts; and the padding and stiffening will do to go in a number of times,—as, also, those of coats. Pockets, sometimes, will do to use again, after they are washed and ironed. Facings and sleeve linings can be cut over and ironed—if necessary, washed—to be used in repairs. Generally, a number of buttons may be saved for future use. And of the outside material, if an overcoat, a sack or a jacket may be cut; if a frock coat, perhaps a boy's vest, or small sack; if pants, a vest for a man. This should be all carefully ripped, the stitches and the lint that collects in the seams removed, the cloth brushed and sponged; if it is greatly faded pressed on the right side, and when next used made up wrong side out; if not, still keep the same side out. In a large family this second hand stock is very valuable; and if not wanted for your own use there are always calls enough for it in the way of charity.

Neckties, and cravats, if of gingham, or muslin, should be of fast colors, and hemmed all around as narrowly as possible. If of silk, black Italian is the most common, and the best. Beware of the glossy, shrill-rustling kinds—they are soon frayed and broken. When the corners of a cravat get worn, cut off the end to a good point and hem anew. When too short for this, cut the cravat across the centre, and sew the two pieces together so as to bring new points for front ends. Very good neckties and scarfs may be made of ribbon folded over two or three layers of cambric or silesia; the seam at the edge, and around the ends, being done with a long needle, in slip-stitch—which is only drawing the folded edges together with long stitches that are kept out of sight.

The most comfortable, and the most economical, garment a man can have for home attire is a loose lounging-coat,—study-coat,—or dressing-gown,—whatever you please to call it. Its use has often saved double its cost in the wear and tear of the more tightly fitting coat which custom demands for out-of-door costume, and hours of toil for many a housewife, who feels it her duty to see that that costume is always neat and tidy.

The Russian and other imported robes that are manufactured for this purpose are elegant, but expensive; and seldom so serviceable as thibet, or merino,—or even cotton and wool cashmere or delaine; while common calico, if of fast colors, is a good material for a coat designed for summer wear. Large-flowered patterns, the figures running into each other, do not show soiling, or rough usage, so much as plainer styles; still, fabrics of one color alone—brown, or green, or blue—with facings and trimmings of a contrasting tint, are much handsomer, and, with care, may look well a long time.

Take for a guide in the cutting of this garment, a common sack-coat, and fit the neck, shoulders, and chest, well, by the measures used for an overcoat. Make it loose and comfortable, yet smooth and neat in the fitting. As to its length, suit the fancy of the wearer;—some like such a coat very long—reaching nearly to the ankles, others prefer it short—a mere jacket. These short coats, or jackets, should always be made of plain material, trimming, or embroidery of braid, running along the edges and over the collar and cuffs. The longer garment looks best without ornament, save facings, or cuffs and collar, of a different color. It needs a girdle of large cord; and to the back of the coat, at the waist, should be stitched two narrow bands, to encase this in its proper position.

A lounging coat for winter use should be warmly wadded—the facings quilted;—but, between the outer cloth and the wadding, across the back—from the end of the shoulder seam nearly to the girdle-bands—a piece of the same material should be laid—to guard against the great wear of the shoulder-blades; also, in the sleeves, from above the elbow to the waist.

From the remnants left after making a lounging-coat you will have ample cloth for a smoking cap, to be worn with it. The simplest form, a jockey, is the best. For this, take a measure of the head above the forehead; and from pasteboard—or, better, stiff padding made of three or four layers of stout cotton cloth pasted together—cut a band one and one-half inches wide, the length of this measure. Cut, then, a circular ring of stiff paper, one inch in width, whose shorter circumference shall exactly fit this band; and, for a cover, cut a round from stiff paper, whose edge will match the larger circumference of the ring. This top of the cap may be made of six, or eight, points, meeting in the centre; the outer corners more or less sharply defined, according to fancy.

This paper frame before putting together is the pattern for cutting the cashmere or thibet for the outside, which, after being stitched, should be tacked to it at the seams. Cambric, silesia, or silk, to which a layer of sheet wadding is basted or quilted, may line it. With this, as with all garments, the lining and facing, though cut of the same shape as the outside, should be less in size,—if no wadding is used, a seam's width must be allowed, at least,—or there will be folds and wrinkles to trouble the wearer, and to deface and injure both lining and outer cloth.

Cord the seams of this cap with piping like the facing of the coat, and cover the head band with the same. If of plain material, embroider the top with braid, and finish it at the centre with a fancy button or rosette.

Men's hats and caps are seldom of home manufacture, but they often need repairing, a new binding, or, a clean lining; which can easily be done by observing how it is when new. Felt hats are apt to get out of shape: they can be restored by dampening, and pressing, either upon a block of the proper form, or a pail or pan covered with cloth. If a felt hat gets torn "rant" the hole, according to the directions given for woolen cloth.

Mend a straw hat that is broken or ripped by pasting cloth to it on the wrong side; or by sewing to cloth,—in that case damp the straw first, and, afterwards press it.

The heels and toes of stockings should be run closely with yarn, or lined with bits of old stocking or flannel. If a person's occupation obliges him to wear coarse boots there should also be pieces on the outside of the heel. If he does much walking, these may be of soft leather, or kid, but they must be taken off when the stockings are washed.

The darning of stockings neatly requires a great deal of patience, and is very distasteful to most persons: I think mending never comes easy; but one can learn to like it—we always like to do what we can do well—and I have heard many remark that the satisfaction they have felt in seeing how they have restored and renewed old things was a much pleasanter experience than the making of new. You know the old Indian superstition that the strength of the victim passes into the form of his slayer? Let us take this for our faith, in overcoming all difficulties. But I am digressing.

To return to our subject: Always begin a darn some distance from the hole, and thicken with yarn all the thin part. It is quicker to mend it in basket, or weaving, stitch. But where the darn comes in an exposed place the knitting should be matched by a chain stitch. To do this darn a thread of yarn across the hole, (on the outside of the stocking) connecting stitch to stitch; and when the hole is thus barred pass across them with yarn, making a loop-stitch on each bar—it is similar to button-hole making. Fill up the hole in this manner, being careful to join the new stitches neatly to the old ones at each side and end. This is the only proper way to mend knit, or woven, mittens and gloves. Never sew together, or draw into a bunch any rent in stockings, or in these; besides being unsightly they feel very uncomfortable.

Leather, or kid, gloves and mittens should have their rips sewed with a short needle, in the same holes that the first sewing made, and with thread, or twist, of the same color. If a glove, or mitten, get stretched in the wrist baste up the fullness on the seam that passes to the little finger—it should be taken out in the shape of a gore. Try it on, and if it suits then cut this gore out, and sew up the seam on the outside, exactly like the other seam. If the thumb be too tight, as is frequently the case, rip the seam carefully; try it on, see how large a bare place appears through the aperture; cut a piece of kid from an old glove of the same color, make it of the right shape to fill the aperture, and sew it in as nicely as the other seams are sewed. If gloves are not stayed at the wrist, take a small piece of similar kid and stitch it there on the wrong side.

Nice house shoes, and slippers, may be made from woolen cloth, either embroidered with worsteds or braid or cord, or kept plain. Carpeting also makes good slippers. Old coat collars quilted together make good soles—so do pieces cut from old felt hats. For patterns get an old shoe, or slipper. Each part should be lined and bound separately. Paste together two or three layers of cotton cloth for a heel-stiffening. After each part is bound sew them together with strong linen thread well waxed. These are very comfortable shoes for winter.

Leather boots, and shoes, often last longer for a few stitches deftly set by a woman's hand; so don't overlook them. Seams rip—elastic gores break out—and straps start off—and now and then the leather cracks, all of which a strong thread, well waxed, in a good, stout needle can remedy.

Those who wish to protect their clothing from smut, or soil, do well to wear a large apron, fitted to cover the shirt-front, fastened with straps about the neck and around the waist; or, what is called a *skeleton*, cut according to the front of pantaloons and having a waist covering like that of the apron. This is fastened by straps around the ankles, and also about the waist and neck. Better still, they will do, to use a frock and overalls, or a jacket and over-pants. These should all be made of stout drilling, or frocking. Blues and greys are the best colors. It is impossible to keep white looking clear and clean. If you get blue be sure that it is an indigo dye—this is the most lasting. Make these garments with good, strong thread, and in the most thorough manner; and always keep them in good order: they are to bear rough usage, you know, and must be capable of warding off accidents which otherwise would befall the clothing worn beneath. In this way they often save ten times their value, beside lessening the housekeeper's amount of washing.

All clothing should be marked with the owner's name. If of cotton, or linen, write it plainly with indelible ink in some unnoticed part. If of woolen, write it upon slips of linen, or cotton, and sew them to the articles. For clothing that seldom needs washing starch and iron the cloth and use common ink. If you have no indelible ink, and you see that the owner of the clothing has often a silvery, or a golden, heading to his dark beard, or moustache, ask him to lend you the little phial that he keeps hidden in the closet; and use its contents in the same way as common ink, for any, even the nicest of clothing.

I think I have now spoken of all important points. I wished the making and mending of men's clothing to be clearly understood by those who know the least about such matters. Keeping this class of readers in mind, I have tried to simplify the subject. Hence, many of my suggestions and directions may to some appear trivial; but if to any I have made the performance of this work easier and pleasanter, it is of no consequence how humble were the means.

NECESSARY RULES OF SLEEP.

There is no fact more clearly established in the physiology of man than this, that the brain expends its energies and itself during the hours of wakefulness, and that these are recuperated during sleep. If the recuperation does not equal the expenditure, the brain withers—this is insanity. Thus it is that, in early English history, persons who were condemned to death by being prevented from sleeping, always died raving maniacs; thus it is also that those who are starved to death become insane, —the brain is not nourished, and they cannot sleep. The practical inferences are three:— 1st. Those who think most, who do most brain work, require most sleep. 2d. That time "saved" from necessary sleep is infallibly destructive to mind, body, and estate. Give yourself, your children, your servants—give all that are under you, the fullest amount of sleep they will take, by compelling them to go to bed at some regular hour, and to rise in the morning the moment they awake; and within a fortnight, Nature, with almost the regularity of the rising sun, will unloose the bonds of sleep the moment enough repose has been secured for the wants of the system. This is the only safe and sufficient rule; and as to the question how much sleep any one requires, each must be a rule for himself—great Nature will never fail to write it out to the observer under the regulations just given.—*Dr. Forbes Winslow.*

GREAT GLACIER OF NEW ZEALAND.

The Westland (Eng.) *Observer* has an account of a visit paid recently by the chief officers of the geological department to the great glacier on the west side of Mount Cook. The foot of the glacier, which is but thirteen miles from the sea, is 1900 feet wide. Neither the glacier nor the immense field of snow which feeds it is visible from the river until within a quarter of a mile of it, when the stupendous mass of snow and ice at once breaks upon the view. Below the glacier a recent moraine extends for several hundred yards, consisting of debris of the rock, twenty feet deep. underlaid by ice and snow, through which considerable streams of water run, which are rendered visible in round holes, caused by the giving way of the ice and by cracks in the surface. On the southern side there has recently been a great fracture of the ice and breach of the rock, which had fallen in immense masses. The party ascended on the northern side, where the snow or ice formed rounded hills, undisturbed by any cracks or fissures. The glacier matter is porous, and presents tolerable footing; it is of a gray color, full of small dirt with occasional stones, which had evidently fallen from the surrounding hills. The great peculiarity of this glacier is not only its immense size but the consequent fact of its descending to so low a level—640 feet above the sea level—instead of ending, as is usually the case at an altitude of some 3000 or 4000 feet, close to the limit of perpetual snow, among Alpine vegetation. Here the green bush extends some thousands of feet above the glacier, on the steep sides of the range in which the glacier has cut the deep narrow gorge. Not a single Alpine plant rewarded the research of the party, and the temperature on the glacier was scarcely below that on the flat below. With some ceremony the party named it the Victoria Glacier. The height of the peak of Mount Cook is found to be 12,632 feet.

SILK-GROWING IN CALIFORNIA.—California promises not only to furnish the best wines, but the choicest silks. At the recent Santa Clara County Fair, specimens of superior watered silk dress goods were exhibited; also, sample cocoons from the neighboring counties, and the fact demonstrated that the entire State is well adapted to silk growing.

THE
NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

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MARCH THOUGHTS.

The stormy MARCH has come at last,
With wind, and cloud, and changing skies,
I hear the gushing of the blast
That through the snowy valley flies.—*Bryant.*

E CAN, indeed, hear the "gushing of the blast through the snowy valley," and we can feel the glowing sunbeams and pattering rain, too, in this month People talk with truth about the fickleness of April, because it is all sunshine and tears, like the maiden who launches into society at sweet sixteen. But March is as inconstant as April, only it shows its sharper features most,—its icicle fangs, its cutting winds and whirlting snows to blind, and freeze and bury you up. The voice of the robin in the pines, or of the blue-bird on the old apple tree, lures you out into the warm sunbeams for a walk or a ride; you scorn overcoat and mittens as you would a fur collar in summer, and go forth as proudly and valiantly as the Knight of La Mancha himself. But you do not return so. A "norwester" strikes you before your walk is half accomplished, and you come limping back as "stiff as a poker," as "blue as a whetstone," and with a poor opinion of March as a season to walk or ride in. You are ready to declare that "if there be a month the aspect of which is less amiable, and its manners and habits less prepossessing, than those of all the rest, that month is March."

But March, nevertheless, is an excellent month to do its own work in. It may not suit our plans or moods exactly, but it cannot be spared any better than June or October. If March did not work, May would not blossom, nor September give us fruits. "Even the winds of March, notwithstanding all that we have insinuated in their disfavor, are far from being virtueless; for they come careering over our fields, and roads, and pathways, and while they dry up the damps that the thaws had let loose, and the previous frosts had prevented from sinking into the earth, 'pipe to the spirit ditties' the words of which tell tales of the forthcoming flowers. And not only so, but occasionally, towards the last of the month, they are caught bearing away upon their rough wings the mingled odors of violet and daffodil."

The month of March, then, has its assigned duties in the general operations of the seasons, and its particular duties for all who have the care of stock and gardens and fields.

March is the *preparation* month of the farmer, when he gets all things ready for the April work, which cannot be postponed, as the sailor clears the decks of his ship for action when a rover comes in sight.

Then, too, as the seasons change, as the old earth rolls over and cants our part of it more directly to the sun, changes take place in our animals which make them more dependent upon man. The variations of the atmosphere into wet and dry, and of temperature into cold and warm, or hot, affect them, so that it becomes necessary to feed and tend with unusual care. It is the usual season, too, of the parturition of the domestic animals, the cows, sheep, swine, and mares, when they need protection from the extreme and sharp variations which frequently occur in the "stormy March."

Nothing should be left undone this month that will tend to facilitate the work of April. All the heavy work of hauling wood or timber, of removing large stones for walls or cellars, of carting manure, of cutting and piling wood, preparing stuff for fences, &c., should be completed before the month closes.

The preparation of the soil and seeding of crops will be essentially facilitated, also, by deciding just what you will do in April, as regards the crops you will put in; what amount, and precisely what land you will occupy for each. This resolves farm work into something of a system, and enables the person having the responsibility to direct others easily and clearly,—prevents mistakes and greatly promotes the general prosperity.

All the implements that are to be used in getting in the crops should be examined and put into perfect order, so that no delay shall occur in sowing and planting when the soil is ready for that work. The seeds to be used should also be examined, such as barley, oats, wheat, grass seeds, corn, and every other kind; going so far with some of the small seeds as to test them in boxes or pots, in the kitchen, to ascertain whether they retain their vitality or not. Such tests would save many disappointments with regard to garden seeds especially, such as onion, beet, parsnip, carrot, egg plant, tomato and other small seeds.

Some trifling arrangements, at least, ought to be made in relation to the vegetable and flower garden, and adornments about the dwelling, for "it is horticultural associations that teach men the beauty and value of rural life, where they may sit under their own vine and fig tree, and amid their own blossoming, fruitful orchards and gardens; homes created by simple pleasures, shared with their own families. This is the good work which horticulture will accomplish, and does accomplish,—that of bringing men into daily contact with nature,—of giving them pure, simple, rational pleasures; and most of all, of teaching them to find happiness, not in the excitement of politics, not in the busy tumults of life, but in their country and cottage homes,—there to understand and realize the truth of that fine saying of Burns:—

> 'To make a happy fire-side clime
> For weans and wife;
> That's the true pathos, and sublime,
> Of human life."

OUR YOUNGEST SUBSCRIBER.

Some months since a manly little fellow entered our office and said he wished to subscribe for the New England Farmer. On handing him a receipt for a year's subscription, we asked if the address was that of his father. The reply, "No, sir, it is my own," was made in so decided yet modest a manner that we did not feel at liberty to make the further inquiries which our curiosity prompted, and putting his receipt in his pocket he bade us good day in a quiet, business-like manner. The entry on our book is John C. Cobb, Brookline, Mass. We have since ascertained that he was only eight years of age, and that at the time of subscribing for the Farmer he had just returned from Amherst, where he had been spending his summer vacation on the farm of his grandfather, Henry Cobb, Esq. On this pleasant farm the lad became so much interested in the stock, and, in fact, in everything connected with the farm, that on being notified by his parents that if he wished to accompany them to the seashore, where the whole family usually pass a few weeks during the heat of summer, he must come home at once, he hesitated a moment, and then pointing to the scenery around, and looking up to his grandfather, said, "Let them go; this is better than all the seashores in the world."

His vacation having expired he reluctantly returned to his school in Brookline, with the avowed purpose of qualifying himself for the agricultural college and for the farmer's profession.

With a generation of such subscribers, and a succession of such students, the New England Farmer, and the Massachusetts Agricul-

tural College, may well feel that their future success and usefulness are no longer problematical.

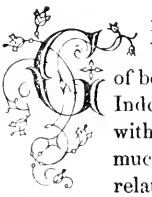
BRISTOL COUNTY CENTRAL, MASS.

We are indebted to Edmund Rodman, Esq, of New Bedford, for a copy of the Transactions of this Agricultural Association for 1867, which we believe is the first printed report of the Society as now organized, though the old Bristol County Society was among the earliest in the State. In a few introductory remarks, President Durfee says: "We have in the area of this county about three hundred thousand acres, and perhaps there is no part of our State where so large a portion is uncultivated. Although the annual product of the industry of this county amounts to the large sum of sixty millions of dollars, only about four millions are derived from agriculture, showing the importance of a better understanding of the relation which exists between agricultural and manufacturing interests." The following are the officers for 1868:

President—Nathan Durfee, Fall River.
Vice Presidents—Edmund Rodman, New Bedford; Oliver S. Wilbur, Raynham.
Treasurer—Samuel A. Dean, East Taunton.
Secretary—Robert Adams, Fall River.
Directors—Luthun Potter, New Bedford; Robert S. Gibbs, Fall River; William L. Slade, Somerset; Noah Tripp, New Bedford; Alden Hatheway, Freetown; A. W. Pierce, Taunton.

PREMIUM BUTTER.—At the fair of the Orleans County, Vt., Agricultural Society, Geo. B. Brewster, of Irasburg, was awarded the first premium on a tub of butter, and submitted the following statement in regard to its manufacture:—"I keep 23 cows of the native stock, with a slight mixture of Durham. The cream was gathered in three days, from milk that set 36 hours after milking; the cream then set 24 hours, then was churned. When the butter came it was put in a wooden bowl and washed with spring water until the milk was all washed out, and the water ceased to be colored, then the Ashton salt is worked in by hand, at the rate of one ounce to a pound of butter. The butter is then set away to stand 24 hours, when it is worked over by hand, taking a small quantity at a time, and working out all the brine; then it is pounded down in the tub, which is filled within a half inch of the top, and covered with a cloth, over which is spread a thin layer of salt. This tub was packed Oct. 4. Cream is not churned the same day that it is skimmed, as it will sometimes have a peculiar taste, which it does not have after standing twenty hours. In the fall the pans are filled two thirds full, and the cream rises as well, but in summer it should be more shallow."

BEES AND HONEY.



GREATLY increased attention has been given to the cultivation of bees within the last fifteen years. Indeed, there has been no period within our recollection when so much has been written and said in relation to them. We are glad to see this. The cultivation of bees, like the cultivation of flowers, has a civilizing tendency. Like flowers, they require a constant and tender care, and rarely fail to enlist a deep interest and sympathy in the bee-master. They soon become acquainted with their keeper, and will allow him to arrange their hives, change boxes, and perform most of the necessary work about the bee stand or house, without molesting him, if he be a kind and gentle master. If he is quiet and proceeds fearlessly, they will alight upon his hands and run over them, especially if he has been prudent enough to rub them with a little liquid honey. They become greatly excited if a sudden blow is struck upon the hive, or in their immediate vicinity, and they at once assume an attitude of defence or defiance. When not disturbed, their *countenance* is mild, their eyes soft and clear, and their whole appearance that of gentleness and repose; but when agitated, as great a change takes place as may be seen in the cat or dog when enraged, and every hair upon them is trembling with excitement. Sometimes they become absolutely ferocious, and will strike a blow almost sufficient to knock a person down, while, at the same moment, the keen and poisonous sting is plunged so deep that it cannot be withdrawn, and is left in the flesh of its victim.

In a hot day, and when they were probably not treated with that deference which a queen and her subjects merited, we have more than once been driven from the stand and obliged to take shelter beneath dense shrubbery which would prevent their approach. But like the sharp-shooters in our late army, they were on the look-out, and, instantly, when head or hand was raised above the shrubs, a blow would come with a force that could scarcely be conceived as proceeding from so small a creature.

At another time—when handling them with great freedom—a friend has been invited to look on, but a sudden blow in the face and an

exclamation of pain would stop the further progress of the visitor.

The care of bees is always attended with some danger, so that every person engaged in it should protect himself by an old hat with a calico sack tied above the rim, and a piece of wire gauze sewed into the sack in front of the face; then with gloves having long wrists tied over the sleeves of the sack, he is proof against any number of bees. The women will take an old dress and fit the whole thing up in an hour.

In an article in the *Scottish Farmer*, Mr. James Bruce says the agricultural population of that country cannot be too strongly impressed with the importance of keeping bees. In many parts of Russia, some peasants have hundreds of bee hives, and really make more profit of their bees than of corn. In one locality the number of hives was incredible; a single parish forest, he was informed, possessed *five hundred swarms!*

Honey is said to possess so great restorative powers, that in some instances, at the point of death, when all stimulants and tonics had failed, a table spoonful, given every half hour has rallied and saved the patient.

As honey is highly esteemed by most persons as an article of food, and as it commands a high price—the supply being scarcely equal to the demand—the culture of bees is worthy of attention in an economical point of view. It is not probable that anything like the amount of saccharine material, produced in flowers, sap of trees, dews or depositions on the leaves of plants, juices of fruits, &c., &c., is collected in any year. All that seems necessary, then, to make honey abundant, is the culture of more bees. In doing this, we would caution the beginner to observe the habits of bees in their natural condition, and learn from them, as far as possible, the best mode of management when brought under the care of man. We are inclined to think that in many cases they are *managed too much*, and that if kept nearer their natural condition they would prove more profitable. The devices for hives are exceedingly numerous; some of them excellent, but many of them expensive, complicated and worthless.

The two great enemies of bees are worms and moisture; keep them free from these, and with a little attention in feeding young or weak swarms, one may find their culture pleasant and profitable.

For the New England Farmer.

FARM HELP.---No. II.

Boy Labor.—Formerly, broad shoulders, deep chests and brawny arms were considered prime requisites for farm laborers. Boys of slender constitutions or of promising intellect could not possibly be kept at home with the expectation of becoming profitable help; and to those of a mechanical turn of mind, the vast amount of muscular labor to be performed was irksome and monotonous in the extreme. But now, with the introduction of machinery, with more commodious and convenient buildings, and new and improved methods of husbandry, comes the demand for something higher than mere strength of muscle. Activity and skill are fully as desirable qualities. There no longer exists the necessity of sending boys to the counting room, factory or work shop to find employments adapted to their strength; for in agricultural, as in all the industrial arts, knowledge is showing its power over material forces; and the terrors of the most wearing and laborious parts of farm work vanish before this ability to transfer what before could only be performed by human muscles, to wood, iron, horses and oxen. And the multiplication of mechanical appliances tend to bring the work more and more within the capacity of the young, the feeble, or the old. A slender youth, a lame, or an old man can now do all the mowing and raking on a large farm. Careful and well trained lads, as a part of the farm force, can render more efficient service than heavy and clumsy men. The profits of some kinds of crops depend upon the amount of this light and cheap help at command. Where only able bodied men are employed, the labor bills rise to a high figure, and here in New England we must resort to every means in our power to reduce the cost of production, that we may be better able to withstand the sharp competition from the more productive portions of the country. Not only can the farmer's own children find abundant work at remunerative wages, but all the available help of the neighborhood can be profitably employed.

But with the employment of children, the question naturally arises, how can their services be made really profitable, while their education is not neglected. No one who values the future of the child, can for a moment advocate that work should take the precedence of study. Youth is the precious seed-time of life, and the golden opportunities of this period once lost, are seldom recovered. The word education is very comprehensive in its meaning; and that of farmers' sons should be emphatically of a practical nature. It cannot be measured by the number of hours they pass in the school room; it means something besides mere scholastic learning, and is largely

the results of observation and experience. The natural sciences, with which they should be familiar, are all illustrated in the fields and in their daily work. The soil, the atmosphere, the vegetable and animal life which surround them are teeming with topics of inexhaustible study, and many a knotty question can be raised over the simplest things they do. The minds of children are naturally inquisitive, and if this propensity is only properly encouraged, they readily acquire the real spirit of investigation and will gather knowledge while about their daily work. In no place can object-teaching be carried out better than in the country school-house.

It should be ever impressed upon the minds of children that an essential part of their education is learning how to work; to work cheerfully, patiently, faithfully and for a definite and high end, and that something is to be learned in the mere mechanical and manual labor of farming. While thus engaged, they are acquiring a trade as certainly as if serving an apprenticeship to a machinist or carpenter. When a young man can perform all parts well and understandingly, he is entitled to as much respect and has as much to rely upon, as if he were a journeyman in any of the common trades.

To adopt a plan of daily study and to reach this standard, boys need some assistance. The idea presupposes some change in the school system of the agricultural districts. The school should be kept nearly through the whole year, with vacations at perhaps seed time and harvest. There should be one session a day, not exceeding four hours, and that held in the morning. This will keep up an interest in the studies and furnish the mind with work and prevent that sluggish and indifferent state which those boys too often manifest who have only one term of schooling during the year, and come to that after a long period of exhausting labor. The younger as well as the older children would find advantages in such a system. Work for the day could be easily planned, so as not to interfere with school hours. Parents and employers who will assist those under their charge in their studies, by encouraging their inquiring spirit; help solve their questions; follow them in their daily lessons, and by reviews, illustrations and amplifications of the text, perfect them in their recitations, will see their efforts abundantly rewarded. The present and ultimate advantages of such home influence can hardly be estimated.

The plan of daily study allows only short days for manual labor. Where steady employment is attempted for boys, the great danger lies in carrying work to an extreme. It is a notorious fact that the sons of many farmers do not receive the educational and social advantages that the circumstances of their parents warrant. They are, in fact, overworked; more being required of them than of men, according to their power of endurance. We wonder why so many boys leave the farm. Three-fourths will give as the cause, hard work. An unreasonable amount is put upon them at a tender age; they are obliged to make long days in the field, before they can well endure them, and farming is made to appear to them an unceasing round of drudgery which prejudices them against it, and they resolve to leave before they understand what it can or ought to be made. Six or eight hours are sufficient for a day's work. Boys will accomplish more and better work in these short periods of labor than when dragging wearily along from early morn till sunset. Boys, being more active than men, do their work quicker, and of course are sooner fatigued; and when they have completed a reasonable amount of labor should be allowed a change. To continue them on duty, partly at work, partly at play, and partly in idleness, after they have already done enough, is a sure way to establish slow movements, indolent habits, and to make careless, inefficient workmen. Great injustice is frequently done to boys when they are matched with men. If they strive to keep up, they acquire the habit of slighting their work or over exert themselves. Many an ambitious and promising lad has brought upon himself serious and permanent injury in this unequal contest. Dull, heavy, rusty and half worn-out tools tend to irritate and discourage boys. One secret of success in their management lies in giving them frequent changes. Their active and restless dispositions, and immature constitutions cannot long endure either mental or physical effort in one direction. A change from study to work, or work to study is not sufficient; they require a variation in these pursuits. Entire change of motion is often equal to positive rest. They also like to see the end of their work at the beginning, and it is really a great help to divide any long or difficult job into easy tasks. They should be provided with good tools adapted to their strength, and be required to keep them clean and bright. When thus well equipped, and working with a will, they will in the course of a season, or a year, accomplish a large amount of work.

There is another condition of childhood, the concession of which ensures better work and more earnest study. A child at real work or real study is under partial restraint. Play is more his natural element, and unless he can have stated times to act out his youthful impulses, he is very much inclined to make play of his work or of his study. We who have grown sober with labor, and silent with care, are apt to judge harshly in this respect. We forget our own young days. Hearty, downright play infuses new life and new energy to a wonderful degree. Thus a full and vigorous development of mind and body depends upon a judicious and happy combination of work, study and play. Either, carried to an ex-

treme, is attended with undesirable results: excessive study tending to enfeeble the body; all work, to deaden the sensibilities and blunt the intellect, and too much play leads to bad habits and an idle and useless life. The farm presents peculiar advantages for the successful blending of labor with daily study. If the studies are practical and relate to their occupation, they awaken an enthusiasm for their work. Boys who are so directed as to perceive the direct or remote application of their studies begin to learn the value of knowledge, and education appears worth striving for; consequently they turn from work to books with greater zeal. A judicious union of work with study reveals the brighter and higher aspect of farming, and will make more interested and skilful workmen. Will it not make boys more contented and happy, and less inclined to quit at the first opportunity their ancestral homes and their father's occupation?

Farmers who can thus educate their boys and keep them at home during their minority, at least, will indeed find in them valuable assistants,—a present comfort and pleasure.

Lawrence, Mass., Jan. 8, 1868. N. S. T.

Remarks.—The foregoing suggestive article reminds us of some of our early experience in combining work with study. In the district in which we lived there was one session of school of two months in the winter, and the same in the summer, and, as a general rule, boys attended the latter until ten years of age. During our last summer term our folks were very busy in clearing up a new lot. For a part of this term, we were required to work in the "burning" during most of the forenoon, and to attend school in the afternoon. Of course we left the field "as black as a little negro," washed up, changed clothes, took an early dinner, and trudged off alone to the school house, anxious to arrive in season to enjoy the noon-hour sports of the other boys. Though our father took much interest in the education of his children, and, being an old school master, was ever ready to assist them, as "N. S. T." says parents and employers should do, we were not particularly pleased with the arrangement. If the "other boys" of the neighborhood had been required to do the same, we should probably have been better satisfied with the plan. The problem, however, of combining work and study is one over which even the managers of our agricultural colleges are still puzzling themselves.

—Geo. Wood, of Brattleboro', Vt., says he has tamed or broken 724 colts in the course of his life.

AGRICULTURAL ITEMS.

—An orchard in Genesee Co, N. Y., of six acres, has, during six years, brought in a revenue of over $14,000, or $2,400 a year.

—We see it stated that a little kerosene oil rubbed upon chilblains has effected a cure. We have received benefit from the application of a little wood ashes lye.

—The *California Farmer* says that the agricultural products of that State already exceed those of the mines, and are increasing in value with great rapidity.

—"God gives no value unto men
Unmatched by meed of labor;
And cost to worth has ever been
The closest neighbor."

—The Vermont Agricultural Society is in a prosperous condition. The profits to the treasury in 1867 amounted to $567.76, which makes the fund now in the treasury $8,661.84.

—The Lexington, Ky., Farmers' Club are taking active measures to encourage the home manufacture of agricultural implements. A move in the right direction.

—To every bale of cotton lint, weighing 400 lbs., there are produced about 1400 lbs. of seed. So says the new work on Cotton Culture, noticed in another column.

—A correspondent of the *Rural New Yorker*, gives several instances where cattle and other animals were badly poisoned by eating straw that had been much rusted.

—The town of Bennes, in Brittany, is noted for its peculiar butter. The milk of the previous evening is mixed with the warm morning's milk, and the mixture allowed to stand for two or three hours, when the whole is churned.

—The Waukegan (Ill.) *Gazette* says sheep are wintering well the present season; a marked contrast with last. This season they went into winter quarters in fine condition; last season was exactly the opposite.

—There are said to be from 300,000 to 400,000 boxes of cheese in store in New York on producers' account. The exportation of cheese for the year, up to November 1, has been about 300,000 boxes greater than it was last year.

—A Vermont farmer has in use a machine constructed from the design of an invalid neighbor, which is managed by a boy and worked by one horse, as a land roller and clod crusher, corn planter, broadcast grass seed sower, and grain drill.

—The *Rural New Yorker* strongly opposes the tendency towards specialities in farming in this country, saying "the practice of devoting a farm mainly to the growth of a single product is opposed to all principles of scientific or common-sense agriculture." The greater exhaustion of the soil, the greater expense in conducting the

farm operations, owing to the pressure of the work at some seasons, and the greater risk of failure are among the reasons given in support of this opinion.

—Dr. Randall says he should not dare to winter sheep without salt, especially when any kind of disease is prevalent. The best way is to give sheep constant access to it—allowing their instincts to guide them, after they have become habituated to its free use.

—The receipts of corn in Chicago, in 1867, were 10,000,000 bushels less than in 1866. This, however, does not show conclusively that the crop was short to the extent this would at first sight indicate, as more may have been shipped through other points.

—Mr. B. J. Campbell, of Glen Haven, N. Y., wrote to the *Country Gentleman* that he was foddering hay that was put in the barn about half dry, with a little lime sprinkled on it. It came out bright and clean from dust. Without the lime it would have been, he says, a perfect smudge.

—One who believes club-footed cabbages to be the result of impure seed, directs to plant the stalks in the spring, as early as the ground and season will allow, with the heads on, and far enough from all plants of the same species, that the wind, insects, and bees cannot carry the pollen and spoil the seed.

—There is no better fertilizer for strawberries than ashes. We remember, says the *American Horticulturist*, that one of the best crops we ever had was raised when the only manure used was wood ashes. All soils will not alike be benefited by such an application, but it is always safe to use ashes in connection with other manures.

—At a late meeting of the Hampshire, Franklin and Hampden Agricultural Society, Milo J. Smith was elected president; A. P. Peck, Secretary; Elnathan Graves, of Williamsburg, A. T. Judd of South Hadley, R. Smith, of Hadley, and J. W. Hubbard, of Northampton, executive committee. It was voted to endow a scholarship in the agricultural college.

—The celebrated sheep "Green Mountain," owned by Hon. Edwin Hammond & Son of Middlebury, Vt., died recently from inflammation of the bladder and kidneys. He had been sick since Dec. 30. This ram was the progeny of the celebrated "Gold Drop," was three years of age last spring, was probably the best stock sheep in the world, and constantly increasing in value to his owners and to the breeders of Vermont. He could not have been purchased for $15,000.

—An association of Western Wool Manufacturing was recently formed at Chicago. President, Geo. S. Bowen, Chicago, with Vice Presidents in Illinois, Wisconsin, Michigan, Indiana, Minnesota, Ohio, and Iowa. Secretary, Jesse McAllister. The resolutions of the Cleveland convention was endorsed, and a resolution adopted that it shall be just cause for expulsion of any member to introduce shoddy or flocking into his productions, representing such product as made from clear staple.

—To show that honey-bees instead of being an injury to farmers are a benefit to them, the fact is cited as well known to observing bee-keepers that when we have a fine yield of honey from the buckwheat, or the orchard, that we have a corresponding yield of grain or fruit, unless prematurely destroyed by frost or other causes. There are seasons when bees work very little on buckwheat, and the result has been, with scarcely an exception, a small yield of grain.

—The committee who have the matter of publication of the Ayrshire Herd Book in charge had a meeting at Collinsville, Ct., recently, approved 682 pedigrees, marked 119 doubtful and rejected some others. The doubtful and rejected must have an opportunity to be heard, after which the pedigree numbers can be affixed with all their intricate dependencies, and the work be published. The secretary, J. N. Bagg, Esq., West Springfield, Mass., is devoting all his leisure time to it.

—A correspondent of the *Western Rural* gives the following remedy for cold or cough: "Fold a piece of cloth three or four thicknesses, wet it thoroughly with warm water, and wring it so that it will not drip. Pin it tightly around the chest, go to bed, cover up warm, and lie till morning. Then on removing the cloth, wash over with water a little colder than the blood, wipe dry, then put on your ordinary clothing, and go about your ordinary work."

—The original London Pippin tree in Virginia is known to have borne every year for the past eighty years, from forty-five to seventy-five bushels of of apples each year, and it was known eighty years ago to have been an old tree. So it has, without a doubt, borne for one hundred years an average of fifty bushels per year. The fruit is first rate quality and over the average size of apples. The tree two years ago was as sound as could be imagined. It was about forty-five feet high and forty-five feet in the spread of its branches.

—Mr. J. W. Clarke, of Green Lake, Wis., details in the *Country Gentleman* a case of garget in which a cow that had lost two teats in previous years was again so badly affected, that one quarter of the bag changed to a scarlet color, and parts of it became detached and fell away until the whole quarter was entirely lost, leaving a vacant space. The wound began to dry and heal around its edges, to which coal tar was applied to keep off the flies. The cow recovered her health, and is now in fair condition, though of course not milked.

—To determine whether kerosene is liable to explode, the *Boston Journal of Chemistry* gives the following directions: fill a pint bowl two-thirds full of boiling water, and into it put a common metallic thermometer. The temperature will run up to over 200 degrees. By gradually adding cold

water, bring down the temperature of the water to 110 degrees, and then pour into the bowl a spoonful of the kerosene, and apply a lighted match. If it takes fire, the article should be rejected as dangerous; if not, it may be used with a confident feeling of its safety.

—Hon. N. S. Townshend, of Ohio, took samples of the Leicesters, Lincolns, Cotswolds, and crosses of these with the South Downs, to Boston, to get the opinions of the manufacturers. They placed very different values upon these samples of long wool. The value ranged from 50c to $1 per lb. It was not the length nor the fineness that governed the value; it was lustre, brightness, that more than all else determined the value. A cross of the pure long-wooled sheep with the South Downs destroyed the lustre. In manufacturing alpaca goods the lustre is the chief quality.

—In speaking of the different families of Short Horns in England, Mr. Sanford Howard, says in a communication to the *Country Gentleman*, "I went to England a firm believer in 'Bates blood.' I spent some two or three days at Weatherby, looking at the best Bates herd in England—Captain Gunter's. Then I saw Richard Booth's, and at once gave up my Bates fancy. I could not do otherwise, as the difference in the two tribes is very strikingly in favor of the Booth. It is true that there are a few persons in England who pay large prices for Bates cattle; but the general public sentiment is largely on the side of the Booths. The special merits of these cattle consist in strong constitutions, capacious chests, well-placed shoulders, smooth shoulder points thoroughly fleshed over, full chines and crops, round and deep fore-ribs, straight, broad and very *thick fleshed* backs.

The following practical suggestions, part of a communication recently written for the FARMER by Wm. D. Brown, of Concord, Mass., are placed here as appropriate to the "Agricultural Item" column. Leaf, flower, and fruit of a coming season are wrapped up in the little buds now on our trees; so, snugly inclosed in these terse sentences, are the thought, experience and observation of an active life.

—Too many barns are deficient in windows.

—Money invested in needed tools pays a high per cent.

—The more comfortable you can keep your animals the more will they thrive.

—A good cow is a valuable machine; the more food she properly digests the greater the profit.

—A few roots, daily, to all the stock, are as welcome as apples to boys and girls.

—Iron shoes on sleds last a life time. They are really cheaper in the end than wooden ones.

—All animals are fond of sunshine. Let them bask in it, if possible

—Replace all the bars, where you often pass, by strong gates, and then wonder that you didn't do so before.

—A borrowed tool, if broken, should be promptly replaced by a new one. A nice sense of honor in such matters is much to be commended.

—It seems strange that housekeepers don't buy pails and tubs with brass hoops and trimmings. They cost a little more at first, but last wonderfully.

—Build safe, easy stairs wherever needed in barns, and save breaking your bones climbing dangerous ladders.

—Give a quart of meal daily to each of your young animals, and you will soon be praising them to your neighbors.

—Where a watering tub is needed abroad, it should be a deep one and set partly in the ground. It will not freeze then in the coldest weather so as to give much trouble

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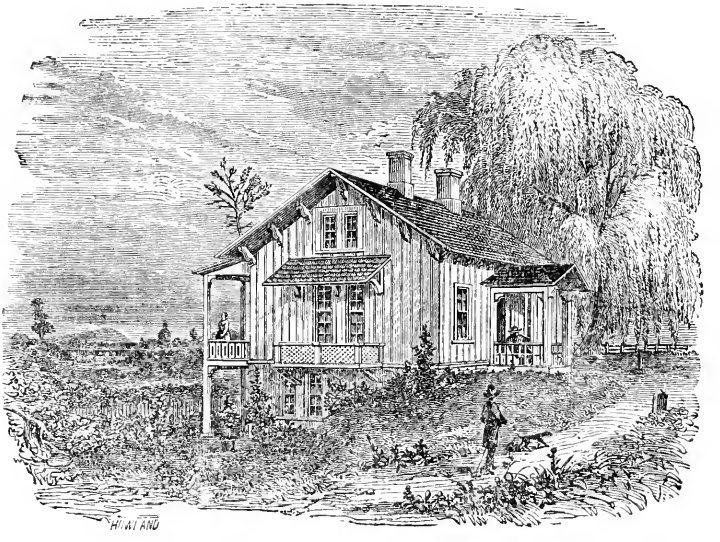
SCOURED FLEECES.—A brief report of the committee appointed by the New York Sheep Breeders' and Wool Growers' Association on the scoured fleeces of last spring's exhibition is published in the *Rural New Yorker*. The tables have not been elaborated as in 1865, but the following abstract of those given may be interesting to many of our readers:—

Breed and Sex.	Age.	Age of fleece in days.	W't of fleece.	W't of scoured wool.
Merino ram	2	368	18 28	7.84
Merino ram	2	355	15 62	6 .6
Merino ram	1	390	13 37	5 15
Merino ram	–	365	16.22	6.28
Merino ewe	1	373	8 75	4.13
Merino ewe	4	365	10.0	5 37
Cotswold ram	2	369	18 37	10.37
Cotswold ram	1	438	17 03	11.62
Leicester ram	4	330	11 44	8.44

As the weather was very wet during the fair at which these sheep were shorn, the fleeces were weighed, when perfectly dry, about two months afterwards.

OLD TIMES IN ILLINOIS.—Some of the correspondents of the *Prairie Farmer* are indulging in reminiscences. One man bought some rough split-bottom chairs at 50 cts. each, when he was married in 1828, and paid for them in No. 1 fall wheat, at 25c per bushel. Corn was then from six to ten cts. per bushel, and no market for potatoes at all. Another early settler says his father sold 2000 bushels of corn and hauled it two miles, for five cents a bushel, and took one-half in whiskey! Another took a two-horse wagon load of pork twenty miles and sold it for $1.25 in cash, five pounds of coffee and calico enough to make a dress for his wife.



A SIDE-HILL COTTAGE.

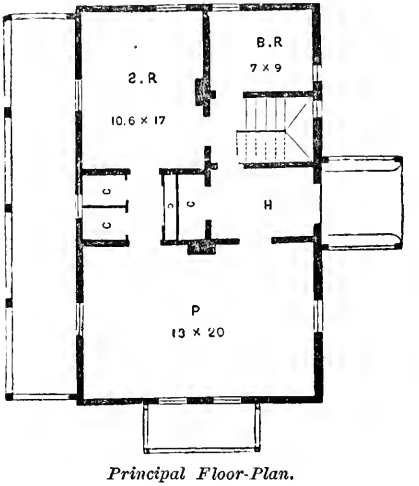
"Circumstances govern cases," is an old adage that expresses a truth too often disregarded in some of our plans and operations. One who has been long accustomed to buildings which were appropriate to their location and convenient for the puposes for which they were planned and constructed, is very liable to adhere to the same style, whenever he builds, though his circumstances and purposes may be very different.

We have in our mind a house in the open country, some ten miles from Boston, built and occupied by a city mechanic, which looks, for all the world, as though it had been cut from some crowded city block, and carefully transplanted to its present location. It has no veranda, balcony, or projection of any kind. It stands stark and bald, as if perfectly unconscious that the surrounding land is valued by mills, instead of dollars per foot.

We are reminded also of another small dwelling house built upon level and rather moist soil, with "a basement," which we once examined with a view of hiring for a tenement, but which our better-half, who did her own work, at once decided would not at all suit her, and of course that house was left for some other customer.

Still, as "circumstances alter cases," and as there are side-hills as well as plains in New England, a basement house may sometimes be appropriate and desirable.

The above plan, as will be seen, is meant for a position below the road. Gentle swells by some valley side, or on the outer margin



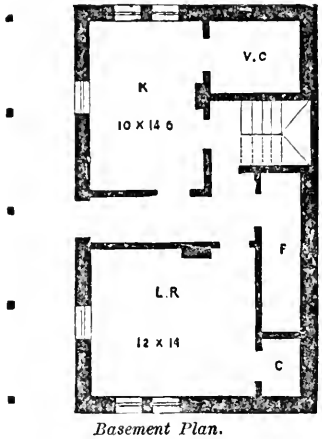
Principal Floor-Plan.

of a plain, often furnish sites well adapted to this plan. The cut, and illustrations were

drawn by Cleveland & Backus of New York, who estimated the cost at $1375, at the rates of labor and material previous to the war.

The plan of the principal floor, shows the position and size of the parlor, the sitting and bed rooms, the halls and closets, so fully as to require no further description.

The basement plan also shows the arrangement and size of the kitchen, living room, vegetable cellar, fuel cellar, and closet. The



Basement Plan.

position of the upper flight of stairs determines that of the lower and makes necessary the recess in the stone wall as shown by the basement plan.

Height of basement, seven feet; main story eight feet six inches.

In the attic there are four bed rooms and as many closets. These rooms are ten feet high in the highest part, and but two feet and nine inches at the side; a result due to the low pitch of the roof.

The upright boarding represented in the cut is a matter of taste, on which architects are not by any means unanimous.

FEED ROOTS TO HORSES.

It is probable that all our domestic animals, in their original condition, were located in climates that would afford them food throughout the entire year, and that they were endowed with the power of collecting that food, as our cows and horses do in the summer season. They would not be able to do this in a New England climate, as the moose and reindeer do; so that they are in an artificial condition, in some degree, and this condition ought to be taken into consideration in our modes of feeding them.

It seems to us to be contrary to their nature, for horses to be kept any great length of time upon dry hay and grain, and without some tender and juicy food to fill the place, as nearly as possible, of green and succulent grass.

This may be done, in some measure, by the use of roots. These will serve, as does the grass, to keep the digestive organs in healthful action. Every horse owner will find it economical to himself to feed roots of some kind liberally to his horses, as under such treatment they will retain their health and strength, last longer, and thus be able to do him more service than when kept exclusively on dry food.

Livery stable keepers understand this, and they purchase a larger portion of the roots which are raised, than the farmer ought to spare; though the farmer has the advantage of allowing his horses to feed upon green food during a portion of the year. Among the roots, carrots are considered the best for horses; but they will eat potatoes, mangold wurtzels, beets, parsnips, and turnips, by commencing with each in very small quantities. Their use will prove cheaper than to confine horses to dry food entirely.

KEEPING MEAT UNDER BRINE.

Many a serious loss occurs to good housewives by the pork or beef coming to the surface of the brine, and being exposed to the air, after it has been packed with great care. The usual way of keeping it down is to lay bits of board upon the meat, and upon them bricks or stones. This is very well so long as nothing is taken from the barrel; but when that is done, if the boards and stones are not put back and *evenly balanced*, some of them cant a little and allow a portion of the meat to come to the air. If this remains exposed for some days, the process of putrefaction takes place, and not only the piece exposed is ruined, but if it remains long in this condition the whole mass receives a taint, and if not rendered entirely unfit for the table, loses its sweet and rich flavor. We have known this to occur where it was supposed the utmost pains had been taken to keep the meat perfect.

It is no small loss to the family to find a barrel of choice pork with a disagreeable taint upon it all, just as a succession of vegetables is coming on in spring or early summer. To

avoid such an unpleasant circumstance, we give below a very simple, and what seems to us an effective preventive of such loss. It was communicated to the *Iowa Homestead*, by one of its correspondents from Clinton, in that State:—

Make a follower of inch board (an old barrel head will do) just large enough to pass through the head of the barrel with ease. On the top of the follower, about four inches from the edge, on opposite sides, fasten two braces with leather hinges. The braces should be about six inches long, and one inch square, having a sharp spike in the upper end. This done, press the follower upon the meat until it is below the brine, then press the top of the braces against the barrel, and the spikes will penetrate the side of the barrel, keeping all in place. Few realize the importance of keeping meat under the brine. If one piece becomes tainted, it will in time convey that taint to all in the barrel.

RANDOLPH, VT. FARMER'S CLUB.

After the report of the discussion of this club which appears in another column was in the hands of the type-setters, we received the following communication in relation to its history and management. We hope it may encourage individuals in neighborhoods where there are no such associations, to move at once in the formation of one. Let the organization and the exercises be as simple as possible at first. Don't try to begin where a club of six years' practice "leaves off." Don't be *constitutioned* to death. Don't be tied to the stake of any two-thirds vote. "We, the undersigned, agree to meet once a week to talk over our farming affairs," is about enough of constitution and by-laws to begin with. From evening to evening, such "articles" and "amendments" may be added as shall be found desirable or practicable. Of course the rules which govern gentlemen and ladies in social intercourse, and those which are observed by deliberative bodies, are always and everywhere in force. If one plan of exercises fails, keep yourselves free to try another, and any other, which may be suggested by your own circumstances and means.

A New Feature.

In conducting our Farmer's Club, we have constantly had in mind, from its commencement, six years ago, to the present time, the personal improvement of its members, as one of its prominent objects.

We started with an essay and a discussion, as the chief exercises. But the first year we frequently failed of having the essay. To avoid these failures, we had six or eight individuals *pledged* to fulfil the appointment whenever it fell upon them, and we were thus *sure* of the essay every week.

Last season we added the exercise of an original "oration," and did not fail of having it during the season.

The present term we have added still another exercise, which proves not only useful and entertaining, but occasionally very amusing. It also proves quite efficient in increasing the attendance of the outsiders. It consists of an off-hand speech, of five minutes, on the spur of the moment, without any possibility of preparation, or previous thought. The President calls to the stand, any one of those who have agreed to sustain the exercise, and then assigns him some subject pertaining to farming interests, upon which he holds forth, not exceeding five minutes.

This and all the other exercises continue to be well sustained, and our attendance is good, from 20 to 60, every Monday evening, "rain or shine," some coming six or eight miles—and we are always glad to see strangers frequently present, who are no doubt readers of the FARMER—as they are generally of the more intelligent and efficient class of farmers. Our Club is one of the most interesting and useful institutions in this section.

Randolph, Vt., Jan. 7, 1868. LECTUM.

For the New England Farmer.

A LARGE MANURE HEAP,

THE FARMER'S GREAT MISTAKE.

MESSRS. EDITORS:—In your paper of January 4th, I asked for information respecting the success of the pupils of Professor Dodge Hayward. On Thursday evening last, his lecture was intended to show the farmers their *great mistake*. The following is the substance of what I understood him to say.

Farming is destined to be the most profitable business men can engage in, in New England. The soil, as a whole, contains all that is necessary as fertilizers, and the reason why farming does not pay well, lies in the ignorance of those engaged in it, in regard to the fertilizers most suited to the lands they occupy, and the crops they attempt to grow.

The farmer thinks he must have a large heap of manure. In this he is mistaken; he need not keep cattle to make manure; the fodder they eat would be of more service to the land if allowed to remain and rot where it grew. He did not advocate the spreading upon the land the substances we give cattle to eat, as even that way of manuring is very much too costly to pay. All vegetable matter, including the grass of the western prairies, and the leaves of the forests of the north, is useless as manure, except that in them there is a small amount of mineral which washes down into the soil, while the greatest part of it rises into the air and is lost. The loss of fertility in our lands, East and West, is caused by the loss not of vege-

table matter, but by the minerals of the soil having been exhausted by corn crops.

The rain, dew and snow, supply all the material of a vegetable nature, which we commonly suppose to be necessary for enriching our land; nature never fails to give us in the rain, dew, and snow, all the elements contained in decomposed vegetable substances. The peat lands of New England contain but a small amount of fertilizing matter. Some of them none at all, and to haul them into the barn to make manure is wasting time to no purpose, as they are but decomposed vegetable matter, and to use them is only to attempt to complete what nature has already perfected.

Some suppose that manure is injured by drying; this also is a mistake. All that leaves the manure in drying, would leave it if it were under the surface of the soil, and all that does leave in drying or in heating may as well leave, since the rain, dew and snow, will supply sufficient of the same to the soil.

When a farmer turns his manure heap, he only increases the fermentation and releases its useless parts. The more he turns his heap the finer the manure and the smaller the pile. The value of the manure is not diminished by fermentation, nor is there any less fertilizing matter present by reason of the quantity being less. Take four loads of horse manure, allow it to burn itself until it is reduced to one load, and you have then, just as much fertilizing matter there as when you had four loads. Take a stick of wood, allow it to lay on the ground to rot, it would be sometime in decomposing, but finally the land on which it decayed would be enriched no more than it would have been if the wood had been burnt in the stove, and the ashes had been spread on the same land.

As of common barn yard manure, so of guano and phosphate of lime: only from thirty to forty per cent of these are of service to the land, and while we pay $60 per ton for them, all they contain that is of service to the land can be provided for $7.50.

Ploughing orchards is useless. Put on minerals, then we shall have fruit and the trees will be healthy; the trees being healthy, we shall have no borers living on our sickly diseased trees. So of potato rot, lack of mineral in the soil induces disease, use it and the disease will disappear, and large crops will be the result.

A common manure heap is composed of carbon 2 parts; nitrogen 7; mineral 1; and water 90; in all 100. Of these, one part is of service and ninety-nine useless.

To illustrate the matter, suppose we employ one hundred men to make one hundred loads of barn yard manure, it will be as if ninety were employed to bring water, seven to bring carbon, two to bring nitrogen, and one to bring minerals; the last is the only useful person employed, the labor of all the others lost.

Strange enough, he would recommend the saving of the solid and fluid manure of cattle, because the solid contained two per cent of mineral, and the fluid six to seven per cent.

He then stated that if we would buy his book, and follow his instructions, if we did not succeed as he had promised we can do, he would then cease to lecture and burn his books.

The speaker, in all respects, appeared to believe his own theory, and he certainly spoke as though he was bred up to and had lived by farming. He seemed to think we were inclined to unbelief, and said, that once a man induced his neighbor to go with him to hear a preacher explain universal salvation, and when he inquired of him, how he liked what he heard, he answered, "I like his doctrine, and would give my yoke of oxen if it could be proved to be true." John Fleming.

Sherborn, Jan. 6, 1868.

Remarks.—Though we have little faith in the Dodge Hayward theory, we are perfectly willing he should have a hearing. We hope his lectures and his book will induce his pupils to think, experiment and compare results. Years ago Prof. Wells analyzed the soil of Massachusetts and that of the wonderfully fertile meadows of the Sciota valley, and was forced to the conclusion that the cause of the difference in fertility could not be detected in the mineral constituents of the soils of these two localities.

For the New England Farmer.

DOMESTIC TRAINING.---NO. 3.

Some time during the past year, a lady wrote to the Farmer respecting a set of "young olive plants," in whose management she professed to find rather more difficulty than in making doughnuts and gingerbread for their food. Perhaps the following, which I have heard a lady relate, may inspire her with patience for the present and hope for the future.

A friend of hers was frequently annoyed and almost discouraged by her noisy, harum-scarum boys, who liked to skate, slide and play ball, regardless of the wear and tear of their clothing, or of their mother's sensitive nerves; while, as if to make the case worse by contrast, the sons of her opposite neighbor were just as good and quiet as could be—willing to sit still all the time. As the noisy boys grew to manhood, however, the rough, boisterous element gradually vanished, and they became useful, honored citizens; whereas the good, quiet boys remained good and quiet—perfectly willing to sit in the house all the time, and quite unwilling to do anything else.

It seems to be easier for healthy boys to run than to walk, more natural for them to shout than to smile, and this should be taken into account in their training. Yet they should not

be allowed to turn the house upside down or inside out, in the exuberance of their spirits.

They should be taught *by example as well as by precept*, to respect the sacredness of home, to treat each other with courtesy and politeness. Habits of personal neatness should be carefully insisted on, and purity of morals and uprightness of conduct seduously cultivated. But in order to train a child successfully, one must begin in season. There must be no domestic tyrants of two years old, be they ever so "cunning." The mental garden must be sown in the early spring, else it will soon be full of noxious weeds. Be sure it will not remain long unoccupied.

The advantage of teaching boys to sew has been well shown in a late number of the FARMER; many would find it a pleasant change from out-door pursuits in these long evenings. Before work was banished from our common schools, (a proceeding of which I have often doubted the wisdom,) it was not unusual for boys to become quite skilful in this branch of education; and as such skill never comes amiss, it would be well for mothers and older sisters to take some pains in teaching them. There are also many other household duties, of which it is wrong to allow them to remain ignorant.

While thus training the boy for the present, the parents should try to ascertain what his future calling is to be. Genius, like murder, "will out." The juvenile M. D. will prepare bread pills and chalk powders, (let us hope that these will be the extent of his medicinal preparations); the lawyer will question and cross-question until he wears your patience out; the clergyman will harangue his admiring audience from the top of a pile of boards; the mechanic will devote his spare time to the manufacture of miniature carts and wheel-barrows; the military commander, at the head of his un-uniformed regiment, will

"Storm some ruined pig-stye for a town,"

and so on to the end of the chapter. These various manifestations will not be overlooked by the wise parent.

Farmers, do not force or ill-timedly advise your boys to follow your own calling, however much you may wish that they should do so. If they adopt it, let it be their own free choice. It will be useless to tell them that agriculture is one of the noblest pursuits, unless your own life exemplifies the statement, *unless, in fact, you believe it yourself.* And if you do, honestly and earnestly believe it, your example will be the best advice you can give them.

Marlboro', Mass., 1868. MATTIE.

REMARKS.—While we have some faith in the "manifest destiny" of individuals as well as of nations, we believe that with most of us there are conditions and circumstances, "that shape our ends, rough hew them as we will." The experience of most individuals, probably, who have lived long enough to find that there is no use in pulling gray hairs from their heads, corroborates that of St. Paul, who said: "When I was a child, I spake as a child, I understood as a child, I thought as a child; *but when I became a man, I put away childish things.*" According to our recollection of our boyhood dreams our "genius" "did out,"—*by turns*,—in nearly all the various manifestations of which "Mattie" predicates the future callings of her several "Olive Plants." Let a circus visit a neighborhood, and all the boys are turning somersaults, or riding the old mare on their heads; a juggler succeeds, and, *presto change*, they are drawing ribbons from their mouths, or swallowing jack-knives.

A FARMER'S TALK ON STOCK.

The farmers of Randolph, Vt., meet weekly. The order of exercises is, first the reading of an Essay; second, an Oration; third, Discussion. At the meeting, Monday evening, Dec. 30, the time usually devoted to the essay was occupied by filling the questions in blank from the Agricultural Department at Washington. The subject of the "Oration" by Mr. S. Howard was Fencing. He estimated the amount of fencing in the town of Randolph at 171,566 rods. Rail fence, once the cheapest, was now the dearest. Stone walls was one of the cheapest. Thought old growth of cherry the best wood in that neighborhood for posts; next, butternut. Considered August and September the best time to cut timber for posts or any other use.

We condense the following report of the discussion on the most profitable stock for that section, and that which will most improve the farm, from the *Orange County Eagle*:—

W. W. Walbridge, on opening the discussion, remarked that he was in favor of the introduction of all kinds of thoroughbred stock, and commended the enterprise of those gentlemen who had done so in that neighborhood. He referred to the introduction, forty years ago, of a breed of black cattle into the town of Cabot, by Judge Dana, which proved fine animals; Durham cattle had been brought into the same town years ago, and they had produced a beneficial effect upon the cattle of that section. The Morgan horse, forty years ago, was a superior animal. He recommended breeding from the stock we have.

But what kind of stock most enriches our farm, he regarded as an important question. Sheep, he thought, although they scatter their

manure evenly, do not sufficiently add to the manure heap at the barn, and their manure is deficient in fertilizing properties. Advocated Dairy farming, with keeping of hogs, and adduced as an instance the improvement of farms in Morristown by this kind of husbandry.

Mr. Lyford said, we cannot devote ourselves here in Vermont exclusively to one kind of stock, but should practice mixed husbandry. But we must have a specific object in view, whatever stock we breed. In breeding we should never lose sight of the object for which we start. He would select for a cow for home use, the Jersey, but considered them worthless for stock or beef. For the dairy, the Ayshire or cross between Ayshire and Short-Horn, and for stock and beef would decidedly prefer the Short-Horn. He thought perhaps they were too large for our soil and climate, but by judicious selection of animals and proper treatment, would undoubtedly prove profitable. He thought by proper breeding and feeding a superior animal might have been obtained from our native stock. He said we should secure the best stock within our means and take good care of it, if we would succeed.

He objected to the theory that sheep did not enrich the farm. His experience has been, that in keeping sheep on a small farm of fifteen acres, he has enriched it more in one year, than his predecessor in three years, feeding the same amount of forage to cattle. He made between eighty and one hundred loads of manure from 100 sheep last year. Housed his sheep through the summer, littered his yards well and kept them moist. He said in conclusion that we should raise the kind of wool that the market demands.

Mr. Sanders advised keeping but one breed of whatever animal, whether sheep or cattle. He preferred the Short-horn cattle for various reasons: first, they bring the highest prices of any cattle in the markets of the world; second, they best combine the desirable qualities for dairy and stock purposes. He has tried the Jersey and thinks no animal consumes so much with so little return. He said a good Short-horn cow will give more milk and make more butter than any Jersey cow in the world. Another advantage of the Short-horns is that if we are obliged to kill the animals at one or two years old we realize much more for them than for any other. He did not approve of the pampered, over-grown Short-horns exhibited at our Fairs, but advocated the breeding of medium sized animals adapted to our soil and climate. Is himself breeding with an eye to the best milking qualities. Although he could recall no man, who had been eminently successful in more than one of the three principal branches of husbandry, he saw no reason why a man could not breed all three, viz: cattle, sheep and horses, having a definite object in view in each, without interfering with each other. He advocated the breeding of the Vermont Merino, as they yielded the heaviest fleeces, were the best formed, best adapted to our soil and climate, and brought the highest prices of any sheep in the world. He considered the Morgan horse, such as Vermont formerly raised, an excellent animal; and thought we had the material by selecting the largest and best mares and breeding to medium sized trotting stallions for making the best horse in the world. He objected to the introduction of the so called thorough-bred, as he has been for centuries bred for racing purposes, and is unfitted both in anatomy and disposition to our needs.

Mr. J. Carter said, keeping sheep is the best way to improve a pasture. Referred to a pasture on which sheep have been kept fifteen years, which yielded this year more than forty bushels India wheat per acre. The sheep returns more to the soil than any other animal in proportion to the amount carried off. It is an animal from which the whole value of material matter may easily be saved, and is next to that of the hog in fertilizing properties.

Mr. Rufus Nutting recommended keeping stock that shall consume all the hay and grain raised on the farm, selling nothing that could be fed. Some classes of Durhams are too large to be restrained by a lawful fence, and are too large to thrive on our hills. Preferred the Ayrshire on this account.

Messrs. S. B. Carpenter, J. W. Atwood, Col. Mead and others participated in the discussion.

Onions as a Medicine.—"Mary," in the *Western Rural* recommends onions for the relief of colds, coughs, &c. Mary is sound on the onion, as we know from experience. There is nothing better. She truthfully says:

Hardly too much can be said in favor of onions as a remedy for coughs and colds; especially for children, they are invaluable. They may be cooked, and eaten at meal time, or, what is better, eaten raw with a little salt, or stirred up in vinegar. A syrup made of them has saved many a child from an attack of croup or lung fever, and where these diseases were fully settled, it has gone far toward a speedy cure. To prepare the syrup, slice an onion in a tin basin, pour upon it a half a teacupful of molasses, or, what is better, honey; add a bit of butter as large as a small chestnut, set the dish in the oven, and simmer slowly for an hour. Leave one of the oven doors open, so it will not be too hot.

Cheese Making.—Sylvester Green, Esq., of Herkimer county, shows a new apparatus for cheese making, which he claims simplifies the process and lessens the labor while it saves at least five per cent. of curd which is wasted by the old process.

He believes cheese making proper is a chem-

ical process, and the less manipulation of the curds the better, in point of flavor, quality and quantity. The apparatus consists of an ingeniously constructed rack or perforated plate, with wooden knives attached, introduced npon the curd which assists to separate the whey from it by means of gradual pressure.

In this process there is no stirring of the curds. After coagulation the mass is cut with wooden knives, and when the whey is formed and a portion of it is laded out, the perforated plate is introduced and gradual pressure applied by placing warm water in cans upon it. The perforated plate sinks down upon the curd, and the knives or wedges entering the curd, operate to separate the whey, and thus, by avoiding manipulation, the best results are obtained. When the curd has attained the right consistency it is run through a curd mill and salted. The principle on which the apparatus of Mr. Green works, is similar to that employed in manufacturing Stilton cheese by the Leicester and Cambridgeshire dairymen.—*Utica Herald.*

AGRICULTURAL ITEMS.

—From seven towns in Niagara County, N. Y., before the purchases were fully completed, $510,289.80 worth of apples had been shipped last season.

—Farmers measure their duties by the yard just now—the barn-yard, the wood-yard and the poultry-yard.

—Cattle are among the chief exports of Texas, yet the State imports extensively butter, cheese, and even milk.

—Nevada is a treeless country. The want of fuel is a great drawback to the value of the mines in that State.

—In the six counties of Jasper, Mahaska, Henry Washington, Wapello, and Jefferson, in Iowa, there were 384,583 sheep, according to official returns made last June.

—Mr. H. C. Johnson, of Danville, Vt., raised on his meadow the past season, from just five acres, 800 bushels of ears of corn, which is equal to 400 bushels, or 80 bushels to the acre, of shelled corn.

—Satisfactory evidence is given that there is, at least, a slight difference between the Jackson White and the Orono potatoes, which fact has recently been questioned. Both are excellent varieties.

—The Irish *Farmer's Gazette* gives the following remedy for sore feet in sheep: Pare away all loose horn about the feet without drawing blood, and anoint them with butyr of antimony, keeping the sheep on a dry standing for a few hours afterwards.

—In Platte county, Ill., says a correspondent of the *Country Gentleman*, farmers have been, now for twenty years, breeding to thorough-bred stallions, and almost every horse you see shows more or less the blood that is in it. They were grading a railroad through the county, and many of the farmers had turned out their teams to help the work along, when I was there last fall, and I counted twenty pairs of horses at work along the road, that would command the notice of horsemen anywhere. All had fine heads, noble necks, were well muscled, and astonished me both by the size of their bone and kindliness of their disposition.

—The Bloomington, (Ill.,) *Pantagraph* says that the beet sugar manufactory at Chatsworth is now in fine working order. The company are feeding five hundred head of cattle from their beet pomace, and ship a car load of sugar every week.

—A St. Paul paper thinks 15 bushels per acre is high enough as the average yield of wheat in Minnesota last season, and that the crop in that vicinity was damaged 20 per cent. by rains after stacking.

—A dog stirred up a nest of rats in a barn at Brattleboro', Vt., the other day, and a man came up just in time to see them take refuge in a barrel. Putting a cover on it, he poured in a quantity of hot water, and when the struggles within had ceased counted up no less than seventy dead rats.

—An English paper says that this year no less than 40 tons of iron rust were taken out of the Menai tubular bridge at one thorough cleaning. At that rate it will soon be carried away in old iron; so will those agricultural implements which are exposed to the weather.

—A. H. & J. B. Day, of Winchester, Iowa, inform the Iowa *Homestead* that they have two two year old steers of their own breeding, one of which weighs 2,010 lbs.; and the other 1,970 lbs. They also have three yearling steers whose weights, respectively, are, 1,080, 1,090, and 1,250 lbs.

—In South Oxford county, Ontario, Canada, there are, according to the Ingersoll *Chronicle*, 64 cheese factories and branches, using the milk from 12,633 cows, and making, this year, 1,366 tons of cheese. In the same county, ten tons of cheese was the amount made in 1864.

—A correspondent of an Ohio paper gives the following as his cure for warts on cattle or horses. Take a small quantity of blue vitriol, pulverize it, and add enough water to make it into a paste; rub the warts over with this once or twice, which will effectually cure them.

—Mr. A. E. Trabue, of Hamilton, Mo., has recently purchased a considerable number of Short-Horns from well-known herds in the blue grass regions of Kentucky. The average price paid for 13 heifers and heifer calves was something over $200.

—Our agriculture has much to hope from young men who, having a love for farming, the necessary capital, a good education, and abundant energy, make up their minds to study farming at some agricultural college, or with some good practical farmer, and then settle down in the country for

life, determined to make farming pay. It will not be many years before our agricultural colleges will turn out hundreds of such men. And the more of them the better. So says Mr. J. Harris, in his Walks and Talks in *American Agriculturist*.

—A correspondent of the *Country Gentleman*, at Gardner, Kansas, says a cattle dealer in that place reports that he has bought 450 head of cattle, from one to four years old, for $3,700, or only a little over $8 per head. Beef is plenty there at two and a h lf cents a pound.

—For threshing wheat in Iowa, six cents per bushel has been the ruling price paid the last season, to the owner of the machine; he finding three men and six horses, and the owner of the wheat finding five men and four horses, and feeding and boarding the whole.

—A grind-stone should not be exposed to the weather, as it not only injures the woodwork, but the sun's rays harden the stone so much, as in time to render it useless. Neither should it stand in the water in which it runs, as the part remaining in water softens so much that it wears unequally,—"out of true."

—"Wool Grower" writes the *Prairie Farmer* that he has about come to the conclusion that the only way in which we can be free from the necessity for "middle men" in the wool business, will be the institution of large wool fairs or markets, where the growers and all classes of buyers are brought together.

—A disease styled the "chicken cholera," has been very fatal during the latter part of the autumn in many parts of Ohio,—geese, ducks and turkeys, as well as chickens, being victims. The symptoms are a loss of appetite, a drooping of the head, the plumage disordered, the excrement yellow, then death. No remedy has yet been found.

—A correspondent of the *Country Gentleman*, in Champaign County, Ill., writes, Dec. 18, careful farmers have already fed their stock six weeks, and there is every probability that they will have to feed beyond the 1st of April; indeed there is every reason to expect famine prices for feed and fat stock of all kinds during next April and May.

—The pursuit of agriculture, with diligence and prudence, seldom fails of yielding, if not wealth, a moderate independence. For the farmer who is not in debt, and the produce of whose farm is sufficient, with industry and frugality, to support his family, is, in reality, as independent in his circumstances as though he were worth a million.

—In reply to a question as to the weight of the gallon of milk used by the cheese factories of New York, Mr. Willard of the *Utica Herald* says: probably 8½ pounds of milk would be about right for a gallon, *wine measure*. The usual rule adopted by our factories is to estimate 10 pounds of milk to the gallon, the gallon being *beer measure*. We know no reason for this measure being adopted for milk further than it is easier to estimate—ten lbs. of milk being considered an average sufficient to make one pound of cheese.

—For manuring fruit trees, a mixture of peat or swamp muck, with half its bulk of stable manure, and about one-twentieth of leached ashes, will be found very suitable. The compost should be piled for a considerable time and well mixed. If for peach trees, soap-suds may be added with good effect. For cherries the proportion of stable manure should be greater.

—H. Vielle, living near Aurora, Illinois, died in the month of December from the effects of inoculation in doctoring a sick cow in May last. The cow, it is supposed, had the hydrophobia, and Mr. V. received the inoculation while attempting to thrust a piece of fat pork down her throat, the saliva coming in contact with a sore in his hand. He was taken with spasms, and continually grew worse till his death, two days afterward.

—At a meeting of the Piscataquis, Me., agricultural society, A. M. Robinson, of Dover, was elected President; Mordecai Mitchell, Dover, and Seth Lee, Atkinson, Vice Presidents; Lyman Lee, of Foxcroft, Secretary and Treasurer; A. S. Chase, Atkinson, S. R. Jackson, Foxcroft, J. L. Robinson, Dover, trustees; Luther Chamberlain, Atkinson, member of State board.

—The Lewiston, Me., *Journal* says that Mr. F. M. Jordan, of Auburn, has conceived the idea of using his large hot houses this winter for the culture of what the "genteel young lady in the country" called "hen fruit." As a consequence a hundred or two hens are comfortably and abundantly laying, under glass, deceived into the idea that it's warm weather and the season for cheap eggs.

—A correspondent of the *Country Gentleman* assumes that the average price of corn in Illinois is now about 80c per bushel. For the past six years he puts it at 30c, and for the six previous years not more than 20c per bushel, and then says, if the best cuts of No. 1 fat beef don't fetch 75c to $1 a pound in New York city, next April and May, those men who are feeding 80c corn won't get pay or interest for their investments.

—As a possible explanation of the prevalence of abortion among cows in the dairy districts of Central New York, a correspondent of the *Country Gentleman* mentions the fact that in not more than one dairy in twenty are bulls kept over two years of age, and in most cases where the herd is small only a yearling bull is kept. This he thinks, when continued through many generations, may have produced this disease.

—A correspondent of the Kentucky *Home Journal* says: "I sow my rye when I dress my corn the last time; I use a one-horse harrow, in the place of ploughs, and run twice in each row, which leaves the ground very smooth and puts the rye in beautifully, and I never failed to reap a good crop of rye, and my fall and winter pastures

were equal in value to the crop of rye; leaving the ground in fine condition for grass and clover seed."

—A correspondent writing to the *Scientific American* says: "Common brass clocks may be cleaned by immersing the works in boiling water Rough as this treatment may appear, it works well, and I have for many years past boiled my clocks whenever they stop from an accumulation of dust or thickening of oil upon the pivots. They should be boiled in pure rain water and dried on a warm stove or near the fire. I write this by the tick of an eight-day clock which was boiled a year ago, and has behaved perfectly well ever since."

EXTRACTS AND REPLIES.

STICKS AND OTHER ORTS—DRAINAGE.

1. The residnum of a cow's weekly allowance of hay is often a bushel, more or less, of little sticks of hardhack, willow, rosebushes, and stout stalks of vervain and other weeds, too coarse for bedding. If cows eat all but this very coarse stuff, without cutting in a hay cutter, is it worth while to cut it? Is there no danger of injury to the intestines of the stock?

2. No doubt properly laid tiles are best for drains. But the first cost is a serious difficulty with some farmers. If drains three feet or more in depth, have one and a half feet of small stones tipped into the bottom, and are covered with three inches or so of straw or brush, before throwing the top soil, may they not ordinarily be expected to answer the purpose of drains for some years.

Paris, Me., Dec., 1867. E.

Remarks.—We do not think it desirable that cows, or any other stock, should be made to eat the sticks and stems mentioned by our correspondent; still, we believe that corn stalks, straw and other fodder, that contain more or less nutritive matter as well as bulk, may be economized, under some circumstances, at least, by cutting. And certainly the manure with which the orts from eat feed is mingled, is more comfortably worked over than that which is bound together by full-length corn stalks, straw, &c.

If you are in the habit of throwing the corn butts into the barnyard, let the sticks and other orts go there too. When collected and fermented in the spring, the orts will get softened and do no harm among the manure. The finer such materials are made—including the corn stalks—the better it will all be. We should anticipate no trouble from the cattle eating any portion of the coarse stuff which they chose to.

2. You say the first cost of laying drain tiles is a serious difficulty with some farmers. So it is with many. On high land, drains may be laid with stones that will last for generations, by taking pains in making the passage for the water, and placing the stones by hand, rather than dumping them into the ditch from a cart.

The mode which you suggest would be a good one on hard land, if you were to make a gullet or water passage, and lay the stones carefully around it.

Where drains are laid with stones on soft land, the mice make holes from the surface down to the stones, and the rain carries the soil down so that the drain soon becomes choked, and the water breaks out at the surface.

In Ohio, a sort of fresh-water lobster, called the crawfish, has been found so efficient an agent in keeping stone drains open, that a correspondent of the *Ohio Farmer* expresses his preference for stones over tiles wherever this little creature abounds.

LICE ON CATTLE.

A Waterbury, Vt., "Subscriber" is reminded of the "pot calling the kettle black," by the man who, after regretting that so dangerous a poison as unguentum should be suggested, went on to recommend arsenic. Nor is he any better pleased with the idea of carrying fire into the barn, or building an expensive smoke-house or other apparatus necessary to smoke out the lice with tobacco.

Mr. L. E. Bicknell, of Windsor, Mass., also testifies to having seen this method tried, and the result was, a pan of coals kicked across the stable and a lively scramble of all hands to keep the barn from burning.

J. W. Nye, of Keene, N. H., pours whale oil on the whole length of the back, which works its way down on the body, and, by two applications, kills all the lice without injury to the cow or other animal.

The "Subscriber" at Waterbury says that thoroughly dried sand occasionally sprinkled over animals from nose to tail will keep them as clear of lice in winter as they are in summer.

HENS AND HEN YARDS.

I have a shed twenty by thirty feet for my sheep to run in in the winter. I think of building a yard at the south end of that shed twenty by twenty-five feet, and keep my hens in the shed yard. How many can I keep there and not have them too thick, so as to breed distempers? How high does the fence need to be? How much grain will each hen eat between the first of May and the first of October? Will some one that has kept hens shut up, answer this, and oblige YOUNG FARMER?

Wallingford, Vermont.

Remarks.—From twenty to thirty fowls are about as many as we deem advisable to be kept together. In this section we are much troubled with vermin, which are very difficult to dislodge when they have obtained possession of the premises. If the fence is picketed it need not be very high.—perhaps six or eight feet. Something like a gill a day of corn, wheat, rye or barley is a common allowance for hen rations. Mr. Bement confined one cock and seven Poland hens for a feeding experiment. A peck of corn was consumed in eleven days; a peck of barley lasted seven days; peck of millet, eight days; oats, six days; wheat screenings, seven days.

The following statement which was received about a year ago, "turns up" rather late perhaps,

but as it may be of interest to "Young Farmer," we publish it, with our apology to "J. F. D." for the delay.

ACCOUNT WITH MY BIDDIES.

I have averaged fourteen laying hens for the year, beginning Dec. 5, 1865, and ending Dec. 5, 1866, which laid 187 dozen and two eggs; have sold from this amount 129 dozen; used in the house forty-five dozen and two eggs; have set, and otherwise disposed of six dozen and nine eggs. My hens were fed with corn, whole and ground,—clear, and with the cob,—wheat, barley, rye, oats, buckwheat, potatoes, fresh beef, woodchucks, frogs, fresh water clams, mud worms, butcher's offal, &c. They are a cross of the Black Poland, Game, China, and common barn yard fowls.

My account with them stands thus:—

CREDIT.

Poultry killed and to kill	$3 00
Four old hens sold alive	2 00
Twenty-eight to keep over	14 00
One hundred and twenty-nine doz. eggs sold	31 37
Forty-five and five-twelfths dozen used	10 50
Total	$63 87

DR.

Fourteen layers and one rooster	$7 50	
Ten cents per day for keeping one year	36 50	
		$44 00
Balance		$19 87

or nearly $1.50 per layer, after deducting expenses.

Bradford, N. H., Jan. 8, 1867. J. F. D.

COMPOSITION OF UNGUENTUM.

Please inform me as to the composition of the "unguentum" mentioned in your paper of this date as a cure for lice on cattle. G. G. K.

Dorchester, Mass., Jan. 4, 1868.

REMARKS.—Unguentum is a Latin word, and means simply an ointment. Popularly it is applied to an ointment composed of mercury or quicksilver and lard. It is called *unguentum hydrargyri* in the U. S. Pharmacopœia, which gives the following directions for its manufacture. The process though apparently simple, we are informed by an apothecary, is one that requires both skill and patience. "Take 24 advoirdupois ounces of mercury, and 12 troy ounces of lard and the same of suet. Rub the mercury with a troy ounce of the suet and a small portion of the lard until the globules cease to be visible; then add the remainder of the lard and of the suet softened with a gentle heat, and thoroughly mix them."

Our apothecary friend said that no one not familiar with compounding drugs and medicines ought to undertake to make unguentum, or to have much to do with it after it is made, if less dangerous medicines can be substituted.

MINERAL COMPOUNDS.

In reply to the "Information Wanted" by "J. F.," of Sherborn, Mass., in the NEW ENGLAND FARMER of January 4, in regard to the success of the scholars of Prof. Dodge Hayward, by the aid of his instruction in agricultural chemistry, in producing hay, grass, fruit, potatoes, &c., I will say a few words, as I am happy to give information so far as I am able. I can speak for only a very limited number of his scholars, and for those, perhaps, not so definitely as may be desired. Five years ago this winter I attended one of the agricultural schools of Prof. Hayward in this place, and was disappointed in the man and in his "teachings." He is truly one of "Nature's teachers," and is as correct in his chemistry of plants as Warring or Liebig.

His mineral compounds for supplying the wants of plants, I have used more or less every year since, usually with good results. Whether, as he states, you can always, with $1.50 worth, produce an extra ton of hay, I am not prepared to say, but have my "honest doubts." I can say that I have used it on mowing land, and know that the effect may be seen for a number of years. One crop does not seem to exhaust it, as the effect is more apparent the second year than the first. I have used it for grain with marked results; have raised the best corn when I manured partly with that, and partly with common manure, that I ever raised.

For fruit, or old pastures, I have never tried it to any extent, but am acquainted with one of his former pupils who has tried it to a considerable extent on old pasture land, and claims to have received a benefit far exceeding the expense, or even his most sanguine expectations.

Royalton, Vt., Jan. 6, 1868. J. G. BENNETT.

ROBINS AND COLD WEATHER.

On the fourteenth of December the thermometer at this place was 16° below zero in the morning, 9° above at noon, and at zero at night. In the middle of the day a robin red breast spent some three hours in the trees about the house. In the town of Weston, I also understand that robins have been seen within a few days past. We should like an explanation of these untimely visits.

ORIN HAGAR.

Wallingford, Vt., Dec. 25, 1867.

REMARKS.—In the southern part of Massachusetts it is not uncommon for robins, especially in mild seasons, to pass the winter in sheltered lowlands. We saw a notice lately of a flock having been seen on Christmas day near Salem. We believe that Mr. Thompson, in his History and Gazetteer of Vermont, mentions a few cases in which they have wintered in that State. It has been suggested that the robins which winter in this latitude are those bred near the northern range of the race, and consequently find here the change in climate their instinct demands. Others have thought that those which stay with us are of the second or third broods of the season, and that the winter comes upon them before they are sufficiently matured to endure the hard marches which the old veterans perform with ease.

HARROWING IN MANURE.

I have noticed the expression of various opinions in the FARMER relative to ploughing in manure, and have come to the conclusion that it has different effects in different localities. Until about ten years ago, we knew no other way in preparing our land for English grain and for seeding down. But the practice has been nearly abandoned in this vicinity. I have become satisfied by experience that three loads of manure put in with a harrow is well worth five buried with a plough for a grain crop or grass, and will hold out longer. I think the best potato crop of which I ever had any knowledge from my own observation was planted on rather worn out land without manure, until just before hoeing, when about twelve loads per acre were spread on. In hoeing them the manure was drawn around the hills and left upon the surface. With the little experience I have had, if I

were to plough manure eight inches under the surface, I should feel like saying "Good-bye manure." In some soils it may work differently.

JAMES H. HEBARD.

West Randolph, Vt., Dec. 25, 1867.

PROFIT AND LOSS IN PORK RAISING.

Mr. David W. Wilber of this town, slaughtered on the 2d instant four pigs, eight months and two days old, whose aggregate weight was 1420 pounds. They were bought at eight weeks old.

Cost of the four	$24 00	
Paid for corn meal	126 00	
		$150 00
1420 pounds pork, 10c		142 00
Profit and loss		$8 00

The meal was cooked. No account is made of skim milk from two cows, which was fed to them for nearly three months. S.

Somerset, Mass., Dec. 23, 1867.

REMARKS.—Neither is there any account made of the manure produced by these hogs and by the meal they consumed. The quality of the pork thus produced, compared with the average of that which regulates the market prices, should also be considered, so far as it is intended for home consumption, at least. For a year or two past pork had been very high, and therefore last season "everybody" went into hog raising; pork is now lower, and probably the same "everybody," being very wise and sharp, will leave the business in disgust!

REMEDY FOR LAUREL POISONING.

I see by the answer to my inquiry regarding laurel poison that there is no sure antidote or remedy generally known. Perhaps the gag may save the lives of some, but it is a cruel remedy. By a note from a friend in the western part of the State, and the owner of a large flock of sheep, I learn that he lately lost a large number by this deadly poison. He knew of no remedy at the time but the gag. I wish to communicate through your valuable paper a sure remedy, and one that has been used in this neighborhood ever since my earliest recollection. Take of sweet milk one glass; two table spoonfuls of molasses, and two table spoonfuls of New England rum. Shake well together, and give milk-warm. The above prescription is for lambs. Full grown sheep would require a larger dose. It will do no harm if given in larger doses, as the intoxicating effect of the spirit will soon pass away. The effect of the dose will be vomiting and purging. I have never known a case where it did not cure, and usually within thirty minutes. E. L. M.

Franklin, Mass., Dec. 30, 1867.

THE SEASON AND PRICES IN ORANGE COUNTY, VT.

We had a severely cold December, with no snow of consequence, leaving the ground at liberty to freeze as deep as was best. The first week in January has been more moderate, coming in with a slight thaw, and several hours' steady rain. But the ground was so deeply frozen that our wells and springs were but little affected by the water that fell. Little trouble, however, is as yet felt in getting sufficient water for stock, but if we don't have a right good "January thaw," many springs, brooks and wells will be likely to "give out." We now have about 18 inches snow, (most of it having fallen this month,) which as yet has not been *reorganized* by the wind, and lies favorably for sledding as well as sleighing.

Notwithstanding the very high prices for stock feed, all our good farmers are keeping their stock in a good thriving order, farmer *Slack* and his cousins, being exceptions. Hay $20; corn $1.50; oats 70 to 75 cents; wheat $2 50 to $3.00; Indian wheat 70 to 80 cents; potatoes $1.00. N.

Randolph, Vt., Jan. 6, 1868.

PATENT HAY LOADER.

Can the Southern colored people be employed to advantage, here in Vermont, as farm help? If so where can they be obtained?

There has been a man through this county selling rights to make and use a patent hay loader attached to one side of the cart or wagon, the wheel being the motive power. Is it of any practical value? Ye who have tried it please answer.

Washington, Vt., 1868. ENQUIRER.

REMARKS.—From our own observation, we are inclined to the opinion that the climate of New England is not favorable to the colored race, and that the training and habits of those raised on Southern plantations are not well adapted to qualify them for service on our farms.

We have never seen the particular hay loader referred to, in operation. By looking at an engraving of it, we thought it might be economical where a hundred tons of hay are to be loaded on land that is smooth. We would not purchase one without testing it, and would advise you not to, as we have heard of the fraudulent operations of agents for the sale of implements of this kind, in several sections of the country.

SICK HOGS.

I have lost twenty-four hogs within the last two years, from various causes; if any of your patrons can give me light on the subject, it will be gratefully received. Some of these hogs are attacked with bunches on their legs, and they become weak, and in a few weeks die. Another kind of attack is when the hog is in good condition, apparently, and at once falls down, squeals a little and is dead at once. If any of the readers of the FARMER can suggest a remedy it may save my porkers from premature destruction.

There are many hogs in Franklin county that die; some think it is the keeping; others think it is for a want of exercise. I have tried various remedies without success. JOHN E. CHAMBERLAIN.

West Enosburg, Vt., Jan. 2, 1868.

REMARKS.—It seems to us that some epidemic must be abroad among the hogs in that region. We have heard of nothing of the kind elsewhere. We hope some of our readers will be able to come to the aid of brother Chamberlain in this matter.

MILKMEN'S AND FARMERS' PROFITS.

In looking over the report of the transactions of the Milk Raisers' Association, one is led to believe that the public would be enabled to judge more correctly of the relative profits of milk raisers and those who deliver the milk to consumers, if they were conversant with the habits of both. If the gentleman from Concord, (Mr. J. D. Brown,) had informed the Association in regard to his net profits per year, in the milk business *alone*, we think he would have shown that the milk business has been very profitable to him. People well ac-

quainted with the milkmen of Boston and vicinity know very well that no farmer could long keep out of the almshouse if he spent his money as freely for fast horses and in fast living, as many of the milkmen are in the habit of doing. In fact, if you find a milkman, who is as careful and saving as farmers are obliged to be, he is sure to acquire property very much faster than the farmer, and with less care, anxiety, and perplexity, and certainly with much less capital invested.

A MILK CONSUMER.

Reading, Mass., Jan. 6, 1868.

RAISING POTATOES.

In your issue of 28th inst., "A Subscriber" at Plymouth, N. H., says he has raised 260 bushels of potatoes from less than one and a half days' labor of self and hand, with horse and cultivator part of the time. I wish he would give us, through your columns, the exact method of ploughing, planting, hoeing, and of harvesting, if he included that part of the work, on nearly two acres of potatoes, with so little time and labor. It is not fair he should keep the process to himself, unless he intends to apply for a patent. L. E. BICKNELL.

Windsor, Mass., Dec. 30, 1867.

REMARKS.—We hope "A Subscriber" will define his position, and explain his statement. We supposed that the labor expended related simply to the small amount of hoeing necessary on land clear of weeds and well cultivated.

EXPOSURE OF STOCK TO COLD.

In travelling through the northern part of New Hampshire and Vermont, during the cold spell of last month, I was surprised to see that most farmers kept their cattle and sheep, and in some cases their horses, out of doors most of the day. It seems to me that it is a mistaken idea, and one that should have been given up long ago, that cattle and sheep are hardier and more healthy for being exposed to the chilling blasts of winter, where the thermometer is from 12 to 20 degrees below zero. So far as my experience goes, it is nearly impossible to make any animal take on fat while shivering with cold, though they certainly require more hay than when kept warm. Z.

Reading, Mass., Jan. 1, 1868.

LARGE GRAPE VINE IN CLAREMONT, N. H.

Seeing an account in the FARMER of the 7th December, of a large grape vine, I will show the people, through your paper, what Old Claremont, N. H., can produce. I have a grape vine in my yard, running on, or trained to the outbuildings, that measures in length 95 feet one way, and 25 feet the other; making a growth of 120 feet of vine. This vine is in good bearing condition; the name and age of which I am unable to tell. This I think beats Mr. Stewart's Clinton vine, which is only 70 feet in all. W. P. THRASHER.

Claremont, N. H., Dec. 8, 1867.

CURE AND PREVENTION OF LICE ON CATTLE.

To exterminate lice on cattle, all you have to do is to cut through the skin on the back side of the ear and close to the head where the skin is loose, put in a piece of unguentum the size of a small pea, and in four days' time you will be unable to find a live louse, and you will perceive no injury to the animal.

As a sure preventive, bore a hole with a half inch bit into the stanchions, on the side where the animal stands, and fill it with unguentum. This I did sixteen years ago, and I do not recollect of having seen a louse on one of the cattle which have occupied these stanchions.

M. M. TALLANT.

East Concord, N. H., Dec. 26, 1867.

THE STORY OF SUCCESSFUL FARMERS.

In a late number of the FARMER, "Inquirer" suggests that winter is a good time to give the experience of the past year. Though an old subscriber to your valuable paper I am still a young farmer and take great interest in reading it, especially the column of "Extracts and Replies." Much information might be given, that would help and encourage young farmers, if the older ones would give their experience. A great deal may be learned from books and papers, as book farming is not so deadly a poison to me as it is to some farmers that I know.

In using books, we must not throw aside common sense. If a man does not use common sense and judgment in his business, whether he be a farmer or a mechanic, he cannot long prosper. What young farmers want is the practice and the practical experience of older farmers, who commenced life under circumstances similar to their own. I know a number of young men of about my own age who have bought farms and run in debt for one-half or two-thirds of the purchase money. Now we want the experience of men who began as we are beginning, and who are now out of debt,—having done it all on the farm. C. B. R.

Berlin, Mass., Dec. 14, 1867.

REMARKS.—There are several reasons why the conductors of agricultural papers find it difficult to obtain the information which "C. B. R." asks for. In the first place, farmers are proverbially modest. They live a comparatively retired life and associate but little with their fellow men. Their business or occupation is a personal or private affair. They belong neither to the "trades" nor the "professions;" much less are they public men. They may like to read about the lawyer, the doctor, the merchant, or the mechanic who secures a place in the front rank of his calling. It is all well enough to know how our Franklins, Lawrences, Beechers, Grants, &c., worked their way up; but who cares to inquire into the means by which an individual farmer paid for the land he owns and the buildings he occupies? The review of his life may afford some satisfaction to himself. He may remember very well how slowly the first hundred dollars accumulated; with what economy of self, wife and family the mortgage for the balance of the purchase-money was finally lifted, and with what pleasure he has provided for the education of his children,—but how would all this look if printed?

In the second place, few farmers are in the habit of writing down their thoughts. To do this implies the performance of two distinct operations—thinking and writing. The difficulty of doing two things simultaneously is often illustrated by patting the forehead with one hand and rubbing the chest with the other. In childhood, after much practice, we learn to think and talk at once; but many fail to acquire, either in youth or in maturer life, a facility in writing and thinking at the same time at all satisfactory to themselves. Hence many of

those whose thoughts and fingers have not been trained to work together, are apt to be discouraged by the difficulties of the double task, and after a few trials they give up in disgust with the balky team of throught and pen, which they find worse to manage than a span of green colts. A little perseverance, with a share of indifference as to the style of composition, and some faith in the editors to make it all straight, will generally help one out of the ordinary snarls of composition, where the main object is a simple statement of facts. An English Essayist once said he always intended to halve the matter of thought with his readers; why, then, may not inexperienced writers halve the matter of composition with their printers?

But as farmers are becoming better educated, as they are more generally taking part in the exercises of clubs and associations, the habit of expressing their thoughts on paper is becoming more generally formed. This is shown by the more frequent contributions from their pens to agricultural and other papers than formerly, which is one of the most encouraging features of the times.

We may, therefore, hope that some of our readers who have fought the good fight of a two-thirds mortgage, and come off victorious,—"having done it all on the farm,"—will encourage "C. B. R.," and those young friends of his "who have bought farms and run in debt for one-half or two-thirds of the purchase money," by such facts as their own experience or "story" may afford.

RED WATER IN COWS.

Please inform me through the FARMER what remedy will help a cow that is troubled with the bloody water. L.

Rumford, Me., Dec. 24, 1867.

REMARKS.—In his "*Milch Cows and Dairy Farming*," Mr. Flint says this disease demands treatment, for it is apt to prey upon the health of the cow. Purgatives are usually employed with much success. Take a pound of Epsom salts, half an ounce of ginger, and half an ounce of carbonate of ammonia. Pour a quart of boiling water on the salts and ginger, stir thoroughly, and when cold, add the ammonia. If this fails to act on the bowels, repeat a quarter part of it every six or eight hours till it succeeds. Then a nutritious diet should be used till the appetite is fully restored.

Generous feeding, and careful tending is the best way to prevent the disease.

CORN COBS.—SEED FOR PASTURES.—ASHES AND PLASTER.

Does it pay to grind cobs for cattle and horses, if we have to pay the money, 8 cents per bushel, for grinding? How much spring wheat shall I sow to the acre on new lands? How much timothy and clover seed per acre for pasture?

Is it good policy to mix ashes with plaster for corn? HAZEN N. SAVAGE.

White River Junction, Vt., Jan. 8, 1868.

REMARKS.—The economy of grinding cobs is a mooted question. We think it doubtful if it is profitable for horses and cattle; but there is no doubt that it is profitable to be fed to poultry, especially to laying hens. We hope the question will be thoroughly tested by some of our intelligent, painstaking readers.

In another column the reader will find the opinion of a writer for the Missouri *Rural World*, who has large faith in the nutritive value of cobs by themselves and when ground with the corn.

The quantity of spring wheat to be used as seed, per acre, will depend somewhat upon the quality of the soil. On a medium soil, from one bushel to one and a half bushels will be sufficient. On a poor soil more.

Eight quarts of timothy and ten pounds of clover seed is the usual quantity used per acre. We err too often in not using seed enough.

We can see no objection to mixing ashes with plaster for corn, and using it immediately.

MANAGEMENT OF HENS.

Can I make a good hen house on the side of a dry hill, by digging in a little way and banking it up to the roof, except the sunny side, and have it so warm that it will not freeze? Would it not be much better than our cold barns and sheds?

If one should keep twenty-four hens would it not be better to make two such houses than to have them in one? A YOUNG FARMER.

Great Falls, N. H., 1868.

REMARKS.—A hen house made as you suggest would be a good one. The excavation should extend some way into the hill, and should have a good ventilator up through the roof. The front should extend out two or three feet from the bank and be covered with glass, and the whole front end be of glass. Then, with an ample yard attached, the biddies will have a fine home, and yield you a profit of one dollar per head, annually, if you tend them well, to say nothing of the convenience of fresh eggs and fine poultry when you want it. Fowls do best when not crowded.

SCRATCHES AND WARTS.

We have taken the FARMER several years, and greet it with pleasure every week. The Extracts and Replies are a great benefit to us farmers; and if my experience can benefit any, I shall be happy to impart it.

We have found the following an invariable cure for scratches on horses. Bind a liberal quantity of fresh cow manure upon the parts affected, and let it remain until it is dry; then wash thoroughly in castile soap. Two applications will generally effect a cure.

For warts, take fresh new pitch from pine trees, and smear them thoroughly. When the pitch comes off the warts will be cured. I have never known it to fail. B. W.

Stratham, N. H., Dec. 31, 1867.

GAS TAR ON ROOFS.

The price of shaved shingles being so high, when repairing my house, in 1858, I concluded to test the virtue of gas tar. My roof was two-fifths pitch, and sawed spruce shingles were used, for which I paid $2.25 per thousand. With a barrel of gas tar, costing two dollars and fifty cents, and

paint brush and bucket, I went to work; after one course was laid, the shingles were all painted with the tar, except that portion coming to the weather; then another course was laid, using a straight-edge instead of a chalk-line, and then apply the tar as before, and so on over the whole roof; were it not for the color, would prefer giving the butts a coating of the tar after shingling; as it was, I painted the front side with dark brown paint, as the tar was visible in some places. After a little more than nine years' exposure, my roof appears tight, with no signs of decay and good for as many years more, while some of my neighbors who have built since, and used shingles without any preparation, have been obliged to shingle anew the past season. Joiners do not like to use the tar as it soils the clothes and they cannot shingle so fast; but with an old frock and a pair of overalls, there is but little trouble, *especially* if the owner is with them and uses the brush. B.

Bethel, Me., Jan., 1868.

SUPERPHOSPHATES—CROPS IN CENTRAL NEW HAMPSHIRE.

I should miss the weekly visit of the Farmer very much. I think it one of the best papers published. We have had no sleighing this winter here, but have had some very cold weather. I hear of heavy snows south of us. Hay this season was good; corn very good; oats good; wheat middling good; potatoes rather light; fruit light. Hay is dull at $25 per ton; corn $1.50 per bushel; oats 80 cents per bushel; potatoes from 75 to 90 cents; apples $5 per barrel.

Last spring I tried three kinds of superphosphate of lime on a piece of corn, putting a tablespoonful of each kind in the hill, taking two rows alternately for each. The result was a very good crop on the Bradley's phosphate, a two-thirds crop on the Coe's phosphate, and a poor crop on the Cumberland phosphate, made at Portland, Maine. The whole piece had twenty ox cart loads of barn cellar manure spread on and ploughed in. I found in that trial the Bradley phosphate very much the best. The price of Bradley's and Coe's was the same. The Cumberland was a cent per pound higher. J. V. A.

West Concord, N. H., Dec. 23, 1867.

A PAIR OF MULES WANTED.

I wish to inquire if you or any of your numerous readers of the Farmer can inform me where a pair of mules can be bought? I wish to purchase a pair for farm work. I have seen them recommended for that purpose as being cheaper and easier kept and to do more work than horses. A Reader of the Farmer.

Haverhill, Mass., Jan. 7, 1868.

Remarks.—The Commissioner of Agriculture in 1866, gave the estimated average prices of farm stock in each of the States. Vermont is reported with 44 mules worth $113.33 each; 49,222 horses, at $77 80 each. Connecticut has 105 mules, at $77.49 each; 38,009 horses $75.08 each. The number and prices of mules in the other New England States are not given. New York has 438,372 horses, at $96.05 each; 2139 mules at $101.90 each. Kentucky has 223,775 horses, at $73.62 each; 59,752 mules at $96.59 each. In Virginia, horses are estimated at $72.82; mules at $86.88. In Georgia, horses $88.10; mules $104.95. In Ohio, horses $73.99; mules $90.06. The grand average of prices in thirty-three States, horses $79.46; mules $92.52. We omit that portion of the letter of "A Reader of the Farmer" which should have been superscribed by "An Advertiser of the Farmer."

CONDITION POWDER.

The following is a recipe for the best Condition Powder there is in the market. Take one ounce each of Fenugreek, Cream of Tartar, Gentian, Sulphur, Saltpetre, Rosin, Black Antimony, and half an ounce of Cayenne, and mix thoroughly. It may be used in case of Yellow Water, Hide bound, Coughs, Colds, Distemper, and all other diseases for which Condition Powders are administered. Dose in ordinary cases two teaspoonfuls. O.

Surry, N. H., Dec. 8, 1867.

COTSWOLD SHEEP.

Can you inform me through the Farmer where I can obtain full blooded Cotswold, or Leicester sheep? I suppose they are kept in the New England States. They can be obtained in Canada, but I do not know at what point. S. C. Drew.

South Royalton Vt., Jan. 1, 1868.

Remarks.—While we are perfectly willing to spend our time in any investigation necessary to furnish answers to inquirers appropriate to this department of our paper, we cannot consent to make these familiar "Extracts and Replies," a medium for that information which belongs to our advertising columns, which are open alike to the breeders of stock, the manufacturers of implements, and the dealers in seeds.

LANTERN LAMP IN WINTER.

I have often been troubled in cold weather with my lantern lamp, not only in lighting it, but unless the best of oil was used, it afforded but little light. A neighbor suggested that I mix kerosene and lamp oil, in equal parts, which I did, and find that it lights readily and affords a good light. Perhaps one-third kerosene and lard, instead of lamp oil, would answer as well. I use the common oil lamp. B.

Bethel, Me., Jan. 7, 1868.

Remarks.—We have tried mixed lard oil and kerosene, as above recommended, for winter use, and thus far with satisfactory results.

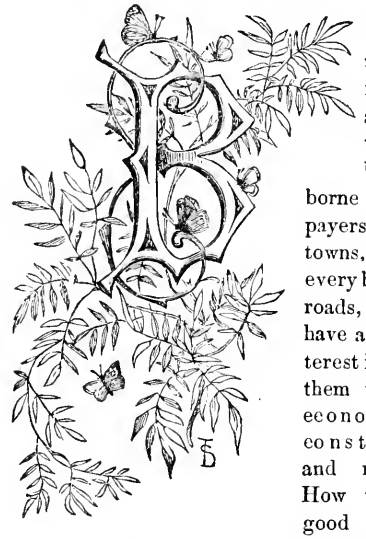
TO PEEL ONIONS WITHOUT CRYING.

A simple way to peel onions without shedding tears, is to draw out the stove hearth, and hold the onion over the draught so that the scent will be drawn into the stove. J. W. Nye.

Keene, N. H., Jan. 1, 1868.

Difference in Seed Potatoes.—Mr. C. W. Knapp, of Danvers, Mass., informs us that he planted last spring one barrel of seed potatoes, two-thirds of which were Early Goodrich and one-third Harrisons, from which he harvested 112 bushels. On the same field, all of which was prepared and manured alike, he also planted one barrel of the Early Dykeman, the yield from which was only eight bushels. The seed potatoes in both cases were cut and planted alike, and the whole field was cultivated and hoed in the same way.

ROAD MAKING.



BUILDING and maintaining roads are among the heavy burdens borne by taxpayers in all our towns, and as every body uses roads, we all have a deep interest in having them well and economically constructed and repaired. How to have good roads at least cost is the great problem to be solved. Any person who considers the subject will perceive that it is one which involves much science as well as practical experience, especially in a broken, uneven country like New England, where, within every mile are found hills, valleys, rocks and swamps. *Where* to build a highway, and *how* to build it, are both important questions; but we propose not to attempt to consider either of these questions at present, but to confine ourselves to what is as important, if not more so,—how to repair and maintain roads already built.

Like the minister who announced that he had divided his discourse into fifty heads, but for the sake of brevity, should omit all but five of them, we shall content ourselves with touching upon the three principal defects in our common roads, and the remedy. The first and great defect in our highways is

Want of Drainage.

Wherever a road is permanently wet, either at top or bottom, we have deep ruts and consequently heavy travelling; and these wet places are usually, especially in spring and autumn, the hard places for teams. The first requirement for a good road is a firm foundation, and a wet foundation can never be a firm one. It is not enough that the water should be taken off the surface, but it must be drawn out, to the depth of three or four feet, or the water will work upward, and the hoofs of animals and the wheels will work downward, and deep ruts will surely be formed. Drainage is itself an art, not very well understood, even as applied to common fields and meadows, and a little practical experience will often save half the expense of a drainage operation. The common error in repairing wet places in roads, is in attempting to cover up the water, by hauling on gravel, instead of removing the water,—thus doctoring the symptoms instead of the disease. It is comparatively an endless task to fill up a road or meadow three or four feet instead of draining it to that depth. We have not space in which to speak of the details of draining highways. We only desire to call attention to it as an operation much needed and much neglected and as requiring more skill than ordinary surveyors and selectmen can be expected to possess. The second great defect of our highways, is

Too Great Convexity.

The common and natural first impression is, that the greater the convexity, or, in other words the rounder the surface of the travelled path, the drier it will be. This is one of the greatest errors of inexperienced road makers. There are many published treatises upon this subject, both in this country and England, and there is not one of them that does not speak of this as the common defect.

If a road is round, a carriage can only be level when it is exactly on the centre of it. If one wheel is on the centre, the other is lower, the weight of the load is thrown on the lower wheel, the friction upon the nut of one and the shoulder of the other is greatly increased and the draught is much heavier, not to mention the danger of upsetting. But this is not all. To avoid these difficulties, every traveller keeps in the centre, except when obliged to turn out for another, and thus by the wear of the wheels in the same track, ruts are soon worn which retain the water, and grow constantly worse till repairs are made.

A moment's reflection will satisfy any one that no amount of convexity can empty these ruts of water, even when they are but one inch deep. A very slight fall in the length of the road will carry the water along the ruts till it finds an outlet.

If, now, instead of being round, the roadway be nearly flat, carriages may travel on any part of it, passing each other without difficulty, no deep ruts will be worn, and a very slight

fall will carry off the water into side ditches, which should always be kept open deep enough thoroughly to drain the road.

Bad Surface Material.

One of the best authorities on Road Building has said that he cares nothing about what is the foundation of a road, so that it be dry and properly covered with surface material. For common country roads, any soil or sand, if well drained, is a sufficient foundation, if there be one foot of good gravel or stone at the top. Stones of various sizes, as usually picked up, should never be put into a road. They have a constant tendency to work upward, especially under the action of frost. Good coarse screened gravel is excellent, where obtainable. It is essential that it be screened, otherwise it will wear unequally, the larger stones washing to the surface and lying loose upon it. Where good gravel cannot be obtained, stone broken by a machine, to the size of common macadamizing stone is the best substitute.

A recently invented machine, in use in Waltham and Cambridge, will thus break a ton of common paving stones in an hour. In the larger towns such a machine would be economical. Roads covered with such material are nearly as hard and smooth as dressed granite.

More has been expended within ten years on many highways in Middlesex County, than it would cost thus to cover them, and no permanent improvement has been made.

The Practical Remedy.

Since so much skill is required to maintain good roads, the first step towards improvement is to abolish the whole system of working out taxes and of district surveyors, and to employ a town agent whose position shall be permanent, and who shall make it his constant and only business to maintain the roads of the town in good condition. Let the town own oxen or horses, carts and other implements, and let the agent employ, by the month or day, the necessary help. This plan is in operation in Waltham and Brookline and other towns, and it is found that the roads are greatly improved, and the cost is much diminished under this system. Let any of our readers ask himself what course he would adopt if he were obliged to keep in repair all the roads in his town. Would he go to a town meeting and ask the voters to elect a surveyor for each district each year, or would he select an active judicious agent who should give his constant attention to the business? Would he let every man who chose, work on the road at the highest day-labor price, or would he select a few hands best adapted to the work?

We trust the towns of New England will seriously consider whether they may not very much improve their highways, and save a large part of their highway taxes, by adopting the system which we have suggested.

CORN BARN—DRAINING A GARDEN.

I am preparing to build a corn barn. I wish to inquire which two of the four points of compass you would have the open crib for drying corn?

What do you think of draining a garden where the soil is a wet, heavy, dark loam, and the subsoil a very hard blue pan. After digging about eighteen inches, I have to pick it all up. I commenced my garden this fall, by digging about three feet deep and eighteen inches wide, and filling in with stones up to within sixteen inches of the top. The ditches are about three rods apart. J. V. A.

West Concord, N. H., 1868.

Remarks.—Leave the open spaces in your corn crib *on the sides least exposed to driving winds*. This will depend upon the location of the building. Generally, the northwest winds are the driving ones, that would send rain and snow in among the corn. This is not always the case, because the peculiar location may shelter the side exposed to the northwest, and leave others open.

You cannot do a better work than to drain such a garden as you describe. Why? Because,—

1. You can work it afterwards with about one-half the labor.

2. Because you will lengthen the growing season from two to four weeks.

3. Because draining will make the soil *more dry* in wet weather, and *more wet* in dry weather, or in a drought.

4. Because it will *warm* the soil.

5. Because it will *improve* the whole *texture* of the soil, making it light and porous, instead of being hard, and dry, and crusty on the surface.

6. Because draining *manures* the soil, as well as warms and waters it.

7. Because it deepens the soil and makes a fine bed for the roots of plants to run in at will.

8. Because draining prepares the soil to receive *manures from the air*, such as ammonia

carbonic acid and oxygen, all of which are continually about us, and are willing to come into your garden if you will invite them there.

9. Because you *can work* in a drained garden earlier in the spring—which is all-important in a garden,—and you can work in it sooner after it rains.

10. Draining keeps off the effects of cold weather longer in the fall.

11. Because it makes dead roots and all other *vegetable matter* decay in the soil much quicker than they would in an undrained soil.

12. Draining prevents an excessive evaporation of the moisture of the soil, and consequently the heat is retained in it, instead of being carried off to the skies.

These, friend "A.," are not all the reasons why a garden should be drained, but they will be sufficient, we trust, to induce you to continue the good work you have begun. *Three* rods apart is too far. Twenty feet is far enough to do it thoroughly; two rods ought to be the extent. Go down *four* feet if you have patience, then, with skill and care in tending, you will have a garden that will literally blossom as the rose.

PALE DISEASE---TAPE WORMS.

Mr. T. P. Skinner, of Sego, Perry Co., Ohio, having expressed the opinion that the Pale Disease, of which many sheep died in 1865, was caused by tape worms, was called upon by Dr. Randall for the facts on which he based that conclusion. In reply Mr. S. states that he examined the heads of several sheep under the impression that the disease was caused by grub in the head, but finding none in several of those that had died, he was obliged to abandon that theory. He then commenced an examination of their lungs, stomachs and intestines

In the first one examined, he found the lungs, liver, heart and stomachs in their natural condition. Observing "that some of the small intestines had a peculiar clear and empty look," he opened them and found a worm "perhaps one-third of an inch wide, with joints about an eighth of an inch in length, and whose entire length he could only conjecture, as it came apart at the joints so easily, but he supposes it was near forty feet in length. It was of a whitish color, slightly yellow. The part of the worm forward terminated in a point, and was round for perhaps fifteen or twenty inches. The rest of the body was as flat as a piece of tape." Not yet satisfied, he examined his other sheep as they died, to the number of ten cases, finding grubs in the heads of some, and in others not, but invariably finding the monster worm above described, in the small intestines. One sheep that died lost its flesh much sooner than the rest. In this he found "myriads of very small, round worms, about half an inch in length, and of a reddish color —but no tape worm." Some of his neighbors who had sheep die at about the same time opened them and found tape worms. Among these neighbors were John Wilson and Thos. J. Williams. The latter, who "breeds and owns quite a number of excellent sheep," informed Mr. S. that in the fall of 1865 he examined three sheep and found tape worms in them of very great length. Two of the sheep so examined were killed to convince men who doubted his statements; and in one, killed to convince Mr. David Ream, an extensive sheep breeder, he found a tape worm extending the entire length of the small intestines to within about a foot of the vent, and doubled back about half of its length. He has learned also that a Mr. Trant and others in the town of Hopewell, in the same county, examined sheep that died of pale disease, with similar results.

In his remarks on the foregoing, in the *Rural New Yorker*, Dr. Randall does not question the facts of Mr. Skinner's observation, but from the frequency of the disease, both in this country and in Europe, where it has been treated by experienced veterinarians without the presence of these tape worms having been noticed, he says that he regards the appearance of worms in these sheep in Ohio as a local malady, connected with food, water, atmospheric conditions or other causes. And although the symptoms observed by Mr. Skinner correspond in many respects with those of the pale disease, Dr. Randall does not consider it certain that in the cases mentioned by Mr. S. the sickness was identical with the Pale Disease.

APPLES IN IOWA.

A correspondent of the *Iowa Homestead* admits that the repeated failure of attempts to produce the Pippins, the Greenings, the Baldwins, &c., of eastern orchards have given that State a bad reputation for fruit growing. Still he believes that native varieties may be grown in abundance. He recommends close planting, say rows 24 feet by 14, and the observance of the three following rules of cultivation and training:—

1 Plant only those varieties which have been found strictly adapted to our soil and climate, and buy your trees of your nearest reliable home nurseryman.

2. Back-furrow your ground into ridges, and

plant your trees thereon; afterwards making the ridges still higher by ploughing towards the trees.

3. So time your annual culture, as to induce an early maturing of growth in autumn.

4. Form your trees with very low heads, and encourage from the start a compact bushy habit of growth, gradually thinning out a little, after growth has become somewhat checked, and the habit of bearing induced.

For the New England Farmer.

LABOR AND CAPITAL.

One of the great questions of the present day with thinking men and political economists is the just and equitable rights of employer and employed, or, in other words, of capital and labor. There has been more or less of collision between them, in one form or another, as far back as history gives us any light upon the subject. A marked instance of this we have in the experiences of the patriarch Jacob with Laban, his father-in-law. The indignant Jacob tells the old sinner to his face, the wrongs he had been guilty of, in the most eloquent language the sacred volume contains. This record we have in the thirty-first chapter of Genesis, from the thirty-sixth to the end of the forty-second verse.

In the past, down to within a century or two, slavery and serfdom have been the lot of the masses. The few have used compulsory labor for the accomplishment of their ends, whether in war or the peaceful service of building palaces, pryamids, and other useful or ornamental works. Compensation was comparatively unthought of, or if thought of uncared for; and no hope of alleviation from this exacting service could be looked for but in death.

Governments were ever inclined, and even now are, to trench upon individual rights in this particular. Well disposed statesmen have had, and probably ever will have, trouble in fixing the limits of government, and the rights of the governed. Personal liberty all enlightened, well meaning men are inclined to guard with watchful care. They will yield only so far as *force* compels or *reason* dictates to be for the general good. Restraints of law are irksome when they invade personal rights, without the free consent of those over whom the law asserts its power.

Recognizing this principle, we have hedged ourselves around, in this country, with constitutions and laws that we consider on the whole as being wisely calculated to secure our greatest good; at the same time, recognizing the necessity of some personal individual sacrifices for the attainment of the desired end. There is a limit, however, to this law-making power. Just where it should terminate is not an easy point to determine. Experience sometimes comes in and solves the problem for us, as in case of those laws compelling a man to confine himself to one occupation, and the amount of compensation he was to receive for it. The time has been, when once a farmer, always a farmer; once a mechanic, always a mechanic; and the same of other departments of industry. No chance for a change, however great the desire or eminent the qualifications. But with us, and in fact with many of the European nations at the present day, it is not so now. Our constitutions and laws shield the most feeble from such tyranny. Our greatest danger lies in desiring to have law bear upon the question of labor at all, save in fixing penalties for *failure* to fulfil contracts.

The hours and compensation of labor should be left to the mutual arrangement of employers and employed, if they are adults. Minors and children must, of course, be left out of the case. Make as many laws as you please, for the purpose of shaping and controling this matter, and they will be found as ropes of sand as to any good results.

Our country has drawn upon foreign ones largely for labor. Many have come here ignorant of our institutions and ignorant of their spirit. Designing men have endeavored to influence them to impose restrictions upon labor. Witness the eight hour movement in many places. How manifest the fact that some have "axes to grind," and are willing to use the laborer for that purpose. The folly of the movement has been fully demonstrated. All such attempts must result in evil, and only evil continually. Demand and supply fixes this whole matter beyond the reach or the power of law. Of what avail has been our usury laws? Who does not know that a man's necessities were the only law he recognized if he had a note to pay. Just so in the case of labor. I have a family to provide for. I have my labor and character as my *only* capital. I seek for its investment. I find a person that will give me a certain sum for a given amount of service. I consider the offer a good one for the *time* he wishes me to be employed; but believing that I can, without detriment to my capital, work more hours and gain better returns, I propose to him to allow me to prolong my day's work. He tells me the law will not permit him to do so. What am I to do in such a case? What can he do? We are both respectors of law, according to the generally received standard. I really *need* all I can earn. He really desires all the service I can render. How long will it be before some method of nullifying such a law will be found? Not very long, I am quite sure.

Wicked men will grind the face of the poor, you say. Grant it. What then? Protect them. How will you do it? You will not accomplish it by any law you can frame, because the employer can refuse to hire. This, I think, is not the remedy. It is to be found alone in a correct public sentiment being brought to bear on this matter. I notice by the papers to-day, that the operatives in several mills in a manufacturing town near us have refused to work for the reduced pay proposed by the managers of those mills. I know nothing re-

specting the merits of the question between the the parties in this case. But this we do know, that this branch of industry is greatly depressed and many establishments are at their wit's end to determine what is best to be done. Some stop entirely; some in part; others propose a reduction of wages. So much for the employers. The employed say that the cost of living is so great that they cannot get on with a less price for their services than they have been receiving during the past few years. How are these conflicting necessities to be met and satisfactorily adjusted, is the great question of the day. Is its solution to be found, as some suppose, in a union of interest in the results of their investments of capital and labor? If so, I hope an abler pen than mine will demonstrate the fact in these columns. Let us, Messrs. Editors, have the facts involved in this question. K. O.

Broad Brook, Conn., Jan., 1868.

For the New England Farmer.

HOME AND ITS SURROUNDINGS.

"O for a land where the sun has smiles,
And flowers perennial bloom."

Who does not love the flowers? Beautiful stars of the lower world! They fill the air with fragrance and clothe the earth in beauty. Who that loves the pearly, sparkling orbs of the heavens above, does not love these bright, beautiful things of the earth below? The sun loves them and smiles on them, and they open their sweet petals to kiss his bright rays. As they germinate, they drink in the fresh rain of the evening and the nectar dews of the morning, and God blesses them. Their language is silent, yet how eloquent! In the spring time they remind us of our ingress to mortal life; in their dissolution, of our egress from mortality to immortality. Their office is to charm and beautify,—to inspire our thoughts and hopes with the beauty of immortal gardens, of perpetual bloom, and to strew our pathway in life with evidences of Divine love and bounty.

"Earth's smiles—God's kisses."

I fancy flowers did not exist when God pronounced everything merely "good."

Now that frost and snows have come, and the flowers have withered and decayed, come with me, reader, and I will show you where, but a few short weeks ago, all this beauty and loveliness existed.

A Walk in the Garden.

This little garden contains but one-third of an acre, including buildings. These apple and pear trees, promiscuously scattered about, were set for the purpose of mingling the *useful* with the *beautiful*, and making home pleasant. Straight lines are objectionable in a garden, as they produce an unnatural stiffness which greatly mars or destroys floral beauty by a set and rude mixing of colors and habits.

Let us go round to the left, or east side, and move around to the west, as I was wont to do when the flowers were here, so as to get a view of them on the sunny side.

This beautiful apple tree on our left I grafted but four years ago, in a seedling stock, one-half inch in diameter, close to the ground; it is now eleven feet high, and bore me some fine specimens of the Danvers Winter Sweet, the past season.

Why did I train it so close to the ground? Because it protects itself from the burning sun in March and April, when the sap is freezing and thawing; the mulching put about the tree cannot be easily blown away: the winds cannot rack it about, and experience has taught me that this system of training, in this climate, enables the tree to produce much larger and fairer specimens of fruit. The specimens nearest the ground are also least stung by the curculio or apple moth.

You see that I have bordered about this tree a circular bed of mixed pansies. The mulching about the tree protects them from the frosts of winter, and shades them in summer, so that they bloom from frost to frost.

This circular bed of dahlias was crowned almost to a cone; the dwarf varieties were placed at the base, the taller (white,) in the middle, the tallest (large scarlet,) in the centre. At a distance this gave it a majestic and beautiful appearance.

Opposite, on our right, is a similar bed of Gladiolus of mixed colors, in mass,—red, pure white, with dark throat, waxen straw with nearly black throat, which was pronounced by many as the most charming flower in the garden. This square bed of everlasting flowers was put in for winter boquets.

The open space on our right, was made vacant the past season by the removal of three plum trees, destroyed by the black wart. I tried many preventives to no effect. That rose that hangs along the end of the house, in a horizontal position, literally covered with blossoms, is the double Queen of the Prairies, which I regard as the most stately of all the climbers.

We have now reached the strawberry bed, twenty by thrty feet, from which I get about three pecks of beautiful berries every season. They are the Cutter's seedling. I cultivate in hills, as it requires less labor, the vines remain longer in a bearing condition, and I get more fruit than by broadcast cultivation.

These apple trees, standing in this bed, are the red Astrachan, which would well repay cultivation if for nothing but the beauty of its fruit. Further on we come to more apples,—Early Harvest, Sweet Bough, Summer Pearmain, and Mother,—all excellent varieties.

These pear trees standing about us are the Buerre Superfin, Louise Bonne de Jersey, Bloodgood and Sheldon. The Superfin is a superior pear, and cannot be too extensively cultivated. The Louise Bonne de Jersey, un-

der high cultivation, is but little less. I know of no trees planted that pay better.

Under those standard pear trees,—Bartlett, Clout Moreeau, and Amalis,—you see annual Phlox—mixed colors—which produce a splendid effect when sown in masses, and it seems to almost baffle the effects of a blighting frost. This is one of the most desirable of all the annuals. The German stocks under the next tree were a long time in bloom,—beautifully double, and they stood the fifth blighting frost like heroes, when I removed them to the cellar, where they remained in bloom for several weeks.

Under the next tree is Candytuft, mixed colors,—beautiful, and indispensable in every garden; mixed German Pansies under the next, and so on. That rose tree, that circles the entire arbor, is the single Prairie, which, for two weeks furnished a perfect mass of flowers, covering more than 150 feet, and was a marked object of beauty and admiration.

These exquisite little yellow flowers you see fifteen feet up in the pear tree, are the Canara Bird Flower; and these dark, rich green climbers you see on the lattice by the piazza columns, are the Madeira Vine. That mass of bright orange under the Tompkins County King apple is the old single Marigold,—not "far fetched and dearly bought;" but if there is beauty in a deep rich orange, then this flower deserves a place in every garden. It sows itself in abundance,—keeps coming and blooming all through the season, and pays no regard to ordinary frosts. White perennial Phlox is a sacred, sovereign flower, and deserves a place in every garden. Sweet peas sown as a hedge beside the front fence are very showy.

That row of Black-cap Raspberries, and the row of Red (Fillbasket variety,) give us two pecks of rich berries each; and these currant bushes beside the fence yield three pecks annually, which add much to the comforts of the family.

The two Delaware grape vines in the centre of the garden, five years out, bore almost a bushel this season, though badly injured by the early frost.

The flowering shrubs—Wiegela Rosea—Deutzia Scabra, Flowering Almond, and herbaceous Peonies, and Dielytras, and this old White Cottage Rose, bring us back to the front walks.

In that little spot in the corner of the yard, I set a pole, whereon is a little martin house, in which dwell a score of little warblers that fill the air with sweet music, making day joyous from April to August. L. L. P.

East Jaffrey, N. H., Dec., 1867.

—The following are the officers of the Strafford County, N. H., Agricultural Society:—President, Hon. H. R. Roberts; Secretary, Hon. J. H. Ela; Treasurer, Oliver H. Lord; Superintendent, Jas. F. Lawrence.

WINTER.

The clouds are white and the skies are pale,
For the breath of Winter is on the gale;
The winds are rude and the air is chill,
And over the brow of the sloping hill
The breeze comes sweeping with mournful tread,
O'er where the summer flowers lie dead.

The snow lies spotless, and pure, and white,
On the lowly vale and the distant height;
'Tis drifted thick o'er the garden beds,
Where our floral treasures once reared their heads;
Its spotless garment of virgin hue
Has hidden them all from our longing view.

The verdant tresses that caught the breeze
On the waving boughs of the tall old trees,
Have fallen silently one by one,
In the sombre shade of the forest dun;
While the tall old monarchs, with snowy crown,
Are solemn and stately, bare and brown.

The brook that babbled, so loud and clear,
Past the flowery heath and the sedgy mere,
Has felt a touch of the north wind bold,
As he bitterly scattered his frost and cold;
And, pausing quick in its onward flow,
Lies quiet and still neath the ice and snow.

No more the breath of the summer time
Shall bear us dreams of a sun-bright clime,
Where never shadow or storm shall blight
The scented bloom of the roses bright;
Where never blossom or leaf shall fade,
In shady bower or sunny glade.

No more through meadows of living green
Shall sparkle the brooklet's silvery sheen;
No longer now, through the hushed air, floats
The tone of the song-souled wild bird's notes;
Nor under the vaulted summer sky
Do we watch the clouds as we dreamily lie.

No more! no more! for the snow lies deep
O'er the lowly vale and the hillside steep;
The sun hangs low in the southern skies;
The flitting daylight quickly dies;
And the north wind flies on his pinions wide,
For the Winter reigns in his kingly pride.

GROUND AND UNGROUND COBS.

The following statements are from an article in the *Rural World*, written by Isaac A. Hedges.

Mr. Wm. Scott, of Fairfield county, Ohio, fed a large lot of mules through the winter for a Kentucky farmer, for a stipulated price per head, agreeing to give a specified quantity of corn in the ear. After feeding about one month, the owner came over to see them, and fearing they were not doing as well as they ought to, proposed that if Mr. Scott would get a corn crusher and grind all the corn and cobs, he would pay $15 per month more. Mr. S. got the mill—the mules could not eat all the corn, and at the same time commenced to improve so rapidly that, to use his own words, he saved his mill in corn, besides being paid in the four months the price extra. He said he used it seven years, grinding for all his stock; and upon selling his farm sold the mill at his vendue at $45, (its original cost was $60.)

Many farmers still doubt the claim for nutriment in corn cobs. I have none whatever. It was related at one of the farmers' club meetings in Ohio, by a member of the State Board of Agriculture, that one of his neighbors, a widow lady, had wintered her cow

upon cobs with no other preparation than merely boiling them soft, the cow giving milk all the time. He said the cow was in full as good condition as any one of his with the usual keeping.

AMERICAN DAIRYMEN'S ASSOCIATION.

The Third Annual Convention of this Association was held at Utica, N. Y., Jan. 8 and 9. The attendance was large, there being delegates from the West, Canada, New England and the Middle States.

The President, the Hon. George Williams, of Rome, N. Y., called the Convention to order. He reviewed the history of the Association since its formation, four years ago. He saw great cause for congratulation in the fact that so many advantages and benefits had accrued to the cheese-making interest from the organized efforts toward improvement in the means of manufacturing. In the localities in New York State where the drought has been the most severe, the estimated crop of cheese has been 50 per cent. below the average of ordinary seasons. Since the last Convention, organizations have been formed in Wisconsin, Illinois and Canada. The President pointed out a few dangers that are imminent in the cheese business at present. One is the large amount of stock already in the market. The amount now on hand in New York is estimated at from 300,000 to 400,000 boxes. The English, by throwing large quantities of homemade cheese upon the market, and submitting to low prices, had the effect to nearly stop exportations at this time. Another danger is the discovery that its manufacture is not necessarily confined to the Middle States. At the West and in the South, farmers are laying by the plough and taking up the milk pail and the cheese vat. He thought that at present butter-making was more profitable than cheese-making.

The usual committees were appointed, and after some remarks by Gov. Alvord, of Onondaga, on the advantages of association, a recess was taken.

In the afternoon the following subjects were reported for discussson:—

1. Purity of flavor in cheese—how secured, how lost?
2. Pressing cheese two or more days—what effect has this upon the texture and quality of cheese.
3. Curd mills—is their use beneficial to the cheese, and is their introduction into general use advisable?
4. Salt—are there impurities or ingredients in the Onondaga salt, that render its use injurious to the quality and flavor of butter and cheese?
5. Butter-making from whey—can it be profitably done at cheese factories?
6. Dairying in America—has it not been over done? Is it likely to lead to a production exceeding the demand?
7. Is it not desirable that the Association take measures to inaugurate some practical and efficient plan by which members may be put in possession of all necessary information from all dairy districts, respecting the quantity of cheese made, with sales and quality of product, &c., at frequent intervals during the season of cheese-making?

On the first subject, purity of flavor, Mr. Weeks of Oneida, read a long and highly interesting paper. He enumerated, as reported in the *Tribune*, as causes for impurity in cheese, unclean milk, diseased milk, the eating of noxious weeds by the cows, undue exercise of the animals, while being driven to or from the pasture, by being chased by dogs, rude boys, careless and irritable help, and impatient milkers, the failure to remove the natural heat from the milk before proceeding to make, impure annato, bad rennet, exposing the cheese to too high a temperature while curing, and other minor causes, which were fully brought out. A discussion followed by several gentlemen, among whom Professor Brewer of Yale College, considered the chemical properties of sweet and sour milk, and the detrimental influence the least particle of sour milk or any impure matter has, where it comes in contact with sweet milk. In the course of the discussion, Mr. Foster, of Oneida, brought out one point which may not be universally understood by dairymen, and that is, that no carrion must be permitted to lie unburied anywhere on the premises of a dairy farm. He had learned from sad experience that cheese will partake of the nauseating smell of carrion if cows come in contact with it in the pasture.

The subject of "Curdmills," was taken up and fully discussed. The use of the mill did not find favor with a large number of cheese-makers, yet it was shown that the disfavor arises more from a want of correct usage than from any direct fault of the machine.

The next question was upon the qualities of Onondaga salt for cheese purposes. Lieut. Gov. Alvord said the qualities of the Onondaga solar salt had been tested officially by U. S. Government officers, and it was found to be fully equal to Turk's Island salt. Since that time the Government has ordered its meats for the army and navy to be salted with either the Onondaga or Turk's Island salt.

When the present Salt Company was formed, they set about experiments for eradicating the chlorides of calcium and magnesium, the ingredients found to a greater or less extent in all salt brine, and by a chemical process these had been taken out, and chemical analysis now shows that the Onondaga salt is purer than Ashton. The cry had arisen some time since that badly flavored butter came of using Onondaga salt, and experiments were tried by packing butter, in alternate packages, with Ashton and Onondaga salt. These packages were examined by a committee appointed by the New York State Society, at its late fair at Buffalo, and the result was, that 25 packages out of 30,

preference was given to the Onondaga salt. He gave the process adopted at the Onondaga salt works for making a pure article of salt, and said the salt sent out by the company as F. F. D. salt, was warranted to be equal to any of the foreign brands.

The Wednesday evening session was occupied by Prof. W. H. Brewer, of Sheffield Scientific School, Yale College, subject: "Cattle Breeding with reference to Cheese Dairying," and by Prof. Brewer, of New Haven, who read a paper by Mr. Webb of the firm of Webb & Turner, dealers and shippers in New York, on the subject of the cheese trade, especially foreign. From Mr. Webb's statements it appears the amount of cheese made in the British Islands the current season is, in round numbers, 179,000,000, lbs., an increase over last season of 30,000,000 pounds.

On Thursday morning the question of purity of flavor in cheese, which was laid on the table Wednesday, was call up and further discussed. Much fault was found with those dairymen who leave their milk standing in tin cans in sun, on the "loading platform," before taking it to the factory. A little milk thus brought to the factory damages the whole "batch" for the day. The practice, also, of covering milk up tight immediately after milking, in order to keep the pigs or the cat out of it, was severely condemned. Before milking, the cows should be in a perfect state of calmness. They must not be beaten to make them "stand." The milkman should carefully and gently clean off the teats either with a wisp of hay or cloth before setting the pail under them.

With regard to rennet, it was considered by the Convention entirely unsafe to depend upon city butchers for the article. These men bring the calves a long distance before killing them. The young animals become hungry, their stomachs inflamed, and the rennet obtained from them diseased. The practice, also, of bleeding the calves before killing them, in order to make the veal white, is fatal to pure, healthy rennet. The rennet obtained from farm killing is by far the best, and, if it can be procured at any price, the only kind that should be used in making cheese. A resolution was adopted recommending the use of tin, instead of wooden pails, for milking.

The subject of butter-making from whey was next discussed. The distinctive feature in this discussion was that, invariably, theorists and chemical men were opposed to the feasibility of the idea, while practical dairymen were in favor of it.

Mr. Kenney of Cortland had made the past season from the milk of 900 cows 288,781 pounds of cheese, and from the whey 3000 pounds of butter. Both the cheese and the butter brought the highest current prices. The sub-whey left after making the butter proved as good for fattening purposes as that fed before any butter was taken out. This was accounted for, by Prof. Brewer, from the fact that neither the cheese nor the butter embodied the fattening propeties of the milk—sugar.

Mr. X. A. Willard delivered an address, reviewing the cheese market for the past ten years, especially 1867, and pointing out the vital necessity on the part of American dairymen, of providing themselves some means of securing trustworthy weekly or semi-monthly reports on the actual state of the trade. He began by noticing the fact that while all other articles of food had advanced in price, cheese had dropped down far below prices of ordinary times. The cry of over-production and glutted markets had scared dairymen into throwing their commodity on the market, thereby giving all advantage possible to the dealer. In the absence of any direct means of information, the producer is obliged to depend upon flying rumor and the word of the buyer for his knowledge of the market. Experience has shown that neither of these sources can be safely depended upon. With regard to the influence England has on our market, the speaker said that country takes from us 40,000,000 pounds a year, and makes our market prices on 200,000,000.

Had the American Dairymen's Association provided some means at its Convention last year for obtaining reliable weekly reports from the market and the factories abroad and at home, the past season would not have witnessed so many dead losses to the manufacturers. They would have had the back-bone to stand firm and demand prices for their cheese which the known amount made and in market would have warranted them in demanding. As it is, no better result can be reasonably looked for another year. Unless this evil is remedied, the middle-men and the retailers must continue to regulate the profits of the dairymen's labor.

Mr. Willard's address was replete with statistics and other valuable information. It was listened to with attention, and it told perceptibly on the members of the Convention, with respect to the vital necessity of immediate action in the matter under discussion.

The afternoon was taken up in further discussing some means of devising a plan for the furtherance of the commercial interests of dairymen, which resulted in referring the whole suject to a committee composed of the Hon. George Williams, W. H. Comstock, Dr. L. L. Wight, G. B. Weeks, Oneida; D. Markham, Jefferson; C. H. Wilder, Wisconsin; Burton Armstrong, Ohio; Chas. E. Chadwick, Canada; W. E. Duboise, Massachusetts.

The following are the officers elected for the year:—

President.—Hon. Horatio Seymour.

Vice Presidents.—Alvord, of Onondaga; Williams, of Kentucky; Lewis, of Oneida; Elmer, of Alleghany; Dubois, of Massachusetts; Walker, of Oswego; King, of Illinois;

Horr, of Ohio; Wilder, of Wisconsin; Farrington, of Ontario, C. W.

Secretary and Treasurer.—G. B. Weeks, Verona, N. Y.

For the New England Farmer.

THE GARDEN IN FEBRUARY.

The best practical argument in favor of a good garden on the farm, where a variety and abundance of all the most common as well as the choicest and best vegetables and fruits can be raised and had for the table at all seasons, is the evident relish with which the farmer and his family partake of the first fruits of such a garden. Take the man who thinks the least of the profit of a garden, and observe him, at a single meal, as a new dish is added to the repast, or any nice fruit is offered; his actions will speak louder than any words of mine can. If so great satisfaction can be realized at a single meal, will it not pay to devote a suitable space of land, and time for the cultivation of a garden, so that a constant supply can be had for the table through the season, and even an occasional change may be introduced, through the year?

It may be said by many, that the farmer's business is farming, not gardening. But is farming, raising stock and fattening cattle all we live for? Is it not our duty as well as privilege to make the every-day life of ourselves and families as pleasant and enjoyable as possible? By attention to these little comforts and conveniences, your family of sons and daughters will grow up around you with a greater likelihood of remaining on the farm, and of being a comfort and support to your declining years. Shall we not, then, have more interest and attention given to the garden, from which so much can be enjoyed, the coming season?

If so, now is the time to plan and make preliminary arrangements. As we have had an early and a steady winter, the spring may be an early one. We should, then, be in readiness to meet it whenever it does come.

Manure and material that will continue to give out heat for the longest time is desirable for a hot bed, and should now be accumulated. Horse manure being the most heating, is the best where mixed with plenty of litter. Leaves make as good litter to mix with it as can be had, but if these are not on hand add considerable straw to take up the liquids and when well saturated throw into the pile and see that the whole is well mixed.

Pea Brush and Bean Poles should be provided in supply, and these can be more readily obtained while getting in the year's stock of firewood, than in a more busy season.

Tools.—Make all needed repairs on old ones, and if new ones are needed be on the lookout, when in market, and see the most desirable patterns, and secure them. Do not buy any poor ones, because they can be had a few cents cheaper, or you will pay several times as much in extra labor in their use. Many conveniences or implements that will assist in the garden work may be made by any one who is handy with tools, that will cost only the material and a little time in constructing. A few years since, wishing to plant some sugar beets and have the seed at equal distance along the row, I made a wheel and inserted in the outer circumference pegs one and a half to two inches long, and about an inch in diameter, at the required distance; to this I attached a shaft and handle convenient for rolling, so that by passing it over the ground, holes were made deep and large enough; and all that remained was to drop a single seed in each hole, and cover. The time taken to construct such an implement will be more than saved in planting a small patch, and it is convenient for marking off for transplanting peppers, cabbage, &c. Give the wood-work of all tools a coat of paint, and their extra durability will pay expenses. In planting extended grounds a seed drill will be often found economical.

Seeds.—Good seeds are especially important. It is best to procure well known and tried varieties only, and leave the novelties to the amateur cultivator, who can better afford to experiment. Overhaul all seeds you have saved and test their vitality, and procure others from reliable sources only. As a guide to the inexperienced, I offer a list of such varieties of garden seeds as have been proved and are known as good.

Beans, Dwarf or Bush.—Early Valentine, and yellow six weeks for string or snaps; Dwarf Horticultural for early shelling.

Pole Beans.—Lima, large, for warm localities, small, for New England; Case-knife; Cranberry; Frost, or Mottled Lima.

Beets.—Long Blood; Early Bassano.

Cabbage.—Early York; Early Sugar Loaf; Flat Dutch; Red Dutch, for pickling; Marblehead; Drumhead, very large; Green Globe Savoy.

Carrots.—Early Horn; Long Orange.

Cauliflowers.—Early Paris; Early Erfurt; Wellington, very large.

Celery.—Incomparable Dwarf; Dwarf Red, Seymour's Superb.

Corn.—Dwarf Sugar; Early Darling; Stowell's Evergreen.

Cucumber.—White Spined; Early Frame; Early Cluster.

Egg Plant.—New York Improved; Long Purple.

Endive.—Green Curled; Moss Curled.

Lettuce.—Early Curled Simpson; Green Winter.

Muskmelon.—Fine Nutmeg; Green Citron; Skillman's Netted.

Watermelon.—Mountain Sprout; Black Spanish; Ice Cream; Citron Watermelon, for sweetmeats.

Martynia.

Mustard.—White, Black.

ONIONS.—Silver Skinned; Potatoe; Wethersfield Red; Top or Tree.

PARSNIPS.—Hollow Crowned.

PEAS.—Tom Thumb; Daniel O'Rouke; Princess; Champion of England; Black and White Marrowfat.

PEPPERS.—Bell; Squash; Sweet Mountain; Cayenne.

POTATOES.—Early Goodrich; Early Sebec; Peach Blows.

RADISHES.—Long Scarlet Short Top; Early Scarlet Turnip.

RHUBARB.—Linnæus; Victoria.

SPINACH.—Round Leaved; Prickly New Zealand.

SQUASH.—Yellow, and White Bush Scalloped; Summer Crook-neck; Boston; Marrow; Hubbard; Winter Crook-neck.

TOMATOES.—Early Smooth Red; Tilden; Red and Yellow Plum.

TURNIPS.—Purple-top Strap-leaf; Early Dutch; Robertson's Golden Stone.

WM. H. WHITE.

South Windsor, Conn., Jan., 1868.

LOAD BINDERS.

A very simple, effective and quick way of fastening 4-foot wood upon a sled, not in general use, is a roller or windlass at the back end of the sled. An inch-and-a-half or two-inch hole is bored horizontally into the rack or ladders behind the back stake holes, then take a round hard wood stick, four or five inches in diameter, make a gudgeon on each end of it to fit the holes bored in the rack or ladders; or instead of boring holes, iron staples can be used on the under side of the rack or sled body, which will hold the roller. Bore two or three inch-and-a-half lever holes in this roller, and you have a windlass similar to those used by blacksmiths in shoeing cattle. When the wood is placed upon the sled, fasten the binding chain firmly to the front end of the sled, and pass it over the middle of the load, fastening the other end to the windlass, which being turned, draws the chain with great force upon the wood, so that not a stick can move until the sled is upset, or the windlass loosened. If the binding-chain becomes loose by jolting the load on the road, you have only to turn the windlass a little, and the chain is tight as before. This is the quickest and most thorough way of fastening loads of any kind upon wagon or sled, and often saves the load from turning over, by keeping it in place when on sidling places.—*N. E. Homestead.*

THE SOLDIER FARMER.—We wonder, sometimes, if the much talked of individual who, after the grand march to the sea and the triumph in Virginia, turned his sword into the plow-share to demonstrate that a soldier made a good citizen farmer, don't often have curious thoughts. As he tramps after the plow does he ever try to make the horses catch the step; as he sees a butternut stained "wamus" slipping with somebody inside of it, down his fence, don't he often want to shoot; as he searches after truant hogs in the woods, does he ever fancy he is out bumming; as he hears Bettie sing out in country style, the stirring trills of a National air, does he ever want to come to a shoulder arms and salute the flag; as he puts on the old blue overcoat, does he look for the bullet holes in it, and think of Joe and Phil who fell by his side; does the dinner-horn sound to him anything like the army bugle shouting a halt; and doesn't he thank God that he *was* a soldier and that he *is* a farmer. —*Farmer's Chronicle.*

From Dr. Holland's poem, "Kathrina," just published by Charles Scribner & Co.

A REFLECTION.

Oh! not by bread alone is manhood nourished
To its supreme estate!
By every work of God have lived and flourished
The good men and the great.
Ay, not by bread alone!

"Oh! not by bread alone!" the sweet rose, breathing
In throbs of perfume speaks,
"But my riad hands, in earth and air, are wreathing
The blushes for my cheeks.
Ay, not by bread alone!"

"Oh! not by bread alone!" proclaims in thunder
The old oak from his crest;
"But suns and storms upon me, and deep under,
The rocks in which I rest.
Ay, not by bread alone!"

"Oh! not by bread alone!" the truth flies singing
In voices of the birds;
And from a thousand pastured hills is ringing
The answer of the herds:
"Ay, not by bread alone!"

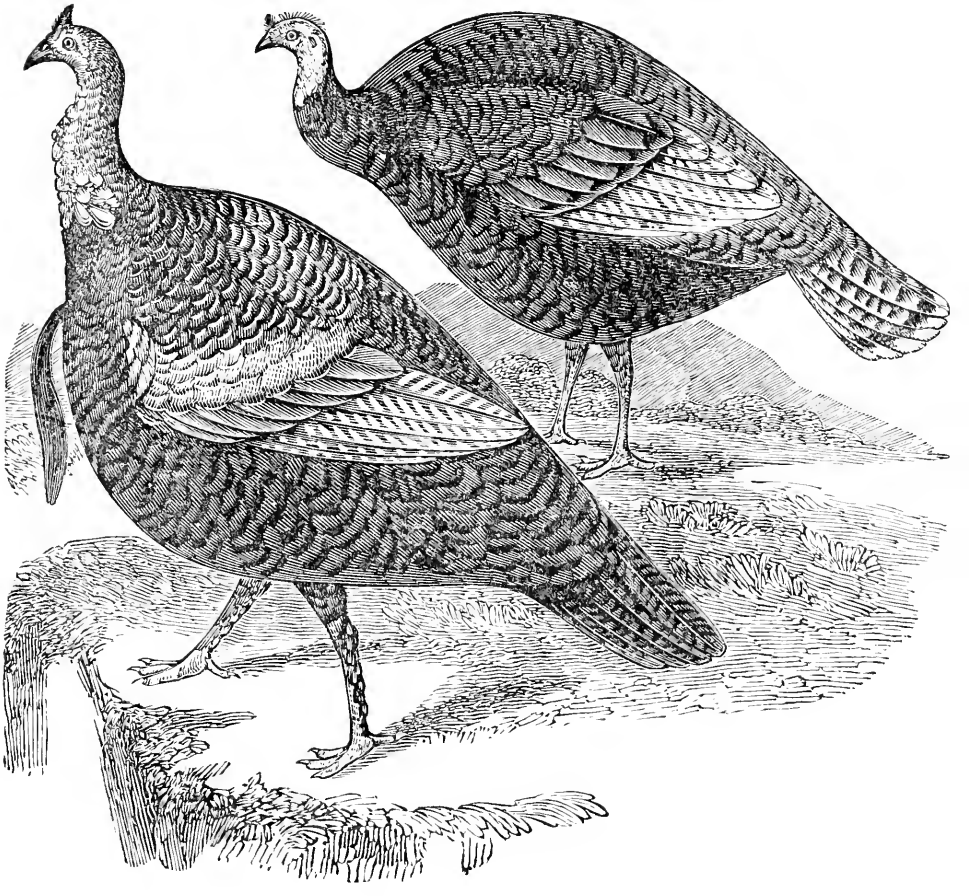
Oh! not by bread alone! for life and being
Are finely complex all,
And increment, with element agreeing,
Must feed them or they fall,
Ay, not by bread alone!

Oh! not by love alone, though strongest, purest,
That ever swayed the heart:
For strongest passion evermore the surest
Defrands each manly part.
Ay, not by love alone!

Oh! not by love alone is power engendered:
Until within the soul
The gift of every motive has been rendered,
It is not strong and whole.
Ay, not by love alone!

Oh! not by love in manhood nourished
To its supreme estate;
By every word of God have lived and flourished
The good men and the great.
Ay, not by love alone!

—A. H. Mills, of Middlebury, Vt., gives the following directions for leading wild animals. Pass a strap or rope around the animal just back of his fore-legs, then tie one end of a long rope to one fore-foot, pass it up through the girth, and back through between his hind legs, and a boy of 12 years at the end of the rope will manage the wildest bullock with ease.



THE WILD TURKEY.

We have had the pleasure of standing in the door of our own log cottage and seeing the Wild Turkey gleaning cautiously and warily in our fields, and roaming in all its native freedom in the adjoining forests. It is a noble bird, and we have never wondered that Benjamin Franklin should have preferred it as the emblem of the United States, instead of the one now perched on our national standards. The above illustration represents the Wild Turkey as seen humped up in the cold weather of our northern winters.

The wild turkey (*M. gallopavo*, Linn.) says the *American Cyclopædia*, is about 3½ feet long and 5 in extent of wings, weighing from 15 to 20 lbs., and sometimes more; the naked skin of the head and neck is livid blue, and the excrescences purplish red; the general color is copper bronze, with green and metallic reflections, each feather with a velvet-black margin; quills brown, closely barred with white; tail feathers chestnut, narrowly barred with black, and the tip with a very wide subterminal black bar; the female is smaller and less brilliant, without spurs, often without bristles on the breast, and with a smaller fleshy process above the base of the bill. It has a crop and gizzard, and an intestine 4 times the length of the body; the cartilaginous tissue of the stomach is less hard than in that of the com-

mon fowl. The full plumage is attained at the 3d year; the females usually weigh about 9 pounds.

They fly in flocks of many hundreds, frequenting woods by day, feeding on acorns, all kinds of grain, buds, berries, fruits, nuts, grass, insects, and even young frogs; they make considerable journeys in search of food, flying and swimming across rivers of a mile in width; though able to reach with ease the tops of the highest trees, their flight is heavy, and would prevent their passage across any considerable expanse of ocean; they are so strong as not to be easily held when slightly wounded; they perch at night on trees. Quitting the woods in September, they come into the more open and cultivated districts, when they are killed in great numbers; they were formerly abundant in the middle, southern and western States, but are now rare except in thinly settled regions, and have never been found west of the Rocky mountains.

The flesh of the wild turkey is more pheasant-like than that of the domesticated varieties. The old males keep by themselves, as do the females and young, the former being apt to destroy the eggs in order to prolong the honeymoon. The nest is a slight hollow in the ground filled with withered leaves, in a dry and sheltered situation, and usually contains, when full 10 to 15 eggs; after this time the males conceal themselves in order to recover their condition; the females alone incubate, carefully concealing the nest, approaching it with great caution and always in a different way, covering the eggs with dry leaves when going in search of food, and bravely defending them against crows and other depredators; sometimes 3 or 4 females lay in one nest, one remaining to guard it while the others seek for food; after the young are hatched the males are attentive to them.

For the New England Farmer.

EXPERIMENTS WITH CORN AND POTATOES.

I send you an account of several experiments which I tried the past season with corn and potatoes; not because I think that experiments on so small a scale positively decide anything; but because they may set people to thinking, and induce others to try similar experiments. I believe that something may be thus learned in regard to raising corn and potatoes, which can be learned in no other way than by experiments. If one way of raising these crops is better than another, it is certain that some are pursuing a wrong course, as there is no uniformity of practice. But how shall we ascertain the best way of doing a thing, unless we compare one way with another by experiments. With whatever contempt some may look upon experiments, almost every person tries them, whether he designs to or not. The man who killed his seed corn by putting it in the hill in contact with ashes, tried an experiment, although he did not mean to, and in consequence became a wiser man.

My experiments embraced nine rows of corn and five rows of potatoes; each row twenty hills long, and the drills were of the same length as the rows. The rows not otherwise designated were managed in the common way. That is to say, hills three feet apart each way; hoed twice; potatoes hilled up in the usual way; corn not hilled. Planted the same quantity of seed in the drills as in a row of hills of the same length; thus leaving the seed nine inches apart. At the first hoeing wed out the corn, leaving but four stalks in a hill.

I had previously become satisfied by numerous experiments, some of which have been published in the Farmer, that four butts in a hill will give the greatest product by weight; although such a large quantity of seed will give more small potatoes.

I am convinced also by repeated experiments, of which I cannot now give any particular account, that four stalks of corn to a hill will yield a better product of corn than a larger or smaller number. A larger number will produce more fodder, and a smaller number will produce larger ears. My experiments were as follows:—

Rows. Corn.	*Yield*
No.	*lbs. oz*
1. Common way . .	18 2
2 Drilled	25 2
3. Common way . .	21 2
4. Planted June 10th 12 dys later than the rest	15 14
5. Common way . .	21 6
6. Hoed 7 times . .	22 2
7. Common way . .	23 2
8. Hilled up	23 10
9. Common way . .	25 2

Rows. Potatoes.	*Yield.*
No.	*lbs. oz.*
1. Common way . .	58 2
2. Drilled	66 10
3. Common way . .	59 6
4. Flat hills	59 8
5. Common way . .	58 10

It will be seen that rows No. 1 and No. 3 of the corn vary three pounds in the product, although treated in the same way. A similar discrepancy may be noticed in other cases. This is owing, I suppose, to that inequality of soil which makes the repetition of an experiment necessary in order to obtain a satisfactory result. I was surprised that the product of the drills was so much greater than that of the row of hills of the same length.

In the Weekly Farmer, May 11, and in Monthly for 1807, page 305, Mr. H. Poor says that Judge Baxter, of Vermont, once raised twenty-six bushels of potatoes from one peck of Lady Fingers, by planting each eye separately. This he seems to think proves that cutting potatoes does not injure them for

planting. How much ground he occupied he does not say; but be it more or less, I think he would have raised twice the quantity on the same ground had he seeded more liberally. Planting a quantity of potatoes seeded in one particular way, without planting any by the side of them with which to institute a comparison, seeded in a different way, proves nothing.

Derry, N. H., Dec. 24, 1868. E. B.

For the New England Farmer.

STOCK RAISING AND DAIRYING.

The following report of the discussion by the Irasburg, Vt., Farmers' Club of the question, "Could we make as much profit in raising calves and growing them for beef, as by dairying exclusively?" was furnished for our columns by Z. E. Jameson, Esq., Secretary of the Club.

Geo. B. Brewster said his opinion was that dairying is the most profitable; but there is so much hard work, care and anxiety about it, that if he could get two-thirds as much profit without the work and care, he should be satisfied. He was tired of dairying, and had considered the subject of changing to other stock. A dairyman is confined closely at home, as generally all the work cannot be safely trusted to hired help. If with twenty cows we raise twenty calves, and do well by them, they will not be worth over $20 per head, while the butter or cheese from the same cows will amount to $50 or more, each.

A. Tenney had not had much experience in comparing the two methods of procedure, but thought when the labor of dairying was considered, the profit derived from stock raising, as it might be carried on, would be fully two-thirds as much as from dairying exclusively. He had some calves on his farm, little red fellows, one might almost mistake them for muskrats at first sight. He had raised calves that would outweigh four such, and sell for more than eight of them. He once raised a pair of April calves in the following way:—At the age of ten days the new milk was taken from them, and the skimmed milk given them, with a little oat meal, with the hulls sifted out. At first only a spoonful of meal was given to each, but the quantity was gradually increased. They had milk in this way till September 20, after that they had no milk. Every morning, through the winter, I scalded one quart of oat meal, then put in cold water to make it cool enough to be drank without danger. At night they had the same. This would be a quart of meal each a day. They drank no cold water all winter, but had plenty of hay. In the spring he sold his farm, with his best stock. These calves girted nearly five feet, though not a year old, and brought $40 each. Last June, he visited the herd of Devon cattle, owned and bred by Mr. Hall in Burke. He there saw ten full blooded cows and ten calves. Mr. Hall was preparing to wean the calves, by learning them to eat a little meal. They were noble animals,—he thought full fourteen inches through the quarters. He was told that from these cows milk enough was taken to make butter for family use,—the calves taking the rest. He was told the price of these calves was from $75 to $125 each. After the calves were weaned, more butter could be made. On this basis, he estimated Mr. Hall's income at nearly $160 per cow. Good stock is readily sold at good prices, while poor stock always finds a dull market. He believed that Devon cows will make more butter than any other breed in the country, or any that has ever been imported. This extra feed of calves amounts, when summed up, to much less than one would at first imagine. To raise good stock he wanted cows that were right and the calves must be fed so that they can grow.

E. P. Church had visited Burke during the past week. He said Mr. Hall's Devon oxen were large and remarkably long animals. He mistook a pair of calves for good sized yearlings. One calf four months old, that had had the milk of at wo-year-old heifer, weighed 330 pounds, and would bring $27 at the butcher's. Would the income from the heifer have been greater if she had been milked for dairying purposes? He thought that even for beef it was profitable to raise calves, and that three quarts taken from the cow by the calf, was better than four drank, and then it requires less care to feed the calf in that way.

Geo. B. Brewster could not believe it a good plan to have calves run with the cow. He knew a calf that has been raised in that way this past summer, that is valued at only $8 now. When a calf is well fed and at liberty, it will run and race so much that it will not grow as well as when shut up. Sometimes a calf will not take all the milk, and the cow must be milked or she will dry up.

Z. E. Jameson said that if a farmer raised calves he need not use all the milk of his cows, as the calves should come in spring when it is most difficult to make choice butter, and then during the summer and fall, considerable butter could be made, and the calves would eat about the same amount of grass as a sheep, costing but little after weaning. Young stock is scarce, and dairymen get heifers to replace their old cows from a distance and at prices that would make stock raising profitable.

SECRETARY OF THE BOARD OF AGRICULTURE.—At the late meeting of the Board of Agriculture of Massachusetts, it was voted that the annual meeting shall be held at the Agricultural College in Amherst; that the secretary's office should be removed to the college, and that the secretary shall have a professorship, and perform such professional duties as the trustees of the college may prescribe.

IRRIGATION AND FLOWING.

Almost every farm has a brook near it that can be directed to irrigating purposes.—*Horace Greeley.*

Mr. Greeley is out of his proper sphere when he lectures on farming. What folly it is to recommend farmers to irrigate their lands, by the streamlets that run through them. Irrigation is practicable only where labor is very cheap, and where the land is level, and so situated that large fields can be flooded at pleasure, and the water turned off speedily: but our farmers, generally, can do nothing at this kind of business, and it is a waste of words to recommend it.—*Rural American.*

Remarks.—Is not the *Rural American* "out of its proper sphere" in this criticism of the extract from Mr. Greeley's Dutchess County Fair address?

Flowage may be "practicable only where labor is very cheap, and where the land is level," but *irrigation* is certainly possible under different circumstances. We have experimented on sharp slopes of rough land, with the most decided advantage—the little rivulets separating a thick growth of grass below them, from an exceedingly light growth above, as far as the water could be made to run. Water that is apparently pure has a very beneficial effect, but where the little stream, as is often the case, has pilfered from the fields or buildings above a good store of manurial matters, the most striking results are often obtained by irrigation.

With but a small amount of engineering skill or labor, a dam may be built and a portion of a brook conducted along its margin at the highest possible water level, by marking its course, as the water flows along, with a stout hoe or sharp spade or shovel; now bridging a depression or hollow in the surface of the field by the use of cheaply made troughs—we have seen common eve-spouts used—now winding around a swell of the land, all the time guiding the stream at the highest attainable level, for the purpose of irrigating as much of the field as possible and for guarding against the gullying which is liable to occur where there is too much descent in the leading water courses. From this horizontal channel small streams are allowed to overflow at suitable distances. The water of these streams after irrigating a belt or strip of the descending surface may be intercepted by another horizontal channel, and again distributed where most needed in other small rivulets. These horizontal channels may be repeated as often as the lay of the land and other circumstances may require. These channels may be deepened, or, with a little care, may be made in the first case by a plough.

While writing the foregoing hints we have had in mind, and have in fact described a practical case of irrigation which we lately witnessed on the farm of Mr. Thomas S. Fletcher in Reading, Vt., by which he has greatly increased the grass crop on a field, on the side of a hill so steep and high that a team could haul up to it at best only very small loads of manure from the barn below, provided he had any manure to spare for his upland, which he said he had not. True, his "water-works" require some care and attention; but with proper management this little stream will furnish a large part of this "hill lot" with an annual coating of manure "as long as water runs and wood grows." This care and attention, however, our friend regarded as a light job, compared with the severe labor of both man and beast which would be necessary to apply to this field sufficient barn manure to produce the same result, even if the manure was offered gratuitously at the foot of the hill.

Water is an interesting as well as wonderful element. How the boys love to build the dams and sluices for the water which operates their miniature mills! Why may they not be led to take a similar interest in those gurgling streams which spread a mantle of green upon the irrigated land in the spring, weeks before it appears on the adjoining fields? We remember very well the interest we took when a boy in the work by which the water of a stream which passed through our "mowing" and which was nearly or quite dry in the summer season, was made to overflow the sides of dry ridges which were hardly worth mowing. The very great increase of hay on the parts irrigated gave rise to many jokes at the expense of our neighbors who owned land on the stream above. Among other suggestions it was proposed that whatever bulk of manure, whether from their barns or their fields, which they wish to float down this stream, should be transported on our canal and through all its locks free of expense to the owners of such freight!

Indeed, we have seen so many instances of the successful use of water in this way, with a small amount of labor, that we must agree with Mr. Greeley in recommending farmers to irrigate their lands where practicable by the streamlets which run through them.

SOMETHING MYSTERIOUS.

Heretofore, in the commercial history of this country the products of the farm have been among the first of the goods and wares in market to depreciate in price on the approach of hard times. Whenever business has slackened, city and village people have found the cost of living greatly if not proportionally reduced. But this year, while factories and shops are cutting down pay or time, or discharging their employees entirely; while clothing, house rent, and some other items of family expense are offered at materially reduced rates, flour and meat, corn and vegetables, butter and eggs remain firm at "war prices." To families dependent on employment that has been partially or wholly cut off, or on salaries that have been reduced, and are likely to be entirely suspended, this unusual state of things is not only mysterious, but it is uncomfortably alarming. In cities and villages it is about as common a topic of conversation, as the weather. We hear it discussed in the streets, in the cars, at the market, at the eating-houses,—in fact wherever consumers meet and converse. Very many ascribe it to the "speculators" and "middle men," but few seem to regard this as entirely satisfactory, as it is well known that speculators and middle men have operated in other times as well as in these latter days. After full discussion, and after carefully weighing all familiar "disturbing causes," the conclusion often reached is, that there is something mysterious in the present state of the produce market.

To our own mind there is nothing at all mysterious in this anomalous state of things, though we admit there is good reason for the alarm that exists. Produce is high and is likely to remain high, simply because the consumers are many and the producers are few. Cause is merely working out its inevitable effect. The demand exceeds the supply. There are more mouths open for "steak, thick and rare," than there are hands feeding the stalled ox; more eggs taken from the basket than are put in,—and people wonder that beef is scarce and that the basket is empty.

Business, like the ocean, has its ebb and flow. For years past the cities and villages have waxed and the country has waned. Young men and young women have left the rural districts for the commercial centres in sufficient numbers to afford, to our mind, a perfectly satisfactory explanation of whatever may appear strange in the present condition of business affairs.

If this view of the subject is correct, we need not extend our remarks by an attempt to point out the lesson it affords to both producer and consumer.

OUR CHEESE.

When Thomas Jefferson was elected President, some of his agricultural friends in Cheshire, Berkshire Co., Mass., united in making a huge cheese that weighed 1600 pounds was loaded. It into a sleigh and driven by Elder John Leland all the way to Washington and duly presented to his Excellency. That was not *our* cheese!

In Ontario County, Can., a cheese was made a year or two ago by Her Majesty's loyal subjects, which was said to weigh some 7000 pounds. It was exhibited at the State Fair at Saratoga, N. Y., and other places, and was finally, we believe, sent to Europe. Of course, *that* was not *our* cheese.

In the manufacture of both of these cheeses, the multitude, the mass, the mob had a hand; and who knows that all these hands were clean? A contemporary poet, in describing the manner in which the materials of the cheese first mentioned were collected, says:—

> "The quivering curd in panniers stowed,
> Is loaded on the jade,
> The stumbling beast supports the load,
> While trickling whey bedews the road,
> Along the dusty glade."

Our cheese was the result of no such conglomerate, nor was it produced by any such multitudinous rabble. We know who strained the milk, who prepared the rennet and cleaned the utensils; whose fingers manipulated the curd, and whose hands smoothed the surface of this triumph of the dairy. These hands and these fingers belong to no factory superintendent or careless operative, but to a neat woman; the tidy, skilful wife of one of the best farmers of one of the best towns in the State of New Hampshire—a town to which, by the way, both of the present agricultural editors of the FARMER now owe allegiance, on the European doctrine of "once a citizen always a citizen."

A full Board of the "We" of the FARMER having tested and tasted, and unanimously pronounced our cheese to be good,—very good,—excellent,—we take much pleasure in

saying that it was made by Mrs. JULIA CHAPIN, wife of F. Chapin, Esq., of Newport, N. H., and that it was sent as a token of her appreciation of the NEW ENGLAND FARMER. Mrs. Chapin has made over ninety cheeses this season, and our travelling agent, E. P. Frost, who enjoyed the hospitality of this family during the late snow storm, and speaks of their cheese room as a model of neatness, desires us to include in our acknowledgment of her gift, an expression of his gratitude for the kindness extended to him.

Before Mrs. Chapin allows her cheese tub to follow the spinning wheel from the family circle to the factory, may we ask on behalf of those of us who eat her curd, and those who read this notice, for an account of her process of manufacture.

EXTRACTS AND REPLIES.

BRONZE TURKEYS.

I take my pen to get information in regard to the bronze turkey. Where did they originate, and where can they be bought? I would like the full breed. I have been told that the hens weigh twenty-five pounds and gobblers forty. Try and give me information about them. I would write you something about my county, but I am very busy improving my farm. I am now building the third barn, and after two more seasons I will show my friends around me whether taking four agricultural papers pays or not. We have a county fair. It is held at Gettysburg, on the battle ground. We have twenty acres enclosed. There is too much attention paid to horse racing, and if that is not stopped our fairs will go down. I am very much pleased with your paper and would like my neighbors to take it, but they think it costs too much. CHARLES W. GRIEST.

York Sulphur Springs, Pa., 12th mo. 30, 1867.

REMARKS.—As to the origin of the Bronze turkeys, we find the following statement, by Mr. C. N. Bement: "A few years ago, Rev. R. H. Avery, of Wampsville, N. Y., exhibited a cross of the wild and tame turkey, which were beyond competition; the largest weighed thirty-three pounds and several others thirty pounds each. Their plumage almost vied with the peacock in brilliancy. These are supposed to be the origin of the now famous bronze turkeys." Mr. Bement also says that turkeys of a bronze black, resembling as closely as possible the original wild stock, are the finest and strongest breeds, and are reared more easily and fatten more rapidly, than the white or pied and copper-colored varieties.

We have consulted an extensive poultry breeder, who has raised the Bronze turkeys, some of which weighed as high as twenty-four pounds, but he did not like the variety; does not keep them now, and would not recommend them to others.

The following inquiry was recently put to the New York Farmers' Club, by Mr. J. C. Sherfeldt, of Chatham Four Corners, N. Y. "Where are those huge turkeys, that weigh forty pounds raised? I want to get some." To which Mr. Lawton, a member of the club, replied, "They were raised in Brooklyn, and fed on shot, just before 'the death.'"

We cannot inform our correspondent who has them for sale, but presume that a line addressed to Mr. Bement, New York, or A. M. Halsted, Rye, N. Y., will secure the desired information, and thus save the dealers in this description of goods the expense of advertising.

We are encouraged in our efforts to make a good paper by friend Griest's good opinion of the FARMER, and hope after he has finished his third "Pennsylvania barn" he will find time to give northern farmers some description of them, and of some other of his farming operations.

SUGAR MAKING.

The season is near at hand when many of the readers of the FARMER will be occupied in making maple sugar. Success to them. I have had my day, and night too, at this business. I always liked the work, and the products of the work; but can now only tell the boys how to do it. Much they already know, but some things they do not know. I will therefore give such directions only as I regard needful.

Spouts.—Metalic spouts are extensively advertised; but I object to them, because they let the air in too freely; which checks the flow of sap in a few days, rendering it necessary to ream out the holes. Spouts should not be less than eight inches long, and should not be shaved off on the top. They may be made of sumach, elder or white ash, and burned out with a wire; or they may be made of some other wood, and bored the whole length and then burned, and the end turned in a lathe.

Tapping.—The bit used should never be over half an inch in size. The rough bark should never be hewed off, as this injures the tree. To make the spout fit well, ream carefully with a common taper bit, but not so as to cut the outer grain of wood. Never set more than two tubs to a tree, or more than one spout to a tub; tap as low down as you can find a good spot; and bore into the tree as far as the wood is white and sound. If you have good trees, and follow these directions, you will need some tubs that will hold three pailfuls each, or you will sometimes need to gather twice a day. PHINEHAS FIELD.

East Charlemont, Mass., Jan. 15, 1868.

REMARKS.—Our correspondent's objection to metallic spouts cannot, we think, apply to the "Livermore Spout," a cut of which was recently given in the FARMER.

ALL HAIL, YE FARMER OF YE OLDEN TIME.

From the above heading you will perhaps be reminded of an article in a recent issue of the FARMER, entitled, "Practice, *vs.* Pen and Ink." It calls to mind a farmer of a hundred years ago. As my experience covers scarcely a quarter of that period, perhaps modesty would dictate silence on my part, but still as I have had some experience in raising hay and farm truck generally, perhaps a few remarks will do no harm.

Under the head of "grass" he says, "never mow your grass until the seed begins to shell, and the salmon color appears." I have cut hay both early and late; but give me early cut hay or none at all.

This is "experience." I did not learn it from books and papers alone, but from the looks of my milk pails and my stock. His grass and his cattle may have the *salmon* color, but I should think they would look more like the last run of *shad*.

Under the head of "barns," our Pepperell farmer says, "have the roof tight. On the sides and ends where the hay and grain are kept, let there be a space between each board, equal to the thickness of your hand. Then your hay and grain will be sweet and good, and your animals will have good lung food and be healthy." I have seen barns of the above description in which the rain and snow blew across the hay, the snow melting and running down through the hay, turning it yellow and musty. This he calls good lung food.

By what he says, it appears ventilation is necessary. I agree with him there; but he probably forgets that we usually have ventilators on our modern barns, and if this does not prove an adequate conveyance for the extra steam of the barn, we can have recourse to the holes the carpenters left. G. S.

Bradford, Mass., Jan. 11, 1868.

RAISING CALVES.

Will you please repeat the statement made in your paper a few months since, giving the cost of raising calves until two years old? Please give all the items for hay, grass, meal, &c. Also the best method of salting beef with sugar and little or no saltpetre? G. E. H.

Shrewsbury, Mass., Dec. 26, 1867.

REMARKS.—After considerable time spent in looking over the files of the FARMER we find the following, which we presume is the statement alluded to. It was copied from a report of a discussion by the Herkimer county, N. Y., Farmers' Club, on the cost of raising stock, and was presented as the estimate of one of its members. The opinion of the club appeared to settle upon fifty dollars as about the cost of raising two-year-olds in central New York. In other sections, we presume that the value of several of the items of feed mentioned would be much less, and that cheaper ones might be substituted.

Value of calf if slaughtered for hide or rennet	$1 50
Seven quarts of milk per day for a month, estimating cheese at 15 cents	7 20
One hundred pounds oil meal fed during summer	2 00
Whey fed during summer	1 00
Pasturage first season	2 00
Wintering first winter, hay $12 per ton	10 00
Pasturage second summer	8 00
Hay second winter	18 00
Total	$49 70

Mr. C. D. Curtis, of Fond Du Lac, Wisconsin, raised ten heifer calves for his dairy in 1864. He furnished the following statement to the *Country Gentleman*.

At three or four days old they were learned to drink. Up to the middle of May the ten calves had the milk of five cows, two hundred weight of corn meal, and what hay they would eat. Milk and meal were then discontinued, and for the next two months they had about ten quarts sweet whey each per day, and what fresh clover and orchard grass they would eat, fed three times a day—of which they consumed half an acre. The next sixty-three days they were fed the sowed corn that grew on half an acre, and the same allowance of whey as at first. About the 20th of September they were turned into wheat stubble ground, seeded to grass last spring. When six months old, the heaviest one weighed 430 lbs., live weight, and the whole lot averaged *four hundred pounds each*. The expense of cutting and feeding the grass and cornstalks, was about the same as harvesting and threshing an acre of wheat.

The milk fed, if made into cheese, would have sold at	$55 00
Two hundred weight corn meal at $2	4 00
Hay, estimated	1 00
One acre land to wheat would have brought	30 00
Value of whey, say	10 00
Eight tons hay is a great plenty to winter them, worth	40 00
Total for one year	$140 00

Equal to $14 per head for yearlings, which is about double the cost of "peace prices."

ARE WE IMPROVING OUR STOCK?

This is a very important question, as we look about us and see what we are doing with our stock and ourselves. What class of horses is it that has given Vermont her credit? I think the Woodbury Morgan. Others may not agree with me. I think that class is the best, all things considered, and should like the opinion of others. What class of sheep has done the most for Vermont, Native, Cotswold, Spanish or Merino? It costs but very little more to raise a lamb that will bring ten, twenty-five, or fifty dollars, than it does to raise one for two dollars. Too little attention is paid to the improvement of cattle. It is surprising to see how indifferent farmers are on this subject. Anything that can raise a bellow will do for many of our farmers. Is it not surprising how their eyes are blinded against their interest in this respect. It is little better with three-fourths of the farmers in respect to horses. They look at the first cost of improved breeds and jog on in the old track. But there is no standing still in this business. We are either going ahead or falling back. So long as our farmers will sell their best cows, mares and ewes, and breed from plugs, so long must we look in vain for improvement; so long shall we go from bad to worse. I hope I may live to see this state of things change for the better. I want to hear from others on this subject.

Rochester, Vt., Jan., 1868. V. M. H.

DUTCH CATTLE.

Permit me to say that the NEW ENGLAND FARMER has been of great advantage to me, as the past year has been the first of my farm experience. It keeps us posted on the markets, and the experience of the best farmers in the country. We consider it indispensable.

Be good enough to inform me through the FARMER in relation to the Dutch or Holstein cattle. Are the cows as likely to be good milkers as any other kind? Are they large and well formed? Are they good workers? H. T. CUMMINGS.

Shelburne, N. H., Jan., 1868.

REMARKS.—Thank you for the good opinions expressed of the FARMER. We shall spare no reasonable pains to make it even better than it is now.

The Dutch cows are large and handsome, and as far as our knowledge goes, give large quantities of milk. But as is usually the case, where cows yield a large amount of milk, it is not so rich in

butter qualities as with most cows that give a less quantity. We have never seen working oxen of the Dutch breed, but cannot conceive why they should not be excellent workers.

DISEASED FOWLS.

I wish to inquire through the FARMER, the name and treatment of a disease I have in my flock of fowls. I have never seen anything like it until this winter. The first symptoms are, a drooping of the fowl, disinclination to move or to eat; after a few days, their legs seem unable to support them; it is with great difficulty they can move; their breathing is loud and difficult; they continue growing worse, when, at the expiration of a week or ten days they die. My hens always have all they will eat of corn and oats, orts from the table, a few scraps, shells, lime, &c., with pure water. X.

Rochester, Jan., 1868.

REMARKS.—The disease you describe resembles what is called *the roup*, the prominent symptoms of which are difficult and noisy breathing, and gaping. The head swells and is feverish. The eyes swell, and sometimes the fowl becomes entirely blind. The appetite fails, the crop feels hard, and the feathers lose the glossy appearance which they have in health.

Dr. Bennett gives the following as a remedy, in his work on poultry. Take finely pulverized, fresh burnt charcoal, and new yeast, of each three parts; flour of sulphur, two parts; wheat flour, one part; water, quantity sufficient; mix well, and make into pills of the size of a hazel nut, and give one three times a day. Bathe the eyes and nostrils with warm milk and water, or soap suds. This disease is probably caused by taking cold. The bird should be kept warm and away from other fowls.

CORN COBS.

In the weekly FARMER of Nov. 23, 1867, and Monthly, page 39, 1868, under the heading, "The Value of Corn Cobs," a writer deduces from statistics of the "State Reform School," published in Monthly Farmer, 1867, page 542, the conclusion that one pound of cobs fed to a cow produces injury to the amount of 10 cents and 4 mills. This is incredible. If figures will not lie, I think that figures in this case, or those who used them, must have made some mistake. Some cows will greedily eat large quantities of cobs unground. Others will not eat them in this state, probably because they find it difficult to chew them. But I never knew cows to refuse to eat cobs after they were ground. If, therefore, cows are injured by eating cobs, or, even if they are not benefited by it, their instincts, in this instance, must be unaccountably at fault. E. B.

Derry, N. H., Jan., 1868.

PEACH RAISING IN SOUTHERN OHIO.

I thought I would give you a description of peach growing in our vicinity. Our hills and mountains are from 100 to 150 feet above the level of the Ohio river. The soil of these hills facing east and south-east is a deep sandy loam. During the last six years some of this land has been cultivated by orchardists, and it has proved favorable to the peach, and a large number of select peach trees have been set out and much fruit has been shipped. Specimens ranging from 10 to 15 ounces have been produced. One man's profit on 15 acres this past season, amounted to three thousand two hundred dollars. IRA A. M'CONNELL.

Stouts, Adams Co., O., Jan. 10, 1868.

CURE FOR LAUREL POISONING.

Having used eggs myself and knowing of others who have used them with uniform success, even after the sheep or lamb was bloated so badly that it could scarcely breathe, I can confidently recommend them. The head of the animal should be raised up high and an entire egg,—all but the shell,—forced down its throat. I have known of very salt grease being administered in the same way, and have heard of a small quantity of shot being given with good results. A SUBSCRIBER.

Strafford Springs, Vt., Jan. 6, 1868.

CRANBERRY CULTURE.

Can you or some one of your Reply writers, inform me of the latest and best work on the cultivation of cranberries, aside from that of B. Eastwood, of 1856? Is good cranberry land, newly and well set with cranberries, at a cost of $400 per acre, when completed, a good investment.

E. Douglas, Mass., 1868. S. N. J.

REMARKS.—We are not aware that there is any book devoted entirely to the culture of cranberries, besides that of Eastwood.

The sum you mention, $400, is a pretty large investment in a single acre of land, but where the location is entirely favorable to the crop with regard to frost, flowage, &c., the investment may be an economical one. Some of our readers, if so disposed, can give you valuable information on the subject.

NORWAY OATS.

In reply to the inquiry, on page 73 of the Monthly Farmer, about Norway Oats, I submit my experience as follows:—Seeing the sample exhibited at the State Fair at Nashua, N. H., in 1866, I paid $1 for a pint, and received a package the following winter, which I found to be a small, green, inferior looking oat; but I sowed them on a good spot of intervale land which had been planted with potatoes the previous year, a few days after sowing my other oats, in May. They grew a very little higher than my common oats, which were on much poorer land; but when filling they mildewed, and not considering them worth threshing I put them with the straw to cut for feed. My other oats yielded a very fair crop, weighing 32 pounds.

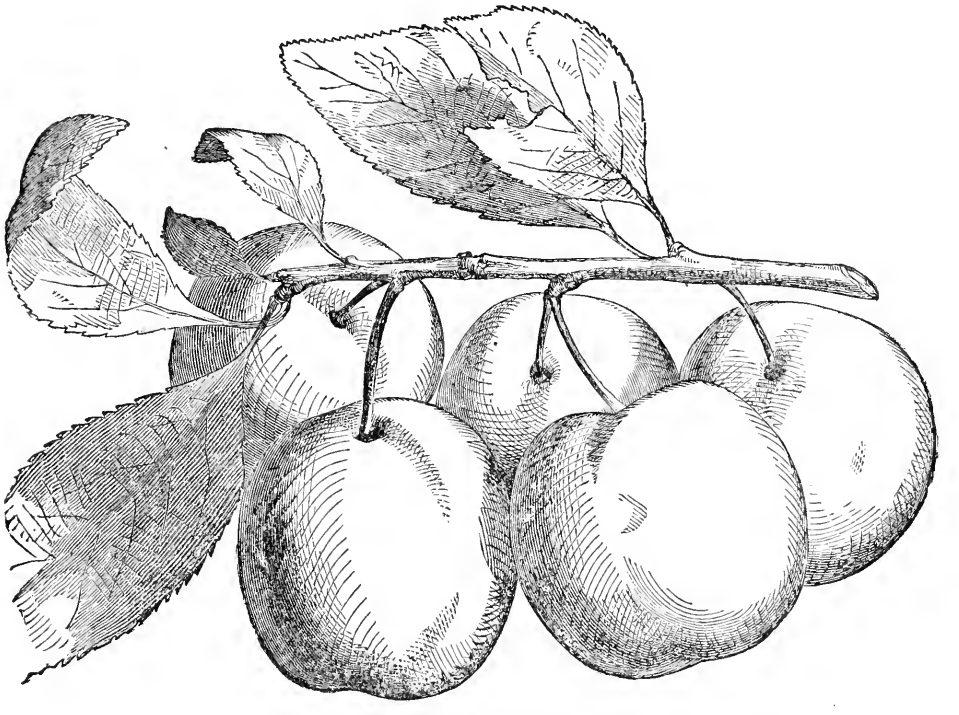
J. A. HOLMES.

Fisherville, N. H., Jan., 1868.

THE SICK OX.

The inquiry in a late number of the FARMER in relation to a sick ox, reminded me of some experience I once had with a cow. For a relaxed state of her bowels, which had existed for two or three months, I gave her tansy tea, after trying various other remedies, by pouring it down her throat. This was a troublesome job, and although it appeared to afford some relief, I became discouraged and concluded to kill her. I employed a man to kill her who had some knowledge of cattle. On examination he pronounced her disease to be "overflow of the gall," and we thought it possible that a patient continuation of the tansy tea, might have effected a cure. E. E. R.

South Troy, Vt., Jan., 1868.



THE JEFFERSON PLUM.

The curculio modestly introduced herself at first as a mere "plum weevil." Plums were plenty and luscious then, and she wished simply to mark a few for herself. Nobody mistrusted that she would meddle with any other fruit, and for some time she did not. But as plums failed, she turned her attention to first one and then another of our fruits until she now claims our apples, pears, peaches, and even our small fruits. Having thus cultivated her taste for so great a variety, may we not hope to be able to return to the cultivation of the plum with nearly the same prospect of success as with other fruits? The fact that there are plums in market every year, prove that somebody succeeds in growing them. If one succeeds, why may not another?

The above cut illustrates a plum raised and named by the late Judge Buel of Albany, N. Y. Mr. Downing says "we think it the most desirable and beautiful of all dessert plums. When fully ripe, it is nearly, shall we not say *quite*—equal in flavor to the Green Gage, that unsurpassable standard of flavor. But when we contrast the small and rather insignificant appearance of the Green Gage, with the unusual size and beauty of the Jefferson, we must admit that it takes the very first rank. As large as the Washington, it is more richly and deeply colored, being dark yellow, uniformly and handsomely marked with a fine ruddy cheek. It is about ten days or a fortnight later than the Washington, ripening the last of August, when it has the rare quality of hanging long on the tree, gradually improving in flavor. It does not, like many sorts, appear liable to the attacks of wasps, which destroy so many of the light colored plums as soon as they arrive at maturity.

Branches slightly downy, leaves oval, flat. Fruit large, oval, slightly narrowed on one side, towards the stalk. Skin golden yellow, with a beautiful purplish-red cheek, and covered with a thin white bloom. Stalk an inch long, pretty stout, very slightly inserted. Suture indistinct. Flesh deep orange, (like that of an Apricot,) parts freely, and almost entirely from the stone, which is long and pointed; very rich, juicy, luscious, and high flavored. Hangs a fortnight on the tree."

Ladies' Department.

DOMESTIC ECONOMY;

OR,

HOW TO MAKE HOME PLEASANT.

BY ANNE O. HALE.

CHAPTER VIII.

WOMEN'S APPAREL—ITS MAKING AND MENDING.

Among the pictures exhibited at an entertainment the other evening was the portrait of a Hawaiian queen; and I felt not a little vexed at the titters and smiles which answered a sarcastic question of the exhibitor, as he arranged the focus of his instrument to display to the best advantage the woman's conspicuous head-dress.

Her heathen majesty was arrayed in the English costume of fifty years ago, and the low-necked dress of that period, with its short sleeves, made very apparent that brawny plumpness so much admired by connoisseurs of Sandwich Island beauty, while an enormous bunch of ostrich plumes, like a flock of moonlit clouds, hung over a forehead "black as the brow of Night."

"What makes girls like feathers?" was the question. Why do soldier-boys wear plumes and bearskin caps two feet tall? was my mental rejoinder—availing myself of a Yankee's privilege.

A woman's fondness for dress is not always proof of her vanity, as is generally asserted, and as this question and its significant answer seemed to imply. Neither is her renunciation of its service any token of her humility or her modesty: the nun, beneath her sombre veil the, quakeress, in her simple garb, may cherish as many arrogant thoughts as did Hood's two peacocks of Bedfont "Trailing their velvets wantonly."

The love of dress frequently springs from a desire to rule or to influence others: sometimes from a wish to improve and ennoble personal appearance; while not a few women find in the preparation and arrangement, as well as in the wearing of their dress and its ornaments, the gratification of an innate love of the beautiful, and the development of their ideas of order and harmony.

We have all witnessed, if we have not experienced, the depressing effect of shabby and inappropriate clothing, and everybody has at times felt that exhilaration which the consciousness of being well-dressed can impart. It is not vanity, nor self-satisfaction, but a delicate and delightful sensation of self-approval, which lends ease and gracefulness of thought and action.

Some persons seem to understand intuitively the art of dressing well upon all occasions. Whether this may be considered *tact* or *talent*, were it classed under the head of "faculty," which in colonial times was a taxable article, I believe hundreds would willingly pay a high rate for the possession of so desirable a gift. Quaint old Doctor Fuller must have had these happily endowed women in mind when, enumerating the qualities of a good wife, he says: "Her clothes are rather comely than costly, and she makes plain cloth do be velvet by her handsome wearing it."

There are those who contend that the dress bears the same relation to the body that the body does to the soul; that it is, so to speak, an out-growth of the senses and perceptions—that certain habits of thought and feeling find their exemplification in the choice of garments, under the name of preference or taste. According to their theory, a woman of equable temper, quiet and modest in deportment, pleasant and refined in speech, will never make choice of gaudy or "*loud*" colors or styles, or incongruities of trimming or ornament.

This is very agreeable doctrine, but it cannot be accepted without modification while so few women are a law unto themselves in this matter; the rigorous rules of fashion and the voice of Mrs. Grundy too often overpower individual proclivities, and crush out all independence of character. But no true woman will bow so low to the behests of fashion as to compromise her integrity or her self-respect; and, however much she may delight in splendor or show, comfort and propriety will claim her first attention, and neatness and good order have precedence over elegance and ornament in the furnishing of her wardrobe. She will be no slattern, and there is little fear of her becoming a dowdy, for she knows that an agreeable personal appearance exerts a genial and impressive influence; and as a good housewife and housemother she will not neglect those small yet important points which are so effective in a woman's attire,—the graceful cut and neat fit of her dress, the harmony of its tints, the pretty collar, and the becoming neck-ribbon.

Much is said about women's extravagance in dress. This generally proceeds more from ignorance than from recklessness. It takes a great deal of experience, besides a keen eye for observation and a clear head for calculation, to be able to follow, even at a moderate rate, the fluctuations of fashion;—how much less worry and waste and want there would be in the world if that despotic queen issued her edicts from Pekin rather than from Paris. But there is no prospect of the dawning of that golden age, so we must endeavor to exercise all possible prudence while conforming to present customs.

And this prudence must be first manifested in the purchase of durable and serviceable materials. Flimsy and mean fabrics are always a shame to the wearer; and if they cost less money in the outset, the expense of time and pains spent in trying to make them pass as respectable and to keep

them decent, generally exceeds the price of a good article. On the other hand, never buy too nice or too delicate an article for the use to which it is to be appropriated, or in getting materials try to make up for the high cost of the goods by buying a scant pattern. Always ascertain by careful measurement beforehand just the amount wanted, so as to have sufficient,—that the garment be not spoiled by being made too tight, or too short, or the wrong way of the cloth, or a little out of shape —expedients which a small pattern necessitates. And, still, do not overrun the quantity needed, so that a great deal shall be wasted,—though it is desirable to have remnants enough to keep any article of clothing in good repair so long as its original comeliness remains; and, in the case of the more costly dresses, to alter its shape according to any reasonable change of the fashion. As to fashion—health, comfort and convenience should be first consulted; then let its rules govern you only so far as to prevent observation which the singularity of an adherence to old styles is apt to provoke.

In choosing cotton cloth, linen and flannel for undergarments, for fear of deception in their quality and substance use the same tests as suggested in Chapter VI. The occupation should decide the color of stockings, flannels and skirts; for instance, when sweeping and dusting are to be done, one will wear drab or gray, reserving white for cleaner employments.

Winter if not summer stockings should be knit, they are so much more durable than those that are woven. Heels and toes of stockings should be lined, the thin places in other parts run and mended, as mentioned in Chapter VII. When heels are very much worn cut them from the sole and ravel them to the ankle; then take up the stitches and with new yarn knit them again and sew them firmly to the sole. If the toes get quite thin ravel these out also, and knit them of new yarn; you can do this even for woven stockings. When the sole gives out cut it from its place, take a pattern of it and by this cut another from some stocking that is beyond repair; then ravel the heel above all thin places (having previously done the same to the toe and cut it like the end of the sole) and supply this length thus ravelled by enting into the ankle; make the end of proper shape and close it on the right side with button-hole stitch. The sole will perhaps need gores where it joins the instep: for these take two pieces of stocking one and three-quarters inches long and one and one-half inches wide and cut them crosswise. Stitch the two straight sides of these gores to the instep and the heel, and then stitch the whole around the sole.

Knit or crochet underjackets, being elastic, are more comfortable than those made of flannel.—Explicit directions and patterns for making these and other undergarments are given in ladies' magazines and newspapers that are widely circulated, so that I need only say that a nice simplicity should always characterize them, and that much time and attention are expended upon the fabrication of fanciful styles, and ruffling, tucking, trimming and embroidery, which could be employed to better purpose. They should be kept neat and whole—the directions already laid down for the repairs of other clothing will apply to everything in this department.

Every woman should have a working-dress to wear when engaged in active employment. It should be of calico (print) or gingham, narrow striped—small plaided—or figured small and closely, in sober, fast colors; and made loose and easy in waist and sleeves: unbleached cotton cloth or drilling is best for lining.

It is not so easy to fit a dress for one's own self as for another person, but it can be done. A pattern that lies well to the form should be procured of a dressmaker, or may be obtained by ripping an old waist that suits. The calico or gingham should be fulled at the belt, but straight and smooth at the shoulders—loose enough to escape strain everywhere, but not to droop or look puffy. Use no whale-bones or stiffening about it. Button it with small strong buttons. Make the sleeves of moderate fullness, and gather them into a wristband; their linings should be loose—*not full*—reaching to the elbow in summer, to the wrist in winter. Five widths of calico are sufficient for the skirt; it should reach just to the ankles, and be hemmed or faced with cambric five inches deep. Insert a large pocket, about eight inches from the top of the skirt, in the seam nearest to the right hand. Turn down inside one inch of the skirt—to lengthen it when the edge of the hem or facing is so worn as to need cutting off and to be remade. Gather it and stitch it to the belt, which must be fitted to the bottom of the waist—wrapping neatly to the left side. Bind the neck of the dress with a narrow lengthwise strip.

No woman, even in her busiest hours, should be without a neat white collar and a bow of bright ribbon at the throat. The collar may be just a band of fine white cloth or linen—made from the pieces left after cutting shirts. Fold it evenly and stitch it nicely along its edges. Wash, starch and iron it, and it is ready to wear. Fasten it with the little bow or knot of narrow ribbon.—This simple ornament costs but a trifle, but it is surprising to see how much effect it has: the homeliest woman with such addition to her dress always looks comely,—her gown—let me use the good old-fashioned word—being clean and whole, and her hair nicely arranged.

Besides this working-dress, house-wives should have long, full aprons, made of new calico or gingham, or from the skirts of such dresses, when the waists and sleeves are past wearing. They should be gathered into a belt having a front attached high and wide enough to cover the waist. For washing, scrubbing and house-cleaning make

these aprons of stout drilling—such as is used for men's overalls. The calico or gingham aprons are very good to wear when a person, though attired in a nice dress, must superintend or do some simple household service.

A short sack, to be worn when sweeping and dusting, will be very useful. It should be put on with the apron over the nice dress if ironing or cooking is to be done. Cut it according to the pattern of such a garment for out-door wear, from good gingham or calico. There is quite an advantage in using this sack and apron at times, instead of the working dress, because they are so easily removed.

A woman who does much sewing has need of armlets, made of brown linen or silesia, reaching from the wrist to the elbow, fitting snugly—but not tight—just stitched with one seam and hemmed at each end; and a brown linen or gingham apron, covering the front of her dress—both waist and skirt. It may be made quite becoming with a little border of bright print, or a small pattern of embroidery in braid near the edge. Half the length of the apron may be stitched up at the sides to make it one large pocket to hold articles of needlework; or two small ones a little larger than the palm of the hand, having been ornamented like the edge of the apron, may be stitched—four inches from each side—about three inches below the belt,—these are convenient for holding sewing implements. Don't ruffle these aprons—the simpler they are made the better they look.

A wrapper is a very comfortable garment for an invalid, or for one who has little stirring work to do. It is now generally made like a long, loose casaque (by some spelled *cassock*) and one of those outside garments will furnish a good pattern. But the old-fashioned style with long, straight breadths and a yoke neck is more desirable,—especially in case of sickness. Make this dress of plain thibet, lyonese, or empress cloth, or all-wool delaine, if it is more for show than use. Give it a border of some contrasting color, either narrow crosswise bands of the same sort of goods, or of silk or ribbon. Place a row of buttons or rosettes of the same color down the front; and border the yoke and the wristbands with the same, as also the belt, or wear with it a girdle cord of a like shade. Wrappers should be made double. If exclusively for winter use, wadding should be tacked or quilted to the wrong side of the inner material, over the shoulders and the chest, and the sleeves should have double linings. These are handsome dresses; but very pretty ones are made of cotton-and-wool cashmere or delaine, or calico of quiet, modest colors in small figures, with a border of brighter hues, either figured or striped,—calico is surer to wash well, and to last longer than the cashmere or the delaine.

For a yoke-neck wrapper fit a waist lining as for a working-dress—loosely and comfortably. The yoke covers this lining from the throat to over the fall of the shoulder; and here the sleeves—which are long and full, gathered into a wristband—are inserted. Three widths of folded goods, or six of calico or delaine, make the skirt, which is plaited, and attached to the lining under the yoke. Hem or face and bind the skirt, which should be just long enough to escape touching the floor; a dress of this sort that drags, or sweeps, or lies like a train, has a very ugly appearance.

Skirt-bindings, which are usually of worsted or alpaca braid, must be shrunken before they are used, by letting them he a few minutes in scalding water and then placing them immediately in cold water, from which they are wrung, partially dried, and then pressed. This prevents that tightness of the binding which gives the edge of the skirt a puckered appearance after wearing it in wet weather.

A casaque wrapper usually wears out soonest about and under the arm-size, on the front of the waist. To mend this, rip out the sleeve above all thin places; also the seam under the arm and the first bias, or, as some call it, *dart* seam. Then cut the cloth from the seam under the arm to this bias, in a slightly sloping line, just where the belt comes; and then extend the bias in a sweeping direction, above all thin places, to the arm-size. Take this old piece, thus cut out, and from new material cut an exact copy, matching the figures and color closely, allowing enough for a strong seam. Stitch it very carefully; see that the added length of the bias is not fulled or drawn, and then dampen and press it on the wrong side. Sew and finish in the same way the sloping seam at the belt, and then re-stitch the bias and the other seams that have been ripped. Mend rents and button holes as mentioned in the chapter on men's clothing. For darning, don't forget to use ravellings of the same material as that which forms the dress,—as also there mentioned. In case of a very bad rent in an exposed part of the skirt, mend it nicely, either by darning or inserting a new piece; and if it can be hidden near the top of the plaits, and the figure will bear reversal, rip out the breadth and use all your ingenuity in getting the mended spot out of sight, in the fold of a plait.

In selecting fabrics for tight dresses—as those are called that fit the form closely—the common style of women's dresses,—be guided somewhat by your figure and complexion, as well as by your age, as to their colors; by your purse, as to their price and capacity for retaining their original qualities; and endeavor to get those upon which the eye will rest the longest with satisfaction, and the mind dwell upon with approval. Stout persons should always wear plain goods; short, striped; tall, checked or plaided; slender persons look best in figured. The colors, drab, gray, stone color, dark-green and claret suit all complexions; blue, pink, lilac and light-green only light; while cloudy and dark complexions should wear yellow, buff, purple, crimson, red, brown, dark blue and

dark green. Elderly women should always dress in dark colors and plain or small figured styles.

Plain goods are always handsome, never go out of fashion, and are becoming to all ages and all figures. Wide stripes and large plaids and checks and figures look hideous when not in fashion, while the reverse of these always look well, and never get antiquated. Purple, lilac, buff, crimson, stone-color and some blues are apt to be spotted by acids and to fade by exposure to the air and sunlight.

For summer, cambrics, lawns, and muslins are more serviceable than bareges and grenadines and other light tissues, but they all need careful usage. Keep them in good order by looking often along the seams of the waist, and the tops of flounces, tucks and hems; and see that the threads are not drawn too closely together in some places; thus leaving gutters and galls which may get dragged into holes if they do not receive prompt attention. The only way to remedy these is to spread the part smoothly on a table, or a large book, and with the point of a fine needle draw every thread back into its proper place by light, gentle strokes. It is slow work, but it pays well for the pains taken. Thin delaines and valencias, sometimes alpacas, poplins and silks need this treatment. Don't leave one spot, no matter how badly drawn up and dragged it may be, till every thread lies straight; then press it smoothly on the wrong side. Bareges, grenadines and thin silks, when torn, if they cannot be neatly darned with their own ravellings, may be made to look nice a long time by fitting the edges of the rent closely together and gumming a strip of lace over them on the wrong side of the fabric.

Silks are suitable for all seasons; but as they cost high and all other articles of clothing to wear with them must be of the very nicest quality, no body ought to buy such dresses until they are fully satisfied that they can afford them. The dowdiest looking array is a silk dress with a cheap shawl and a shabby bonnet and gloves. To be sure, cheap silks can be bought, but they are miserable things—fraying or creasing and cracking to pieces very soon; and they have such an air of pretence and shabby gentility in their metallic lustre and crackle that a noble-minded woman would prefer a good alpaca or poplin. A French or an English crown alpaca, or an Irish poplin, will last years, and render double the service at half the cost of an ordinary silk.

Valencias of cotton-and-wool, and delaines of the same material, are useful and pretty fabrics. But they need care in washing, or the colors will run together while drying—and the cloth is apt to shrink or cockle. These are generally of American manufacture. Scotch wineeys, French all-wool delaines, as also thibets, cashmeres, empress cloths, alepines, tamise and others of a woolen or silk-and-woolen texture are nice for winter wear. In all of these get those that are of the softest wool and of the most regular weaving.

For patterns to cut these materials, rip the waist of an old dress that fits well, and copy from that your lining—it should be of stout silesia. Then consult some trustworthy dressmaker as to the style of the waist and sleeves and the cut and disposition of the skirt. Choose some graceful, unpretending fashion, and if verbal descriptions are not sufficiently plain, buy a pattern to shape these. Sometimes in the ladies' magazines and newspapers—before referred to—you may find just what you need in this respect. Having decided in what fashion to make your dress compare your linings with it, and make all necessary modifications towards securing an accurate union of the two. Baste, and have patience to try it on and alter till it fits exactly.

In cutting a dress for another person take measures around the throat—across the back at the fall of the shoulders—across the chest at the same point—around the waist just beneath the arms—and around the waist at the belt. Measure also the length from the arm-size to the belt, as also from the throat to the belt, both back and front,—and from the throat to the fall of the shoulder. Then take a pattern that fits your own figure and with these measures calculate what variations to make. For length of sleeve bend the elbow and measure from the shoulder to over the wrist joint. Be sure that your cloth lies straight, and lengthwise, when you cut; and see that you have folded your two biases for each front in such a manner as to give ease, as well as to look easy and graceful.

In cutting the arm-size don't get it too far on the back—too narrow a back gives one the appearance of a skewered fowl. Nor yet encroach upon the width of the chest—too narrow a chest causes that castiron or wooden aspect of a dress, which is so disagreeable to see and so distressing to endure. If it binds arm, back or bust, don't rest till the evil is removed;—it often depends upon a very slight thing—an irregularity in its curve, or misplacement of the pattern so that the cloth is cut out of line.

Some persons pin the silesia to the form in order to cut a lining. This is generally a quicker way, but there is more waste of stock and great danger of spoiling the whole. It is so difficult to keep quiet as a statue during the disagreeable manipulations of nervous fingers and the insertion of innumerable pin-points—not to mention the gashing and snipping of sharp scissors' blades—that high and uneven shoulders, low and uncomfortable arm-sizes and crooked and clumsy biases are frequently the result of this method.

Gored skirts require less material and are more comfortable than those that are of equal width throughout; but, fearing that the fashion may not last long, many prudent women are unwilling to cut their breadths in that way, and so fold the fabric to the desired shape. This is, however, a questionable economy, for a skirt made thus does

not sit, or hang, so well; and if ever the old fashion returns, the difference between the worn and the unworn portions will give the dress a shabby look—either make the skirt with whole widths and straight seams or cut the material according to the prevailing style.

All skirts wear longer for being lined. It is not always necessary to buy new cambric for this purpose. The best widths from old dresses—whether of lawn, gingham, calico, or cotton-and-wool delaine—should be washed, slightly starched and ironed, expressly for this purpose. A cambric lining and facing will bear removal through two or three dresses, if thus renovated at each change; also sleeve and waist linings. Even when a waist lining is worn out around and under the arms a piece of strong silesia from some other cast away lining may be so skilfully inserted that it will do good service in a working-dress or wrapper.

It is especially necessary to line gored skirts; and the lining and outside must suit each other exactly,—being stitched together, through their whole length. In stitching these seams be careful not to full, nor to stretch either edge—both straight and crosswise must lie easily and smoothly together. After they are stitched, press them carefully, and then baste your facing: this should be of haircloth or wiggin for all nice dresses;—or the more ordinary stiff cambric will suffice. It will need particular fitting at the seams to give the skirt a free and flowing appearance.

The gored street or walking dress is getting modified to a very pretty style, suited either to the house or out-of doors; and, having the double recommendation of economy and comfort added to its good looks, will probably long be a favorite with persons of a correct taste and ripe judgment. But as to train-skirts, they are an abomination, which, if every sensible woman will let them alone, must very soon pass away.

Exercise your best taste in the ornamenting of your dress. A little nice, simple trimming improves, because it relieves, the monotony of a plain dress, and, by contrast, enhances the beauty of the fabric. But a great deal of trimmin , or too strong a contrast either in color or material, is worse than none at all. Figured, striped, checked, and plaided goods seldom need anything beyond their own substance, arranged in folds, to give a finish to seams and edges, and to break up the stiffness and formality of their designs.

The chief fault in dress-making is the superabundance of trimming and ornament. Beside the extravagance of time and money which it occasions, many a beautiful garment is actually disfigured by such a wasteful display; and many a young woman who does not yet clearly understand the principles of beauty, finds fault with everything, rather than its ornaments, because her dress is so unbecoming. She knows that she is satisfied with her morning and working dress, plain as they are, and by-and-bye she will discover that simplicity and harmony constitute the highest and the most charming beauty.

The fabrics and the fashions of women's outside garments are so numerous and so variable that I can only offer a few general suggestions in regard to them. Let comfort be your first consideration, and let common sense rule in all your deliberations upon the matter; and when you have once made up your mind as to that which is best suited to your needs, be contented with it, so long as it is comfortable and looks respectable.

The most useful outer garment a woman can have, and one which every woman should own—no matter how much handsomer or how many her purse may afford—is a common hooded cloak; made long, loose, and large; of what is called waterproof or repellant cloth. It is always in season, always appropriate, be the weather fair or foul; but for one who is often exposed to stormy, or wet weather it is absolutely indispensable. It is universally known, and so simple in its construction that no directions for cutting or making it need be here given. I would only say that, of all outside garments, own this, if you own nothing else.

The head, being the most important part of the human figure, and the chief seat of beauty, its clothing presents claims to our most careful attention. Hence women have considered head-dresses as the best subjects for the efforts of the ingenious and fanciful, till the imagination seems to have run riot in the fabrication of hats and bonnets. The most insane notions in reference to the elegance, the fitness and the comfort of these articles have at times controlled their fashion—never more so than at present. Still, we must, in a measure, conform to the prevailing customs of society; one of which is to wear a bonnet for display rather than for use—especially in the winter season.

I suppose after this harangue my readers hardly expect me to teach them how to practice economy in these things. Nevertheless, I make the attempt, by starting first with that axiom of the judicious Hooker: "Choose the greater good before the lesser." Bonnets must be worn; do not overlook their convenience amid the absurdities of which they are made the vehicle. Let your choice be from the most modest and unpretending; comparing favorably with your other clothing—nice, yet not fine; beautiful, but not gaudy. As much as possible they should be the work of your own hands, the exponents of your own taste—not the mimicry of some crazy Jane of a milliner's apprentice, though you may purchase the frame and sometimes the materials of her mistress.

The graceful aspect, the jaunty air, which some suppose that none but the fingers of an adept can communicate to that conglomeration of textures and tissues that passes for a bonnet, may not at first come at your bidding. But, in the event of a first failure, all good sprites having cognizance of your essays at truth and beauty, will so turn the

tables upon folly and extravagance, that you shall become the bonnet, if the bonnet do not become you; and by perseverance in your endeavors you will at length be successful in winning whatever elegance or grace you may desire for the perfection of your work.

Straw bonnets and hats are the best for common wear, and any one can make them look pretty and becoming, by observing what colors agree with her complexion and choosing their ribbons accordingly. If she can afford the more fanciful structures—of lace, or crape, or silk, or velvet—she *must have* one of straw, for that can stand all weathers and all usage; it looks proper on all occasions, too, if neatly kept. But all others soon get out of shape if exposed to dampness—crape and lace are so delicate that even the evening dews may ruin them; in fact all fancy hats and bonnets, by constant wearing, very quickly lose their beauty, and nothing is so detrimental to a woman's personal appearance as a soiled or dilapidated bonnet.

The suits of dress, sack and bonnet, all of the same material, are the prettiest style yet invented, and a very economical one. The best are made of modest-hued goods, and delicately trimmed. The waist and sleeves are plain; the skirt gored, and of moderate width and length. There is no need of two skirts, or even trimming to simulate an extra one—it is handsomer without. The sack is of medium size. The bonnet, of plainest form; depending not upon ornament for its effect, yet holding a few small rosebuds or violets, or a bit of ribbon and lace, that set off to the best advantage the wearer's hair and complexion. Whoever is the possessor of such a costume may rest assured that she presents an agreeable appearance. Yet it is a cheap dress—ten dollars will cover the cost of the whole suit, if she makes it herself,—and with care it will suffice for company, visiting, walking and travelling, nine months in the year, for two years, at least; and it is to be hoped that the style will last ten times that length.

Of all the various jackets that have been adopted during the last few years the Garibaldi continues highest in favor. Made of muslin it has come to be regarded almost a necessity for summer wear, and being very cheap and also easy to make, (it should copy the pattern of the waist and sleeves of the working-dress, except that the lining is low in the neck,) no young woman should be without it. While the more ambitious fabrics gain much from a union with its unsullied purity, even a calico or a gingham skirt takes on a hitherto unknown beauty from its companionship.

Muslin and lace are becoming to all, because of their translucence and pearly whiteness; and therefore, in the form of collar and cuffs, either plain or embroidered, they make the best edgings for garments where they border upon the skin. The opaque, dead white of cambric has a contrary effect, so that pique and Marseilles jackets are not so desirable though many wear them.

Mend all these goods with great care, muslins, and laces with muslin ravellings—the thicker fabrics with their own threads. Darn all bracks, and fill holes with patches whose edges are so nicely darned into the material that only the closest scrutiny can detect them. This is done by first basting them in neatly and then taking the stitches thread by thread, following the weaving with the needle. When rents occur among the figures in embroidered muslin or lace you can frequently cut out the plain portion from figure to figure, and insert new in this way, even if you take out a considerable portion of uninjured fabric. Wrought muslin and lace should always be pieced by lapping one figure over another, when the embroidery is not heavy enough to make such joining noticeable, and tacking it securely with fine thread on the wrong side and around the edges of the figure. Otherwise, trim the edge of the figure carefully with scissors from the plain lace or muslin and sew it in very nice overstitch to the plain portion of that which you wish to unite with it.

Be dainty in the choice of gloves and careful in their usage. Kid gloves to wear well should be an exact fit. If too loose they are unsightly and deface quickly. If too tight they are always ripping or tearing. Cheap gloves are not worth buying. If you cannot afford to pay the price of good kid, content yourself with nice merino for winter, with silk or raw silk or lisle thread for warm weather—you will find many styles that are beautiful and durable. Repair them as directed in Chapter VII. When silk and cotton thread gloves get stretched, take in their looseness at the seams. If they are soiled, wash them with white castile soap—upon the hands; rinse them and partially dry them in the same position, then take them off and press them with a warm iron. This often shrinks them a little, but they will look like new. Kid gloves can be cleansed in the same manner, using milk, instead of water, with the soap. Keep these on the hands till perfectly dry, and then "buff" them,—that is, rub them briskly till they are smooth and soft.

No systematic housekeeper will be without her knitting or crochet-work for spare minutes. In this way she can furnish other members of her family, as well as herself, with mittens, scarfs, hoods, jackets, or even shawls, which for beauty and comfort are great additions to any wardrobe. I have no space for giving the directions for their fabrication, and, really, I think there is no need of it; for the bright colors and soft texture of worsteds are so enticing to young fingers that a knowledge of all their combinations is usually acquired before they are sufficiently acquainted with plain sewing. Although more important duties engage the greater part of the time and thoughts of the housekeeper, it is to be hoped that her early fondness for such employment will induce her to continue it during every interval of leisure, as a source of pleasant recreation, and of providing

these garments of taste and comfort for her household.

It was the fashion a few years since to wear boots of the same color and material as the dress; and then many young women, in a spasm of economy, furnished themselves with a set of tools, and went to work making boots for themselves and their friends. But their enthusiastic fit soon wore off. Perhaps if it had continued they would not have found themselves able to manage the more substantial, and more sensible materials of which women's boots are now made. Yet the same energy and prudence, which prompted them to that work at that time, ought to set them to making all sorts of house shoes and slippers. Serge, thibets and the thicker woolen cloths are suitable materials, with the addition of felt—which old hats will furnish—thickly quilted in layers, for soles; or, in some cases, the thinner sole leather, procured of the shoemaker or at the leather-dealer's. Worn-out shoes and slippers will serve for patterns, and silesia and common worsted braid—often remaining after making dresses—for linings and bindings. Boots should be kept in repair by inserting new elastic gores when needed—stitching them evenly with a stout needle and strong, waxed thread; by neatly mending the eyelet strips in the same manner, and also all broken buttonholes. Both serge and leather boots can be mended with a short needle and strong thread, by slipping the needle between the lining and the outside and passing from side to side of the rent or rip with small stitches.

Every article of clothing should be carefully used, promptly and faithfully mended, and when not in actual service either folded or hung smoothly away from dust and dampness, where nothing can soil or injure it. It is the duty of housewives to teach by their own example the importance of maintaining an agreeable personal appearance—which can never be accomplished without thorough neatness and tidiness in attire; no nicety nor elegance can ever atone for the absence of these virtues, and the influence of a mother's habits in these respects is beyond calculation.

[The next chapter will give suggestions and directions concerning Children's Clothing.]

From Putnam's Magazine for February.

THE OUTCAST.

Her sympathies are yours and mine,
Her heart is full of human love,
Her tastes, in spite of tinsel shine,
Do naught against her nature prove;
Not less her pity is than ours,
Nor are her joys an idle jest;
Sharp are the thorns beneath the flowers
She clasps unto her woman's breast.

She came into her life of blame,
Like us, in helplessness of grace;
Unconsciously received her name,
Unconsciously assumed her place;
Blessed with maternal care or cursed
With poverty's neglect, she rose
Through years' gradation and rehearsed
Her future of allotted woes.

It was not if she could or would;
She took her fate, like us, on trust;
Her follies are no natural mood,
Nor does she choose for jewels, dust;
For had she chosen, well we know
Her life had been our counterpart,
With more perhaps than we bestow
In sympathies of mind and heart.

The glances of her evil eyes
On us pass judgment none the less
Than we, who walk in saintly guise,
Condemning what we only guess.
Where we discern a gulf between,
She sees a simple line of chance,
And holds that we like her had been,
But for the chain of circumstance.

The stars that guard the lovers' talk
Are not more chaste with holy light,
Than when they guide her wayward walk
Through the waste places of the night;
And she and we beneath their rays
Reason the same, or reason not,
And misinterpret others' ways
To make our own the happier lot.

And which of us the saints shall say
She's wholly wrong nor partly right;
Or who, beneath that painted clay,
Pronounce there is no blameless white?
Then cast not at her stones of pride,
Low stooping from our height above;
But, moving humbly at her side,
Lift up her life with saving love.

THE NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

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R. P. EATON & CO., PUBLISHERS, OFFICE, 34 MERCHANTS' ROW. **MONTHLY.** SIMON BROWN, S. FLETCHER, } EDITORS.

APRIL.

"*Candidus auratis aperit cum cornibus annum Taurus.*"—VIRGIL.

The white Bull opens the year with his golden horns.

ET a boy take an orange, and thrust a wire through it from stem to calyx. Let oneend of the wire point to the north, and the other to the South. Draw a line round the centre at right angles with the wire, and set it spinning round from west to east. The orange now represents the earth revolving on its axis, and the line, the equator. Let the light of a candle fall upon it, so that the rays shall fall directly upon the line. The sun is now over the equator, and the days and nights are equal. We will call it the vernal equinox, which occurs about the 20th of March. Now tilt up the northern end of the wire gradually, until the direct rays fall 23½ degrees north of the equator. Here make another line around the orange. This is the tropic of Cancer, and indicates the distance from the equator, at which the direct rays of the sun fall upon the northern half of the earth's surface about the 20th of June, the longest days of the year.

Now begin to turn down the northern end of the wire, and about the 20th of September you will get the earth into the same position it occupied when you began the experiment. This we will call the autumnal equinox. Keep on gradually turning it down, and about the 20th of December, the direct rays of the sun will reach 23½ degrees south of the equator. Here draw another line around the orange. This will represent the tropic of Capricorn. Now the days are shortest in the northern half of the earth, and longest in the southern.

Now begin to tilt down the northern end, and upon the 20th of March, you will get it again into a horizontal position. Remember that the orange is to be kept spinning round on its axis all the while that you are tilting it up and down. These motions of the orange will give us a tolerably correct idea of the movements of the earth in relation to the sun, and the cause of the difference in the temperature, and in the length of the days, at different seasons of the year.

On the 20th of March, the earth's axis was horizontal. The northern end of it is now

being tilted up at the rate of 23½ degrees in three months; or, any given place on the northern hemisphere is approaching the sun at the rate of 470 miles a month, or about as fast as an ordinary man would walk. We shall soon be in a warmer climate. Taurus will be the reigning sign in the Zodiac, and the earth will open her bosom to the genial warmth of the sun, the buds will swell, and flowers will begin to open, the leaves will unfold, and all nature will spring into life and beauty.

But climate does not depend entirely upon latitude. It is influenced by various local causes. The latitude of Rome, the home of Virgil, is not very different from that of Boston. The warm waters of the Mediterranean, and the warm south winds from the arid sands of Africa, make the season at least a month earlier than ours. The month of April in that part of Italy, is more like our May, in which we may more properly speak of the opening year. The "Aprici dies," or sunny days of Virgil, are rare in this climate, in April, where the east winds, blowing over the icebergs of the Atlantic, take the place of the African winds on the shores of Italy. But the life-giving influences of the sun will be felt in due time, and all nature will rejoice.

APRIL HAS COME.

"April has come, and in the silent wood
The light rain patters, as if fairy feet
Upon the crisp leaves gambolled. There's a scent
Of blowing flowers on the soft south air,
* * * while along the rills
The grass springs green and balmy, and the earth
Is fragrant with a thousand springing seeds."

Mrs. B. H. Thomas.

April has come. Welcome, April, after the long and severe winter which has kept us ice-bound and snow-bound for three long months. All the more welcome will April be for this, with its showers and flowers, its singing birds and fitful skies. All the more heartily will the farmer enter upon his spring work, and the flower-folk get into the garden to see how things prosper there.

The old adage, "Take Time by the forelock," is worth remembering, as we enter again upon the new life of spring. We suppose it means that we shall take hold at once, promptly and efficiently, of whatever work we have to perform. To plow, to dress the land, and to sow in season, so that crops may have the influence of sun and rain at the proper time, requires as much skill as for the merchant to introduce his goods to the world just at the moment when they are most needed and there is a demand for them.

Certain crops, as the grains, demand April and May influences, and must have them, or they will be unprofitable crops. You may give them July and August, and add to them all the resources of your skill, and still they will languish. April and May were their birth-months and their growth-months, and they never will flourish without them.

Without, then, enumerating the important duties which devolve upon the farmer and gardener in *April*, it is enough for us to call attention to them, and urge that no one of them be left to be taken care of by the laggard's motto: "there is time enough yet;" but that every thing be done seasonably and well, and then *peace* and *prosperity* will preside over the house, garden and fields.

WHEAT CULTURE IN MAINE.

The *Maine Farmer* publishes a circular of S. L. Goodale, secretary of the State Board of Agriculture, announcing the vote of the Board, "That the several Agricultural Societies receiving bounty from the State be, and they are hereby directed, to offer in premiums for the encouragement of wheat culture, during the current year, a sum not less than one-fourth of the amount of bounty so received during the year." The secretary says, there is good reason for the belief that, even now, the average production per acre of wheat in Maine, over the limited breadth sown is greater than the average product per acre in the Western grain-growing States, and no doubt exists that, with improved culture, more judicious rotations, better manuring, and under-draining of such lands as suffer from a retentive subsoil, the acreage product can be greatly increased. The most successful method of culture in that State is stated to be—to prepare the land thoroughly in the fall by ploughing and manuring; and to follow this with seeding at the earliest opportunity in the spring—when the frost is first out for a little depth. The ravages of the wheat midge or fly, which for a term of years were terribly destructive, have been much less harmful for some years past, and there are reasons to hope they may not again become a serious hindrance to the cultivation of wheat in that State.

SAND IN THE BARN CELLAR.

The practice has become somewhat common of carting large quantities of sand into the barn cellar and mixing it from time to time with the droppings of the cattle. It is a practice involving the outlay of a great deal of labor of both man and beast, and consequently of much expense. This is done under the supposition that the sand *absorbs* the liquids and saves them.

So far as the sand keeps the liquids from running away, it is well to use it, whether it absorbs them or only prevents their escape by being in their way. Sand has little or no absorbing power, and only acts in this case by being in the way of the liquids.

In the absence, then, of peat, the use of sand is economical just as far as it prevents the liquids from escaping. Beyond that, it seems to us to be lost labor to cart in and out again any quantity of sand. It adds nothing of value to the manure, or, if anything, in scarcely an appreciable degree, while every cord of it that is handled over two or three times must cost from one to three dollars, according to the distance which it is conveyed and the wages paid.

The presence of sand in the manure heap acts as a divider, and in this way may be of some service; but it would be slight. At any rate, the same amount of labor expended in adding good peat to the manure heap, or charcoal dust, or almost any fine, dry vegetable matter, would probably be ten times as useful.

For the New England Farmer.

MAPLE SUGAR MAKING.

I am an old maple sugar maker, and have made as good an article as was ever sold in any market. I have also expended much thought, time and money in making experiments, and have looked the world of agricultural literature over for information on the subject without ever having got a suggestion worth a pin to me as a practical man.

Your correspondent, Mr. Field, says the rough bark should never be hewn off the tree and I can most cordially endorse, with abundant reasons, the assertion; but when he recommends boring through the white wood, I am reminded of the man who killed his goose that laid the golden egg. No tree should be bored more than one-half an inch in depth, and no more than one hole may be bored in the same tree, if the perpetuity of the orchard is desired. We have used the cast iron, the wrought iron, the sheet iron, the sumach, and in short every kind of spout ever used, except the Livermore Patent Spout, and we very much prefer the Willard's Franklin Spout, (that advertised in the FARMER by Mr. Proper.) To discuss the reasons for our preference would occupy more space than you would be willing to afford us, and we can only say that Messrs. Orange Judd & Co., of New York will publish during this year a work in which every process in maple sugar making is fully considered, and every conclusion reached is fully sustained by evidence. There are certain principles underlying the whole subject, of which the mass of practical men are entirely ignorant.

Your correspondent "A. B," of Essex, Vt. wants to know "what's the matter" that his sugar is waxy and black. There is nothing plainer, when you once "see it." All sugar solutions, dense or dilute, when exposed to light, heat and air, undergo decomposition or what is technically called degradation, or to express it in more common, though not strictly correct language "they begin to turn sour." Agitation either by boiling or otherwise accelerates the action, and the presence of foreign matter also helps it along.

Degradation is also contagious, and one particle of degraded matter acts like leaven in the mass. Now "A. B.'s" old buckets are full of the leaven, and it is a physical impossibility to get it out by scalding or otherwise. Then again, it makes all the difference in the world whether he fills up his pan and keeps a pan full of sap boiling hour after hour, or only puts in just enough to cover the bottom of his pan and keeps filling in as he reduces the amount by evaporation. Could fresh drawn maple sap be instantaneously relieved of the water contained in it, the product would be pure cane sugar, as pure as any loaf sugar; but that being a physical impossibility, all maple sugar is composed of cane sugar and this degraded article, which is known to chemists as grape or uncrystallizable sugar, and which is but two-fifths as sweet as the cane sugar, and which constitututes the greater part of "A. B.'s" waxy sugar. If the excess of grape sugar is great, the mass should not be cooked too hard; as the uncrystallizable part dries on to the other and prevents either precipitation or purgation.

As regards the distance from the ground at which trees should be tapped, there is some difference of opinion. I am inclined to believe that the tree does not dry up quite so early low down, and that is all the difference, and it does not amount to anything. The only difference between lowland and highland sap is that the former is sometimes more dilute, and, requiring longer boiling, is subjected to a little more of the degrading influence. Sap almost invariably deposits a small amount of the carbonate of lime in the form of a hard scale on the kettle in which it is boiled. It has, however, no injurious effect unless per-

mitted to accumulate in quantity, when it has a tendency to discolor and perhaps burn the sugar.

I regret that want of space compels me to so cursory a view of this subject, but I suppose I must stop or the printer will bar me out entirely. O. S. Bliss.

Georgia, Vt., Feb. 29, 1868.

EXTRACTS AND REPLIES.

COOKING CATTLE AND SWINE FEED.

In the Weekly Farmer of December 7th, under the heading "Cooking Cattle Feed," are some statements made at a meeting of the "Royal Agricultural Society of England," in which I was much interested. It seems that our British brethren use the English language somewhat differently from ourselves. To say "chaff" for cut straw, "cake" for oil cake, "Swedes" for Swedish turnips, "pulping roots" for mashing them, "malt combs" for, I know not what, &c., must, I think, sound rather strange to many American ears. What Mr. Laws intended to prove by saying that one of the animals with which he experimented was "white, with a black nose," I do not know. Some of the statements made at this meeting I do not fully understand; still I think it very evident that they militate very strongly against cooking or fermenting food for any kind of animals, especially those that chew the cud. In this I think they are right.

So far as my experience goes, pork from hogs kept on uncooked and unfermented food is far superior to that from hogs kept on cooked and fermented food. If I could get no pork but this, I should, so far as eating pork is concerned, turn Jew at once. I have frequently bought pork; but have much more frequently obtained bad than good. I do not indeed know how it had been fed, but in most cases, I suppose, with cooked or fermented food; as this is the most common practice. I have, on the other hand, frequently eaten pork which I knew for a certainty had been fed wholly with uncooked and unfermented food, and always found it good. Cooked food is apt to be given too hot; and fermented food is apt to be fermented too much. It may be said that these evils might be avoided. Theoretically they might; practically they never will be. The world always has contained careless people, and doubtless always will.

Derry, N. H., Feb., 1868. E. B.

Remarks.—The dust or substance that separates from malt in the process of drying or during its preparation, is sometimes called "malt combs" and at others malt-dust, and is used both as a spring top-dressing of grass land and a feed for cows and pigs. The question of color, particularly that of white, has been considerably discussed both among European and American cattle breeders, and many have a prejudice against white. Prof. Agassiz introduced the subject at a late meeting of the Massachusetts Agricultural Society. He said white rabbits had uniformly weak eyes. He supposed the white color resulted from a bleaching of those darker tints which are connected with the qualities of the blood, and therefore indicated a certain feebleness of the system. A butcher of thirty-six years' experience in the business was cited who was very strongly prejudiced against white cattle, and said they never dressed well. It was also stated that tumors near the roots of the tail of a white horse are common, and that white horses were subject to a disease known as "melanosis," which seldom or ever attacked a black, bay or red horse. With a knowledge of these facts and theories, it is not at all strange that Mr. Laws should allude to the peculiar color of his peculiarly strange acting steer.

BUNCH ON A STEER'S JAW.

I have one pair of steers that are nicely matched. One has a bunch growing on his under jaw about as big as a hen's egg. I first noticed it only about a week ago. It is soft, and appears to be growing fast. How can I get rid of it with safety? Will it be safe to cut it out? D. W.

Hartland, Me., Feb. 25, 1868.

Remarks.—Bunches upon the jaws of animals are so various in character, and are the result of so widely differing causes that it is unsafe to advise what to do without an examination of each individual case. We understand that these swellings upon the jaws of cattle are sometimes produced, as on the human face, by a decayed, broken or disordered tooth; sometimes they are fibrous tumors or a kind of wart under the skin, but not connected with the bone; and often they result from an internal disease in the bone, or from some external injury to it. It is an old adage, that to know the disease is half the cure. If, in this case, the bunch is caused by a bad tooth, it should be extracted; if it is what the books call an encysted [in a sack] tumor or wart, it can readily be removed by cutting down upon it and taking out the cyst or sack; if it is the result of a blow or other external injury, bathing in cold or warm water may be beneficial; if it is caused by a disease in the bone, a surgical operation, to which we alluded in the Farmer of Feb. 29, may be advisable. It would be well, we think, if all country physicians would qualify themselves to advise and assist in diseases of animals.

BEANS FOR SHEEP.

I have a quantity of poor beans. Are they good to feed to sheep? A neighbor says they will make the ewes lose their lambs. Is it so? A. S.

Tunbridge, Vt., Feb. 25, 1868.

Remarks.—Similar inquiries were made of us a few years ago in relation to oats. We then replied that oats, corn, beans or any other food in which nutritive matter was highly concentrated was liable to injure sheep or any other animal if injudiciously fed. Even cold water, if drank injudiciously, may injure or kill a thirsty man. According to the chemists, there is a little over one pound of nitrogen in 100 pounds of hay, and in 100 pounds of beans nearly four pounds of nitrogen. According to a table in Randall's Sheep Husbandry, the theoretical nutritive value of 23 pounds of beans is equal to 318 pounds of carrots, or 70 pounds of Indian corn; while from the practical experiments of one man in Europe, the value of 54 pounds of beans appeared to be equal to 250 pounds of carrots, or 52 pounds of Indian corn.

But we believe that farmers generally find that sheep are more liable to become "cloyed," or over fed on beans, than on almost any other grain, and that great caution is therefore necessary in feeding beans to sheep, especially at the commencement, as they eat them with great avidity. It is well to mix them with more bulky food,—shorts, oats, buckwheat, &c. But, properly fed, beans are *the* food for sheep, both for fattening and for the growth of wool: and if they are often injurious to breeding ewes that fact ought to be known.

MORE ABOUT TAPPING AND SPOUTS.

Though your correspondent, Mr. Field, discards metalic spouts, they are in common use in this section, and if you find any *better* sugar than is made in Brookfield, I would like to share with you in a good feast. Another correspondent, L. M. Hunt, says that tapping trees in a circle will girdle the tree in time. Undoubtedly correct. But let us take a tree one foot in diameter, and allow an inch of boring each year, and you girdle the tree in about thirty-six years, provided it did not increase at all in circumference. But in that time the tree may become two feet in diameter. In that case you may go round again. Then take a tree two feet in diameter and put two tubs to a tree and two spouts to a tub, and you girdle the tree in about eighteen years; but in that time it will not have half doubled its diameter. Now sir, I think we are becoming a set of robbers, in one sense. We are taking all we can get, and return nothing; and if we go on half a century longer in this unrighteous manner, we shall find our ship wrecked on the shoals of want of maple sugar. I say, give me a pod bit, say two inches long, three-fourth by three eighths inch, with spout of sheet iron, with one end ground sharp; pare off the rough bark and bore one inch deep; then drive in the spout below the hole—careful not to drive into the wood; then drive the nail with head on one side only, just above the hole and hang on the pail. When necessary, I would go round with my bit and rim out as I thought best. V. BAKER.

Brookfield, Vt., March 2, 1868.

TO PREVENT DARK AND WAXY SUGAR.

One of your correspondents, "A. B." wishes to know why he makes "dark and waxy sugar." One great reason I suspect is, he does not keep his tubs and other fixings clean, for the sap is alike free from impurity in all trees. I have an orchard on ground such as he describes, and another four hundred feet higher; and with the same care the sugar is of the same quality. I have tubs older than he speaks of, yet I had orders last season for this spring's sugar. My practice is to scald and scour the tubs both before and after using. The barrels too, should be scalded and cleaned. This last may be done by putting a cham inside and shaking the barrel well. Care should be taken that smoke does not come above the sap. It is my habit to strain the sap through flannel as it is gathered, and it should be boiled down as soon as possible. Cleansing the syrup, when boiled down, is another important item in making good sugar.

Sunderland, Mass., March 3, 1868. Z. M. H.

AMOUNT OF SEED FOR POTATOES.—WHEAT RAISING.

Last season I experimented a little on the amount of seed to be put in the hill for potatoes, and found that potatoes cut two eyes to a piece and two pieces in the hill, gave as much by measure, as where planted a whole potato in the hill, while the whole potato for seed, gave a third more in number,—there being many small ones. This held good with five different varieties on ordinary soil, alike as to quality.

I think that if the farmers of New England would exert themselves to raise their own wheat, we should soon see flour quotations down to living prices; or even if they would do as well in this line as the farmers have done in a small school district in this vicinity, who raised nearly three hundred bushels, or about enough to supply the wants of the district. A.

Washington County, Vt., 1868.

RED WATER IN CATTLE.

Give the animal, in common cases, one tablespoonful of copperas and two of saltpetre, and in severe cases, double the dose, giving it from three to five days, once a day, in the morning; then wait a few days and if the disease is not entirely cured, repeat the doses. I once cured an ox by four doses, that had been troubled for over a year.

Brookfield, Vt., Feb., 1868. L. W. B.

REMARKS.—Prof. Gamgee of the Edinburgh Veterinary College calls this a "disease essentially attacking the poor man's cow," and says it is often checked by a change and improvement of diet. Mr. Flint recommends as a purgative one pound of Epsom salts, half an ounce of ginger, and half an ounce of carbonate of ammonia. Pour a quart of water on the salts and ginger, stir thoroughly, and, when cold, add the ammonia. Repeat, if necessary, once in six or eight hours till it succeeds.

A SICK OX.

Several years ago I had an ox that showed similar symptoms to those described by a correspondent in FARMER of Jan. 25. While examining his head I looked into his nostrils, and saw something so far up that I could not reach it with my hand, but with the help of pincers I got hold of it, and with considerable difficulty I drew out a branch of a tree, covered with small twigs, and over one foot in length. How long it had been there I know not. The ox must have got it in his head while in the pasture, probably feeding where I had previously cut wood. The stick went up butt first, so that it was impossible for the ox to get it out without help. The stick was all covered with pus or matter. Immediately after it was extracted the ox got well. HIRAM FRENCH.

Eaton, Compton Co., Province of Quebec, Feb. 4, 1868.

HOLSTEIN OR DUTCH CATTLE.

I own several Holstein cows raised from stock imported by the late Hon. William Jarvis, formerly Consul to Spain, and P. W. Jones, Esq., Amherst, N. H. I also own Jersey and Ayrshire cows. From my own experience and personal observation, I do not hesitate to state that the quality of the milk of the Holstein cows is equal and that the quantity far surpasses either of the others, although as a breed they may not at present be considered quite as popular. I recently had the pleasure of seeing eight Holstein working cattle, raised and owned by P. W. Jones, Esq., Amherst, N. H., the smallest of which girted seven feet; and at the same time a cow owned by the same gentleman which gave at two milkings 36 quarts. I consider them a tough, hardy breed of cattle, and all qualities considered, the most profitable breed we have. C. H. TILTON.

Ashland, Mass., March, 1868.

EFFECTS OF A FIRST CROSS.

Discussions at the late meeting of the *State Board of Agriculture*, in Concord, Mass.—Recollections of a ramble among the sheep growers in Vermont.—Effects of a first cross.—Sheep breeders in Vermont.—A lamb criticised—disappointed—find a *taint*—the mother no longer a proper breeder.—Views of Dr. Harvey, the celebrated discoverer of the circulation of the blood.

Many topics relating to agriculture were discussed at the late meeting of the Massachusetts State Board of Agriculture, in Concord, and among them that of *breeds* and *breeding*. The principles which should govern the breeder were clearly defined by some of the speakers, and several interesting and valuable facts and suggestions were drawn out in the course of the discussion. One among them, was upon *the effects of a first cross*. The principles enunciated were not new to us, but some of the illustrations cited to sustain them, were of a highly interesting character.

The discussion on this point brought to mind some of the incidents that occurred a winter or two since, during a week's ramble among the sheep breeders in Addison county, Vermont. We saw and examined as many of the finest flocks as we could reach in several days, through the aid of as fine a pair of coal black steeds as ever man drew "the ribbons" over.

After examining one very fine flock, with as critical a touch and eye as we could command, the proprietor said, "If you had come with the intention of purchasing, which lamb of the flock would you select?" After scanning the flock for a few moments, the favorite was pointed out. Should *you* select that lamb? we asked. No, was the reply. We then enumerated the excellent points and qualities which we thought the lamb possessed, commencing at the nose and ending at the tail! at the same time feeling *a little under par* at the failure. Well, said our friend, good-naturedly, let us take that lamb to the door, where you can examine him in a clearer light, and away from the other sheep. We did so, and no new discoveries were made on our part. We were puzzled, and exclaimed, "Why would *you* reject that lamb?"

"Because he has a taint," was the reply.

"Where is it? I see none."

"Look at his nose, just above the nostril."

And, lo! there was a brownish-black spot, but rather indistinct, about as large as the ball of one's little finger, and that was his condemnation! There was the unmistakable mark of the South Down. On every other account the owner confessed that it was the finest lamb in the flock. But this was evidence of impurity, and rendered the lamb nearly valueless.

In such a case as this, the probability is, that the mother of the lamb will never again produce offspring that is free from taint, and ought at once to be turned to mutton, or bred from "as a scrub." The next offspring would be quite as likely to have a nose, half of which would be black, as of any other color. This is the manner in which deterioration creeps into flocks of sheep, and into all our domestic animals.

On this point there were some remarks recently, by a correspondent of the *Prairie Farmer*, of a highly interesting character. He says:—

A number of years since, a choice lot of South Down ewes, belonging to a neighbor, accidentally coupled with a very coarse native ram; the owner was so incensed that he destroyed the lambs and supposed that would be the end of it; but so long as I knew his flock the stain was not removed. Now here, now there, the blood of the coarse native buck cropped out.

Last fall, while passing through the flock of a noted breeder of American Merinos, in the Green Mountain country, I noticed a peculiar trace about the faces of a number of ewes; a dark tinge on the nose and a peculiar halo-like ring about the eyes. In one or two instances, also, I noticed a tinge of dark about the fetlocks. A neighbor, who knew the flock as well as the owner, informed me that a South Down buck got into the flock several years since, and although his lambs were all disposed of, the trace of his connection with the ewes was so apparent for three years, that several lambs were quietly disposed of, and the traces are now so distinct that a close observer would see them at once.

And, by the way, I have now in my flock of Merinos a ewe which last year got with lamb by a half blood South Down ram which broke into the inclosure. Her pedigree is undoubted, and yet her lamb this year, from a first class Hammond buck, has undoubted South Down marks.

Nor is it difficult to understand how this can happen. If the fœtus be of mixed blood—its blood mingling and commingling with that of the mother would, as Dr. Harvey expresses it, "inoculate her system with constitutional peculiarities of the fœtus," "and as these qualities are in part derived from the male progenitor, the peculiarities of the latter are so engrafted on the system of the female as to be by her communicable to all offspring she may subsequently have by other males." This principle holds good, in the improvement of stock, as well as in its deterioration. The use of a first class, thorough bred buck, not only improves the one issue, but engrafts the peculiarities fixed by a long and distinct line of ancestors upon the females indelibly. So at once the value of the thorough bred males becomes evident.

—A large convention of the dairymen of Wisconsin and Illinois was held at Belvidere, Ill., Feb. 11. X. A. Willard, Esq., of New York, delivered an address.

PLANTING PINE SEED.

Will you please inform me as to the best method of planting pine seed, preparation of the ground, season of planting and where they can be obtained.
Gloucester, Mass., Feb. 21, 1868. E. L.

Remarks.—In an article on "Sowing seeds of Evergreens," about two years ago, we advised a correspondent who made inquiries similar to the above, to go into any forest and inquire of Nature what course she pursues in propagating the various trees that flourish so nobly in her dominions. We shall there learn that the oak and chestnut ripen their fruit in the autumn; the elm and maple in June; the sugar maple in August and September; the yellow birch in July; the white pine in August, and the pitch pine some time during the winter. The fall, then, is the time to gather the burrs of the white pine, for field planting.

Mr. David Alden to whom the premium for the cultivation of forest trees, in Plymouth County was awarded, in 1852, says the proper time to gather white pine seed is from the 25th of August to the 10th of September, and before the opening of the burrs. They should be spread on a tight scaffold, away from mice, and when dry can be threshed with a flail without injuring the seed. We believe the seed is also usually kept for sale by some of the city seedsmen. The seed is sometimes planted in the fall and sometimes in the spring. Mr. Alden found that the seed sown in the fall vegetated too early and the plants were killed by late spring frosts. He preferred spring planting.

But these pine seeds placed on the impoverished soil of an open field, and exposed to the full glare of the sun and the unobstructed sweep of drying winds, are so differently situated from those planted by nature on a soil of decomposing leaves, and protected by the shade and shelter of the forest, that much trouble is found, in practice, in raising a crop of pine trees, on our worn-out land, from the seed.

In the Transactions of the Massachusetts Agricultural Societies for 1856, we find the statements of three applicants for the Plymouth county premium on Forest trees. Mr. S. Hayward planted 153 rods, in Oct. 1829, in hills 5 feet 3 inches apart, each way, on land sown to rye that year, putting four seeds in a hill, and covering them one-fourth of an inch with earth. Many of the seeds sprouted in the fall and died in the winter. The trees were trimmed in June, 1855, and many of the poorest cut out. In 1856 there were 708 trees standing on this lot. On another lot of one acre and 16 rods of grass land, which did not yield enough to pay for mowing, he sowed pine seed broadcast in Dec. 1840, upon the grass. In 1856 there were 3019 trees in a growing state. Another lot of two acres and 53 rods was sown with white pine seed, broadcast, and, as before, upon the grass, half in in December, 1840, and half in March, 1841, without any noticeable difference in their germination or growth. In 1856, 3726 trees were growing on this lot.

Mr. R. Sampson, another claimant, began by planting seeds, but as they did not come up well, he resorted to transplanting. Those taken from the woods did poorly, while those taken from the roadside, pastures, and open fields, did well. He set some 8000 trees on about twelve acres, and regarded the last week in May or the first in June as the best time for transplanting.

The third claimant, Mr. J. Copeland, sowed the seed on seven acres of rye land,—part in February, and part early in April. Neither sowing came up well, and he resorted to transplanting, using those from ten to twenty inches high In transplanting, he said we gain from five to six years in the growth, and with less labor than in gathering and planting the seeds. He found that two men could set 500 trees, enough for half an acre, in a day. He regarded April and November as the best months for transplanting. If set the last of May or first of June, the dry weather that frequently follows prevents their growth, if it does not kill them.

Mr. C. Morton of Kingston, commenced transplanting pine trees in 1848, on land that produced nothing but mullein and tinkham weed. Of some 400 transplanted the last of May not one in twenty died, while of those transplanted by the same process in the October following, scarcely one out of twenty lived. His method was to furrow the ground as for corn, only wider, select trees from pastures, &c., take them up with a shovel with considerable sod and soil about the roots, place them in the furrow at proper distances, and haul the earth around them. In one case his hired man with one horse furrowed the ground, collected

the trees from an adjoining pasture, and set them out on half an acre in one day. In 1862 some of those set in 1848 were more than 20 feet high, and measured near the surface of the ground nearly three feet in circumference.

CHEESE FACTORIES.

The Massachusetts Cheese Manufacturers' Association, held their annual meeting at the Town Hall in West Brookfield on Thursday, Feb. 20, 1868. We are indebted to a correspondent for the following report of the proceedings, and regret that ill-health deprived us of the pleasure we had anticipated of meeting our friends on this occasion.

The following officers were elected for the ensuing year:—

President—Hollis Tidd, New Braintree.
Vice Presidents—D. S. Ellis, Warren; J. F. Davis, Barre.
Secretary—N. S. Hubbard, Brimfield.
Treasurer—B. F. Hamilton, New Braintree.

Eight factories reported, viz.: Barre Central, Barre Cheese Company, Hardwick Centre, New Braintree, Wilbraham, Worcester County, at Warren, Coy's Hill, at Warren, and Warren Cheese Company, at Warren.

These factories received 14,053,136 pounds of milk, and made 1,447,355 pounds of cheese. It took from 9.29 to 10.40 pounds of milk for one pound of cheese. Coy's Hill, in Warren, averaged the least, and Wilbraham the highest.

The following is an abstract of the reports from the several factories:—

Barre Central received 2,365,456 pounds of milk, and made 248,023 pounds of cheese. It took 9.50 pounds of milk for one pound of cheese. Whole expense of manufacturing, materials, freight and marketing, $2 38 per 100 pounds. Net price per 100 pounds, $12.01. They also report a net profit on hogs of $203.78.

Barre Cheese Company received 2,295,834 pounds of milk, and made 240,328 pounds of cheese. It took 9.55 pounds of milk for one pound of cheese. Whole expense of manufacturing, materials, freight and marketing, $2 60 per 100 pounds. Net price per 100 pounds, $12.08. Profit on hogs of $191.98.

Hardwick Centre received 2,485,585 pounds of milk, and made 264,267 pounds of cheese. It took 9.40 pounds of milk for one pound of cheese. Whole expense of manufacturing, materials, freight and marketing, $2 41 per 100 pounds. Net price per 100 pounds, $12.60.

New Braintree Factory received 3,063,048 pounds of milk, and made 309,270 pounds of cheese. It took 9 90 pounds of milk for one pound of cheese. Whole expense of manufacturing, materials, freight and marketing, $2.51 per 100 pounds. Net price per 100 pounds, $11.82.

Worcester County cheese factory at Warren, received 2,045,209 pounds of milk, and made 202,239 pounds of cheese. It took 10.11 pound of milk for one pound of cheese. Whole expense of manufacturing and materials, $2.35 per 100 pounds. Net price per 100 pounds, $12.2776.

Wilbraham Factory received 610,184 pounds of milk, and made 58,670 pounds of cheese. It took 10.40 pounds of milk for one pound of cheese. Whole expense of manufacturing and materials, $2.00 per 100 pounds. Income per 100 pounds, $14.50. (Probable gross sales).

Coy's Hill Factory, Warren, received 289,079 pounds of milk, and made 74,174 pounds of cheese. It took 9.29 pounds of milk for one pound of cheese. Whole expense of manufacturing, materials, freight and marketing, $2.744 per 100 pounds. Net price per 100 pounds, $11.446.

Warren Factory, at Warren, received 498,741 pounds of milk, and made 30,384 pounds of cheese. It took 9.90 pounds of milk for one pound of cheese. Expense of manufacturing, $1.13 per 100 pounds. Net price per 100 pounds, $11.24.

Amount of Capital Invested.

Barre Central . .	$7,500.00	Wilbraham . .	$2,500.00
Barre Cheese Co.	5,053.23	Coy's Hill, Warren	5,509.00
Hardwick Centre	4,250.00	Warren	2,778.00
New Braintree .	8,000.00		
Worcester Co., Warren	$4,600.00		$49,181.23

At this meeting the following resolution was adopted, and we acknowledge with much pleasure the receipt of a certified copy thereof from the Secretary, N. S. Hubbard, Esq.:—

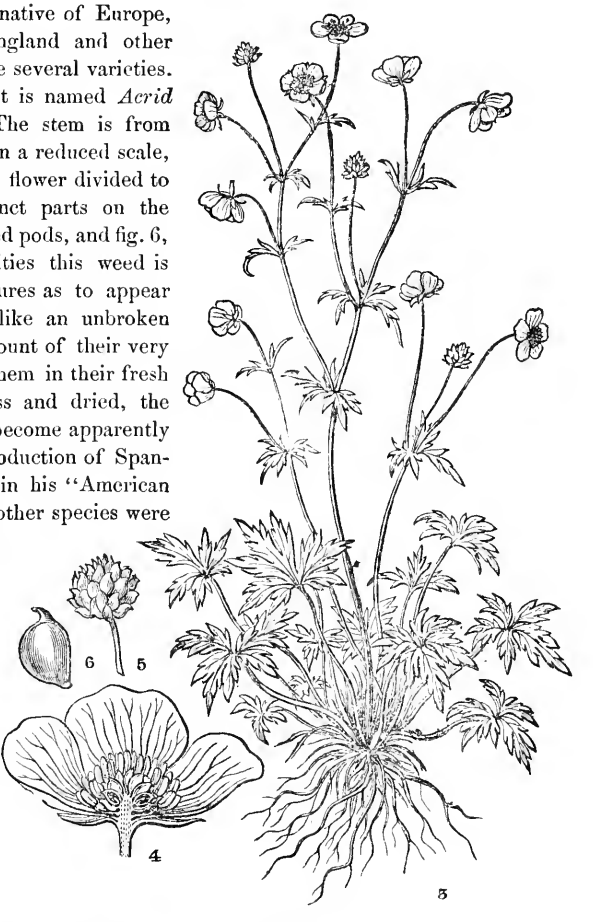
Voted, That the conductors of the Agricultural press of Massachusetts, be made and constituted honorary members of the Association, and that the Secretary be directed to apprise such conductors of the fact, and hereafter to notify them of the meetings of said Association.

Why Dahlias Degenerate.—Mr. E. Ferrand, of Detroit Michigan, makes the following statement upon this subject, in the New York *Horticulturist*:—

In order to propagate the new varieties of dahlias, and make hundreds of plants where only a few would be propagated by the usual methods of separating the tubers, or making cuttings from *forwarded* growths in early spring, the European raisers of dahlias graft them on roots in winter, and to that effect use roots of the strongest growing varieties. To make those grafts, only one bud is sufficient, so that when the owner of a good variety desires it to remain scarce, for pecuniary reasons or other, he uses scions with only one bud at the top; those plants grow and bloom as in the ordinary way, but in the fall everything is gone of the new variety, and even the tubers, except those (tubers) the upper part of which has been used for stocks, and which may have yet some dormant buds; the same when planted afterward by the uninitiated produce the flower of the stock and not that of the variety grafted on it.

When instead of a scion with a single bud, one with a second bud at the base is used, inserted into the stock, the lower bud grows into roots which naturally reproduce flowers identical to the variety of the scion.

BUTTER CUP, OR TALL CROWFOOT.

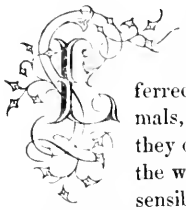


This "flower of the field" is a native of Europe, but is now common in New England and other parts of the country. There are several varieties. The one represented by the cut is named *Acrid Ranunculus* by the botanists. The stem is from one to two feet high, as shown, on a reduced scale, by Fig. 3. Fig. 4 is an enlarged flower divided to show the insertion of the distinct parts on the receptacle. Fig. 5, a head of seed pods, and fig. 6, a separate pod. In some localities this weed is so abundant in meadows and pastures as to appear at a distance, when in bloom, like an unbroken sheet of golden yellow. On account of their very acrid juice, cattle do not eat them in their fresh state, but when cut with the grass and dried, the acridity is dissipated, and they become apparently quite innocuous. Before the introduction of Spanish Flies, says Mr. Darlington in his "American Weeds and Plants," these and other species were used to produce blisters; being uncertain in their operation, they are seldom employed. About a dozen other species are to be found in the woolands and meadows, and a few aquatic ones in streams and ponds. The only one of these which assumes the character of a weed at the north is *R. repens, L.*, the long stems of which are usually prostrate and rooting at the joints; it has large bright flowers, and is sometimes common in wet meadows.

A variety grows in Europe with a fleshy bulb, which is highly acrid, and which, it is said, is sometimes used by beggars to cause ulcers upon their bodies, in order to excite the sympathy of those to whom they appeal for charity. This variety is a troublesome weed.

PRACTICAL SKILL.—Many presume to think that they can leave the workshop or bar and succeed in farming, but they are sure to fail, no matter how well versed they may be in theory, or, as it is called, book farming. Beside, a person may raise good crops and valuable stock, but one great object is not yet gained, which is to dispose of our products to good advantage. Young farmers have to contend with this, and in trading with their brother farmers they are sure of being taken in if they know not the relative value of stock. Sharks of every size and grade are around him to prey upon his ignorance and good nature, and the result is an empty pocket and a store bill. Out West here you must learn the art of trading. To be a judge of horses, cattle, hogs, and sheep, as well as of the manner of feeding, breeding, &c., is no small matter. The want of this keeps thousands of farmers poor, and will, until they learn, by bitter experience, to change their way of doing business. In short, he only can be a successful farmer who has taste and experience in all the various branches of this most various of all pursuits. I have tried the theoretical, and the advice of others, and failed, and it was only when, discarding all others, and trusting to Dame Nature and common sense, that I have realized a fair competency.—*S. W. Williams, Mechanicsburg, Ill., in N. Y. Tribune.*

SAWDUST AS A LITTER.



ENGTH of hair, thickness of hide, and a great amount of vital energy are conferred upon our domestic animals, but it does not follow that they do not need protection from the weather, or that they are not sensibly improved by whatever tends to their comfort and contentment.

A cow that stands upon an uneven floor, or one that is too short, or whose neck is cramped between stancheons that are too narrow, will be in a constant state of uneasiness and discomfort. An ox that has labored all day, and then obliged to lie upon bare planks at night, with currents of cold air coming up between them, will not find that rest which he would if the floor were tight and well covered with some kind of soft and clean litter.

So swine love to wallow in the mire, but that is one of the means to which they resort to keep off insects, and in the end, to keep the skin clean and in a healthy condition. No animal, however, enjoys a clean and warm bed, better than the hog, and if *educated* properly, few animals will keep their bed more clean. They will gather up the straws from every corner of the room, and *make up their bed* in a compact manner, with as much assiduity and pains-taking, as the best chambermaid in the land shows! If the hog is a sloven, and does not keep his bed-chamber clean, it is more frequently to be attributed to the inattention of the owner, than to any innate disposition of the animal to live in the dirt.

Those who drive teams upon the road soon become convinced that their animals will perform fifteen to twenty per cent. more labor, for having well littered floors to lie upon at night.

These are some of the reasons why we can profitably *use sawdust as a litter*. But there are others. A correspondent of the *Scottish Farmer* wrote to the editor that, from the fear of introducing the Rinderpest through straw brought from farms at a distance, he was induced to litter his cows with sawdust. He then inquired what admixture would most speedily decompose the sawdust, and thus improve the manure as a fertilizer of the land? To which the editor replied:—

"Sawdust, in its natural state, is not easily decomposed, but it is an excellent absorbent for liquid manure, and when well soaked with urine, ferments readily. It is, therefore, a valuable material for bedding cattle, and no difficulty will be experienced in getting it to decompose, provided it has been thoroughly saturated. At one time we had the command of a large quantity of sawdust, which we used with great advantage as litter, and also for mixing with the night soil of some extensive public works, for which purpose it answered admirably in every respect. It is stated by chemists that sawdust, during decomposition, forms certain acids, which act as excellent fixers of ammonia, and that when well mixed with dilute sulphuric acid, it is one of the best materials which can be employed for fixing the ammonia given off in stables."

There are other plain reasons why we can use sawdust as a litter economically. Besides affording a soft bed for the animal to lie upon, it is an excellent absorbent of the liquid droppings of the stock, which are too often allowed to run to waste.

We have no doubt that a barren piece of land may be brought into a high state of fertility by the use of sawdust, and without the application of manure. The process would include a period of several years, undoubtedly, but might be cheaper in the end than any other, if the sawdust were abundant and near at hand. It would be something as follows:—Apply a dressing of sawdust in the spring, and plough it in just so as to cover and mix it with the sand. In mid-summer add another dressing and plough. If weeds appear, plow again in the fall. A single horse will be sufficient to do the work, so that the cost of labor in applying the sawdust and ploughing the land will be all that is invested in it, excepting interest on the value of the land,—and that would go on if it were not touched.

In the course of two or three years, under this management, weeds and grasses would appear, and when they become numerous, plough again, sow clover seed, and when the plant is nearly ripe, plow that under. Level, sow clover seed again, and so continue until the land is so abundantly supplied with vegetable matter as to bring any of the common crops of the farm! Then manure liberally, occasionally ploughing under a crop of clover, or straw of any kind, and you will have a constantly improving soil that will continue a good soil until the end of time.

This process we have stated from our own experiments in a small way, and from numer-

ous statements made to us of the effects of dry vegetable matter upon a lean soil. We find in *Johnston's Elements of Agricultural Chemistry*, the following remarks, which corroborate the views we have expressed:—

"*Sawdust*, with a view to slow amelioration, or dry vegetable matter of any kind may, if in a sufficient state of division, be added with benefit to the soil. Even sawdust applied largely to the land, has been found to improve it,—little at first more during the second year after it was applied, still more during the third, and most of all in the fourth season after it was mixed with the soil. That any dry vegetable matter, therfore, does not produce an immediate effect, ought not to induce the practical farmer to despise the application to his land—either alone or in the form of a compost—of anything he can readily obtain. If his fields are not already very rich in vegetable matter, both he and they will be alternately benefited by such additions to the soil.

"Saturated with ammoniacal liquor, or with liquid manure, sawdust has been profitably used, and without further addition, in the raising of turnips. It may also be charred, or by alternate layers of quick-lime, and thus beneficially applied."

The decomposition of sawdust will take place more rapidly where the soil is manured; but our object in detailing a process has been to enable the farmer to bring up a piece of waste land to a state of fertility, by applying a *capital in labor* upon it, and without using the manures which he needs for the land already intended for his crops.

CARE OF ANIMALS IN WINTER.

In wintering animals, there are some things to be considered besides the mere feeding and sheltering them. They have rights, tastes and habits that must be regarded, or they will be discontented and perhaps suffer.

Thus gentle and peaceable cows may be turned into the yard with a dozen rollicking steers or as many huge oxen, which will race and push them about, and not only deprive them of a fair share of the fodder thrown out, but allow them no time for rest and to "chew the cud of contentment."

So they may be exposed to the frolics of one or more colts, which will chase and bite and kick them until they become nearly exhausted before the time comes for tying them up at night. All this may be done on the part of the colts in the way of fun, but as the frogs said to the boys who threw stones at them, "it may be fun to you, but it is death to us." The colt has no milk to make, no wood to draw, does not go to mill or market, but is full of vim and mischief, and so practices his powers of attack and defence on the poor cows and young cattle which are shut up with him in the yard.

It is a good practice to separate the stock. Keep the colts in a yard with a fence so high that they will not attempt to jump over it. Allow no carts, wagons, ploughs, harrows, or lumber of any kind to remain in it, which they can run against or stumble over and injure themselves. This is the practice, we are well aware, with those who engage in the raising of colts to considerable extent, but where one or two only are kept, they may be seen daily disporting themselves pretty much in the manner that the boys enjoyed the sport and exercise of firing stones at the poor frogs who come to the surface of the water for a breath of air.

Especially, do not compel the calves to run with larger and older animals. Sheep and calves may, perhaps, run together without detriment to either, if in small numbers; of this, however, we are not quite certain. There may be objections of which we are not aware; some of our experienced friends can tell us. Finally, read and remember the following by a correspondent of the *Germantown Telegraph* on keeping

Calves with Sheep.—Late calves, when they come to the barn in the fall, will, if confined in yards with older animals, frequently sicken and become debilitated. Being weak and small, they are usually shoved about, and deprived of their due share of the food, and in consequence, 'fall away' rapidly. Now, I never allow animals of this description to associate or be confined with larger ones, but put them with my sheep, where there is no danger of their doing or receiving harm. Sick calves, I have observed, often pick up and devour with avidity the hay and straw from among the sheep dung. It is medicinal, and I know of no article that has a more immediate and salutary effect in restoring diseased calves to health, than sheep dung. I have practiced this usage for many years, and have never lost an animal, though I have had many sick when they came to the barn."

—The Hocking county, Ohio, *Sentinel* says: "A terrible disease is now raging in this county among the hogs. Some farmers have had as high as fifteen and twenty die in one day. It is caused by sore throat. Turkeys in great numbers, have also died, the present week, of the same disease."

COST OF CHEESE.

The Herkimer County, N. Y., Farmers' Club recently discussed this subject. The reporter for the *Utica Herald* remarks that in old times, Herkimer county farmers did a fair business in making cheese at 7c per pound. This fact as a basis has led many astray. They naturally conclude that all above the 7c which cheese now brings must be clear profit. The majority of farmers keep no current farm accounts. They can not tell what a bushel of grain or potatoes costs, or in fact any other farm product. They sell their products at prices which seem to be high, very much higher than in former years, and conclude that they must be laying up money rapidly. At the end of the year, when all the products have been sold and all the various accounts and expenses are to be paid, the rugged fact presents itself that there is "no money in the locker," and there is some considerable astonishment where it has gone. The first thought which occurs is that some useless extravagance has been indulged in, or more than usual losses have eaten into the profits. On carefully revising the operations of the year, men fail to find the leak.

Three detailed estimates of the cost of making cheese were submitted, two of which showed an actual loss, with cheese at $14.228 per 100 pounds. The annexed statement was made by Eleazer Rice, of Fairfield, Herkimer County, who, we are informed, is one of the best farmers in Herkimer county, as well as one of the most successful—a sound, clear-headed business man. In this estimate, the farm is thrown in, or called nothing, nor is there any charge for personal or family services or labor.

RECEIPTS.

50 cows, 400 pounds to the cow, 20,000 lbs 14c	$2,800

EXPENSES.

Interest on cows at $70 and utensils, wagons, &c., $5,000 at 7 ₱ cent	$ 350
Depreciation of cows and loss from disease, average	350
Depreciation on teams, utensils, &c.,	250
Fertilizers	35
Taxes on land and personal property	150
Horse shoeing and repairs of tools, &c.,	50
Repairs of buildings, fences, &c, average	150
Insurance	8
Incidentals	50
Paid for hired help	500
Board &c., of hired help	250
For making cheese at factory, boxing, &c.,	400
Total	$2,544
Profits	$256

The price of farms is very high in Herkimer. One of the gentlemen who furnished an estimate of the cost of making cheese paid $130 per acre for 81½ acres. The sale of another farm at $140 per acre was mentioned, and was said to be a fair average of lands in that vicinity. Remarks were also made upon the high cost of labor, which had ranged from $25 to $30 per month, with board, which, with flour, &c., at present prices, equalled a salary of $500 to $600 per year for the most ordinary laborer.

FARMERS' CLUBS.

It is sometimes said by members of farmer's clubs that a subject selected for discussion is not a *practical* one, because it does not relate directly to the care of stock, the handling of the soil or implements, or the general management of crops. Is it so? Will not discussion upon any topic that relates to the business of life expand the mind, bring new or useful ideas to it, and give it new powers to discuss those questions which are of the most importance to us?

The great need of the farmer at the present day is the want of more intelligence upon *general things;* a knowledge of *principles*, rather than of practices. He guides the plough well, and knows that without this preliminary operation he could secure no profitable crops. He is satisfied, too, that the crops absolutely require a still further comminution of the soil than the plough affords; but has he inquired what principles must always be at work in the soil in order to give him any crop, and especially to give him an abundant and profitable one? He must find what these are, and then he will know how to prepare his soil to set them at work.

It is not enough for the farmer that he discuss over and over again, the manipulations, merely, of the farm. He must venture more. He must have questions before him that will call him away in some degree from his life-long practices on the surface, to the rich and unused treasures which lie below—the *principles* which give life and action to all.

He must not only prepare his soil for the manures which he applies to it, but for those more subtile substances which his hands cannot grasp, but which the soil can grasp and retain if it is in proper condition to receive them. This will afford him a delightful study, and will lead the mind gradually to that general intelligence that is so much needed.

The question as to what subjects are proper for discussion at the farmers' club meetings, has been well answered by Mr. DANIEL F. ROGERS, of Ill., at a meeting of the Farmers' Institute in N. Y. He says:—"In my opinion there is no subject of any considerable importance to mankind, a liberal and intelligent discussion of which is not within the proper limits of any farmers' club. Many farmers seem to think that farmers' talk should be only of farm stock—pigs, poultry, ploughing and manure. There is nothing in the occupation of a farmer that makes it necessary that he should grovel in the dirt. There is nothing in the occupation of a farmer to prevent his being an educated man. Intelligence with them should be as free and glowing as the sunshine and air in which we live."

This statement elicited warm applause and brought out several other suggestions upon the same subject.

For the New England Farmer.

IS IT PROFITABLE TO MILK COWS IN THE WINTER?

A Discussion by the Irasburg Farmers' Club, reported exclusively for the FARMER, by the Secretary.

E. P. Church claimed that to give cows extra feed, say meal and grain, to make them continue to give milk in winter, is injurious, causing them to be less thrifty the next summer, when kept only on grass. Prolonged milking is also detrimental to the calf of a stock cow. So he let them go dry three or four months, to gain flesh milked away through the summer. Cows should be in good flesh when they come in in the spring, and would feed meal to them at that time. Cows that are milked are more affected by cold than those that are dry. Then, a cow can give only about a certain quantity of milk in a year, and we can get it all in the summer, or be all the year about it. Winter butter is usually of poor quality, and it is a disagreeable job to milk in cold weather.

Mr. Tenny was inclined to agree with Mr. Church. Young heifers should, perhaps, be milked longer than old cows, to establish milking habits. He believed it best to keep cows fat; the fatter the better. He had known cows to have four quarts of meal each, while at grass. It may have been a damage to them, but he doubted it.

A stranger from Addison County said it was the custom there to let the cows go dry three or four months, and feed meal before they calve and until they go to grass. If we give extra feed before they are dried off, so as to make them hold out their milk, they will not do as well the next summer.

Mr. Hines lived in Franklin County when they first began to make cheese there to sell, and now it is the greatest dairying section in the State. There are some who still say, "I would just as soon have my cattle come in poor as not." He did not state the product of such cows, but he said the class who are careful to have them "come in fat," find no difficulty in getting 300 pounds of cheese and 50 pounds of butter per cow. These are the most successful dairymen. The reason why many fail to realize the benefit of extra feed, is because they leave off too soon. The meal should be fed until grass is large enough to give a full supply.

Mr. Tenny fully agreed with Mr. Hines as to the importance of continuing the meal, and said that a few miles north of Montpelier, he saw a Mr. Wilson carrying in two pails of milk, and learned that he had only two cows. On inquiry he learned that Mr. W. fed corn stalks cut by a machine, put into a very tight plank box, wet with scalding water, then covered securely and left about twenty-four hours. The stalks became tender and were eaten greedily by the cows, and they continued in milk until they came in again. If fed on hay they would easily dry off.

Mr. McClellan said he disliked to milk in the stable, and therefore he let his cows oft by milking once a day, soon after he knew they were with calf. He had milked cows quite late that were fed extra, but the next season they were a third less profitable.

Z. E. Jameson believed that butter could be made as profitably the first part of winter as the last, for in fall the farmer has a greater variety of fodder and more roots than in spring. As to milking, the stable is the best place, as the cow stands quietly, and can be kept clean. He believed the calf of a stock cow will not be injured if the cow is milked until within four weeks of calving. Those who practice this method make more butter per cow in a year, than those who milk two months less.

For the New England Farmer.

CAPITAL AND LABOR.

Many appear to think they have found a solution of the vexed question of the rights of capital and labor in the admission of the laborer to a share in the profits and losses of the business in which capital is invested.

While admitting that success has attended such arrangements, under peculiar circumstances, I am skeptical as to its being generally so; and in fact think there are good reasons for supposing it will not be, so long as there exists so much real lack of foresight and economy among the laboring classes. How few of the many who are dependent on their daily labor for their daily necessities, exercise proper wisdom in husbanding their earnings, especially when times are good and af-

ford an opportunity, if judiciously improved, to lay aside quite a sum against future needs. It appears as if it were a general rule, the more the income, the greater the wastefulness; the greater the opportunities for thrift, the less the inclination to improve them. If these are facts, and few careful observers will dispute them, what improvement are we to expect in case these persons are to be pro-rata participants in the profits of the workshops and mills in which they labor?

Some no doubt will contend that the *faet* of such a connection will beget self-respect, self-reliance and personal interest in the results, that will eventuate in developing the very thing we find they so greatly needed. With some we are ready to admit this result might be looked for; but with the masses we are not justified in expecting it. Business might be divided equally with the workmen to-day, and to-morrow many would be in circumstances to require you to do the same again, and so on until the entire capital was gone.

The truth is, man has not become fully satisfied with the law, given by his Maker when in Eden, that by the sweat of his face he should eat his bread. It is one of the many "pricks" he foolishly persists in kicking against. He tries various expedients to evade the law, but in vain. Sooner or later he finds to his sorrow, that if a man will not work, neither shall he eat. This law implies or enforces the principle that we should earn and wisely use our earnings, so that we may have enough and to spare.

I have in my mind an illustration of this want of thrift in a man now employed by me. The business requires a capital of about three thousand dollars. To encourage this man to interest himself in the success of the business, I gave him very liberal wages, so liberal indeed, that I could see no good reason why he should not be able to lay by two hundred dollars a year, after supporting his family as well as those around him supported theirs. I also told him that when he had saved up a thousand dollars, I would sell him one-third interest in the business, and continue his pay as before. He set out with this prospect before him, but to-day he is involved in debt on every hand. It would seem as if the very liberal income he received was really an evil to him.

How to manage wisely with such men is a problem I am unable to solve. I have again renewed my promise to him, and he is again trying the experiment. Wealth will concentrate in the hands of the few, unless we can devise some method of co-operation, which, while it gives the laborer his equitable share in the results of the business, shall at the same time confer on him those business and moral qualities that will enable him to appreciate and make a proper use of the position in which he is placed, and the opportunities he enjoys. He must, of necessity, be brought to feel more fully his manhood, and seek for culture and elevation of character. He must *feel* the necessity of avoiding the drunkard's cup, the loafer's resorts, and the haunts of the vicious; and that the present is inwrought with the future as intimately as web and woof. Failure of present duty will more or less unmake his future. If by any means we can bring men to attempt to *level up* instead of trying to *bring down* to their level those who by patient industry, careful economy, and faithful use of their God-given powers have outstripped them in life's race, we shall have the best foundation laid on which to rear our hope of success. Then indeed may we with cheerfulness look the future in the face and feel that by the smiles of a beneficent Providence all is well. To attain this end men of means, and the agents of corporations must put their hand to the work, training and educating their employees to a better appreciation of their individual responsibility, and a better understanding of the relation of present duty to future success. I can conceive of no other means of escape from our present ills. This failing, we must of necessity go on in the future, as in the past, with capital and labor at a dead lock most of the time. K. O.

Broad Brook, Conn., Jan., 1868.

For the New England Farmer.

THE SMALL MANURE HEAP.

In an article in your paper of Jan. 18, it is asserted that "a large manure heap is the farmer's great mistake." This is Dodge Hayward's theory, or "chemistry" as he calls it; a theory opposed to the belief and the experience of all tillers of the soil. He says, "All vegetable matter, including the grass of the western prairies and the leaves of the forests of the north, are useless, as manures, except for the small amount of mineral they contain." Then he goes on to say, "The loss of fertility in our lands is not caused by the loss of vegetable matter, but by the loss of the minerals of the soil."

Chemistry informs us that nothing is added or lost, in all of nature's operations. If you burn a block of wood you have for the ten pounds of wood, an equal number of pounds of water, carbon, creosote, and ashes. Mathematics teach us that if we *borrow* we must *return*.

Has this lecturer found a mineral that will supply *all the fertilizing* matter that the soil requires? If so, great must be his success. His theory is something to this effect: the more fuel you burn the *less* heat you will get! He says, "the rain, dew and snow supply all the material of a vegetable nature;" "manure is not injured by drying," and that if you "let four loads of horse manure burn itself till it is reduced to one load, you have just as much fertilizing matter as when you had four loads!"

Now every farmer and gardener will tell you that horse manure that is "burnt up," as they

term it, is not so valuable to produce crops, as that not "fire-fangled." Every person of common sense, well knows that to cut the grass year after year, from a given piece of land without returning to the land any fertilizer, impoverishes the soil, and it becomes barren and ceases to yield a crop of anything.

It is not simply mineral that the impoverished land needs. It wants that which has been taken from it. It wants grass, leaves, barn-yard manures, and compost. The smaller your manure heap, the smaller barn and cellar you will need to store your products. Like begets like; minerals are minerals, and vegetables are vegetables. Vegetables of all kinds contain but a very small per cent. of mineral matter. A cucumber contains 97 parts of water in 100. Beans contain only 14 parts of water, and 86 parts are dry matter, of which 38 parts are carbon.

Hayward's theory would be to burn one ton of hay or manure to ashes, and then spread that on the land to grow the crop. Is that either scientific or natural? The ground wants heat and warmth,—stimulus, carbon and ammonia; and to secure these you must have your ground finely broken up and light, so that the air can more or less circulate through it. Hay, orts or straw (that have been well saturated with urine) placed a few inches below the surface and covered with dirt, generate heat by fermentation, and fill the soil with ammonia, and afford plant food. I contend that manure is *wasted* by drying. How? The ammonia and other principles are lost in the air. When covered with soil these principles are retained, and impart vitality to the growing plant.

The assumption that mineral matter is all that is needed to grow a crop, is a fallacy. What is the ground itself but minerals?

I once planted the ordinary garden vegetables on a soil to which no manure, except a sprinkling of ashes, had been applied for years. It had been, as farmers say, well "skinned." My crops were sad failures throughout. Having faith in manures, rather than in minerals, I took a quantity of my garden soil and formed a basin under the privy, into which the vines and weeds from the garden and yards, with ashes and every other vegetable matter within my reach, were put, together with one peck of lime. In the spring I added another half cord of the soil, and the whole was forked over and well mixed. A few days after the ground had been spaded, this heap of compost was spread on and raked in. Apparently, every seed I planted germinated, and I had sweet corn, beans, cucumbers, marrow fat squashes, carrots, turnips, peppers, beets, onions, mustard, lettuce, peppergrass, summer squashes, and other vegetables, all of good size and excellent quality, and in striking contrast with their starved and Liliputian predecessors of the previous season. The second year I repeated this operation, omitting the lime, and raised about fifteen hundred pounds of ripe and green vegetables, on fifty feet square of a small garden; two crops having been grown on a part. The first year my crop of potatoes was not more than half as heavy as the seed planted, but this year I had Jackson Whites as good as ever were set before a president. My potatoes were raised in a bed as follows: Having forty or fifty pounds of salt hay—I presume any other would have been as good—I put it into a bed, some fifteen feet square, from which the soil, to the depth of six inches, had been thrown out on the sides after the ground had been prepared for planting; the subsoil also having been spaded up light. The soil was then thrown back upon the hay, sufficiently to cover it, and the potatoes were dropped in line or drills, about eight inches apart, and covered up with soil, but so as to leave the potato bed a little lower than the surrounding land. I kept the weeds out by pulling them up while small, as the vines were too near together to admit of the hoe, though the ground was occasionally loosened with a very small rake. They were several times sprinkled with soap suds. The result was a yield of about three bushels of beautiful potatoes.

DR. BOYNTON.

Lawrence, Mass., Jan., 1868.

THE "JAMESTOWN" BREED OF CATTLE.

The Norfolk County, Mass., agricultural Society, awarded the "Wilder Cup," the first premium on herds of milch cows, to Mr. J. W. Gay, of West Dedham, who entered his herd of fifteen cows, eleven of which were raised in Dedham, and were entered as "pure or high grade Jamestowns," a part of which were dry, and others nearly so, the herd giving from two to eighteen quarts each per day.

As to the origin of the Jamestown Breed, the chairman of the committee, A. W. Cheever, Esq., furnishes a statement, by Colonel Stone, of Dedham, from which we condense the following:—

"In 1847, Capt. R. B. Forbes, as commander of the U. S. ship Jamestown, went to Ireland with a cargo of provisions for her starving inhabitants. On his return, the Lord Lieutenant of Ireland, wishing to confer some favor on the commander, made him a present of a fine Suffolk heifer, which proved to be one of the deepest milkers, giving in her flow, twenty-six quarts beer measure of the richest milk. She was a remarkably fine specimen of this superior stock, which stands high and prominent for the dairy in that country.

On his return, he disposed of the cow and gave the proceeds to the Irish Charity Fund. John Marland, of Andover, Mass., was the purchaser, and when he disposed of his farm she passed into the hands of John D. Bates,

of Swampscott, Mass., and afterwards into the hands of Mr. Osborne, of Danvers, Mass.

We are not aware that she ever had but one heifer calf. This one was owned by Mr. Wallace Thaxter, of Boston, and proved a superior dairy cow. Several of her bull calves were raised in this vicinity. Nearly all her progeny were without horns, showing the remarkable strength of the *Suffolk strain.*

In 1854, this remarkable cow dropped a bull calf, which was secured by Dr. Wight, of Dedham, Mass., and raised by Thomas Smith and named Jamestown, after the noble ship that brought his mother to this country. He proved himself as remarkable in his progeny as that of his kind on his mother's side; his sire was *Beverly*, a thoroughbred Jersey, out of *Flora* by the 'First Prize Bull' at the Royal Agricultural Show in Jersey. *Flora*, the mother of *Beverly*, was imported by Mr. Motley, and proved one of the most remarkable of that celebrated stock, having made sixteen pounds of butter a week.

This stock hold qualities which I consider very valuable in a dairy stock. They are very gentle, I never having known a vicious animal, unless they were too strongly crossed with the Jersey. When 'Jamestown' was five years old, a four-year-old boy could manage him in safety; he was worked in harness and perfectly handy. They are perfectly hardy, good feeders, and hold out in their milk remarkably, which I consider the great recommendation. I know of several that give milk the year round."

In an essay on cattle breeding, published in the Transactions of this society for 1859, Mr. Sanford Howard, says:—

"The Suffolk breed is without horns. It was formerly somewhat noted for dairy properties, but it is not extensively kept at the present time. It is not absolutely known that any of this breed have ever been imported into this part of the country; but polled or hornless cattle, which were formerly quite common here, bear more resemblance to the Suffolk than to any other breed. They certainly have no claim to the title of Galloway, which is sometimes applied to them, being different in color, (the Galloways are almost invariably black,) shape and characteristics. A cow was also brought to this country from Ireland, several years since, in the ship Jamestown, and hence was called "the Jamestown Cow," which closely resembled the Suffolk I have seen in England. A bull from this cow by a Jersey bull has been kept in Dedham several years, and has left a progeny which in general appears to possess superior dairy properties."

In closing their report the committee say, they are glad that Col. Stone is endeavoring to preserve and perpetuate in its purity as far as possible this remarkable "Jamestown stock."

HORSES IN VERMONT.

After alluding to the statistics of horses in Vermont, which show a decrease of nearly 50 per cent. since 1860. Mr. Ezra Meech, of Shelburne, Vt., one of the most intelligent farmers of that State, writes as follows in a communication to the *Country Gentleman:*

Our horses have been decreasing in number, and I fear degenerating in those qualities that make a valuable horse. It is true, we have a few fine specimens remaining, but when we look back fifteen or twenty years, we had then many more good stock horses than we now have, and it was no uncommon thing at that time to find four or five pairs of nice matched carriage horses in many of the towns in northern and western Vermont.

I am convinced that great improvement may and ought to be made in the horses of Vermont, and much is yet to be learned, in my opinion, in regard to the best manner of raising them. I was in conversation a few years ago with the late Col. Orvis, a celebrated cattle raiser of St. Lawrence county, N. Y., who said to me that he could give me the whole secret of success in producing good cattle, in a very few words, which were as follows:—"Get a good breed and make them comfortable"—neither let them want for food, nor suffer with heat, cold or wet. But in my experience in raising horses for the last twenty-five years, the same rule will not apply unless the horse is comfortable where the horned animal would die. I have no question but that better horses can be produced by exposure out of doors, away from sheds or barns, during the whole time of their growth, getting their feed in the way nature designed they should, than can be produced by the way commonly practiced. The horse will generally grow larger, much better developed, more hardy and healthy, and less liable to disease or accident, besides saving much expense in the way of fodder. I took from a pasture thirteen horses and colts on the 14th day of January, that up to that time had had nothing but grass, at which time I could not see that any of them had lost flesh, unless three or four breeding mares whose colts are still with them; and had it not been for these mares, they might still be in the same pasture, but fearing that the colts might, by remaining longer on the mares, injure the next foal, I took them up to separate them. There is no trouble or difficulty in pasturing cattle and horses here in Vermont from nine to ten months of the year in all seasons, and most years longer. For the last twenty years I have had from ten to twenty work horses and colts that have run out, and they have not consumed an average of 500 pounds of fodder to the animal.

I would like to be one of eight or ten to invest $50,000 in a farm near the lake, and de-

vote it exclusively to producing something better in the way of horses, than we now have.

REMARKS.—Some of the geologists have supposed that in "old times" New England was an island, the valleys of Lake Champlain, the St. Lawrence and the Husdon rivers, being occupied by an arm of the sea. Be this as it may, it is well known that the heavy, clay soil of the valley of Lake Champlain is remarkably productive of grass and all forage crops. The amount of snow, also, which falls in Shelburne is from one-fourth to one-half as large as that which falls in towns on the easterly slope of the Green Mountains. These facts should be taken into consideration by farmers in other sections who propose to adopt the plan of winter pasturage recommended by Mr. Meech. We hope, however, that his suggestions and liberal proposition will lead to something practical in the improvement of horse breeding in Vermont.

EXTRACTS AND REPLIES.

CRIBBING HORSES.

I wish to inquire through the columns of the FARMER with regard to the cause and cure of cribbing in horses. I have a valuable animal addicted to that habit. JOHN SHERMAN.

Middlebury, Vt., Jan. 18, 1868.

REMARKS.—The causes of crib-biting are variously stated; they are probably, some of the following: want of exercise; imitating other horses; sometimes grows out of the custom of cleaning them near bars or partitions, which the horse lays hold of when he is curried a little too hard; it may grow out of the habit of keeping feed, grain or hay continually before the animal, and the digestive organs becoming impaired; or the habit may be induced by the long-continued impurity of the air in the stable.

The habit of crib-biting occurs among horses of all classes; those that are poorly fed and tended, and those that receive most systematic care; among the young and old; those that work much, and those that work little.

It cannot, we think, be a habit of mere fancy, but springs from some want not supplied, which disturbs the system, and gradually leads to an unrest which settles down into one fixed habit. The premonitory symptoms indicate indigestion, as when the animal is biting a small portion of heated air or gas is frequently eructated. We should consider a "cribber" to be an unsound horse.

What is the cure, you ask? First, a moderate, nutritious diet of good hay, with grain in proportion to the work performed.

Secondly, regularity in feeding, twice or three times in twenty-four hours, and no more given at once than will be eaten with a sharp appetite.

Third, the utmost cleanliness in everything about the animal.

Fourth, have no feeding box attached to the stall, but feed from a box on the floor, and when the horse is done take the box away. Have no timbers or edges of boards within his reach; but smooth surfaces that he cannot well get hold of.

Fifth, let the animal have his freedom on the bare ground occasionally, and place a lump of rock salt in his stall where he can always reach it when there. Each of these will tend to enable the horse's digestion to recover its lost tone.

WORMS IN HORSES.

My horse has been troubled for some time with worms, and in looking over the FARMER for a remedy, I came across one in the paper of Sept. 7, 1867, advising wood ashes, and this having no effect, to use two drachms of *tartarized antimony*. When I went to the druggist, he told me it was the same as *tartar emetic*, and would surely kill my horse, and frightened me from buying. I have used a great many of your receipts and have always found them good, and so I thought I would like to ask you if the druggist was right. Excuse me for the trouble, but I really want to know. He, (the druggist,) said that 15 grains would kill a man.

Haverhill, Mass., Jan., 1868. J. H. BARKER.

REMARKS.—In the FARMER of Sept. 7, 1867, "A Reader," writing from Mansfield, Mass., inquired for an "effectual method of destroying worms in horses?" We replied at some length, and gave as a remedy the use of *wood ashes*, which we had employed for many years with the happiest results, and which we could therefore confidently recommend.

We took pains, however, at the same time to consult the books, and in the best work on the disease of horses, which has ever been published in this or any other country, *Mayhew's Illustrated Horse Doctor*, we found the following:—"Whoever has remarked the dunghill in a knacker's yard has seen it to consist quite as much of *lumbrici* (that is, worms,) as of excrement. *Mr. Woodger, of Bishop's Road, Paddington*, removes these pests with ease and certainty. The above-named veterinary surgeon gives *two drachms of tartarized antimony* with a sufficiency of common mash, as a ball, *every morning*, until the parasites are expelled." This is the exact quotation. Dr. Mayhew's book is the most thorough and humane work on horses that we have ever seen, and his experience with them is probably more extensive and familiar than that of any other man. His work on the *Management of Horses*, and his *Illustrated Horse Doctor*, are warmly commended by the ablest journals in this country and in England and Scotland. There is not a particle of quackery about them. He was placed in the English Horse Guards, we learn, when a boy, where he he evinced such a love for the equine race, and such an aptitude in learning all about it, that he was thoroughly educated, not only in what

appertains to horses, but as a man of letters. If he errs in recommending the remedy in question, Dr. Woodger also errs.

It does not follow that, because 15 grains of tartarized antimony would kill a man, that the same amount would kill a horse! Some things that are poison to men are said to be entirely innocuous when swallowed by dogs. We are glad to notice that what we suggest ourselves, and what we present as the opinion of others, is observed and considered. Under such a course all parties will be quite likely to get at the truth. *Black* antimony is a common remedy for various diseases of horses, and is the crude article, remaining much as it is when taken from the ground.

Still it is well to be cautious in the use of drugs which are not well understood, and we close this article with the judicious remark of Dr. Dadd, who says, "It was customary in former times to give powerful vermifuges for the expulsion of these parasites; but the most rational method is to impart tone to the digestive functions and organs in the use of tonics, stimulants, and alteratives."

FOUR VARIETIES OF APPLES IN ONE.

In reply to the inquiry of Z. A. Gilbert as to how the sweet and sour apples were produced that were raised by Mr. Allen of Greene, Me., I would say that some forty or fifty years ago there lived in my native town, Townshend, Vt., a Mr. T. Sumner, who experimented somewhat in grafting fruit, and succeeded in producing a variety similar to the kind named in the Farmer of Dec. 7. It was produced by taking four varieties of scions, quartering each scion, then taking one-quarter from each variety and putting the four quarters together to form one scion. This bound together and set in the limb produced four varieties in one apple.

Westminster, Vt., Dec. 9. 1867. N. F.

Remarks.—The fact of there being occasionally different flavors in different parts of an apple is admitted by pomologists. But that it can be produced by the means described by our correspondent is not generally believed. Some years since Solon Robinson, agricultural editor of the *New York Tribune*, offered a reward of $100 for proof that any one had succeeded in producing sweet and sour apples, by uniting buds from sweet and sour trees, but we understand he has not as yet paid over the money to any claimant.

SALMON AND SHAD FOR CONNECTICUT RIVER.

The experiment which has been undertaken by the New Hampshire Commissioners of River Fisheries, of stocking the Connecticut river with salmon, has so far succeeded well. Of the impregnated eggs deposited at the Cold Spring hatching works, at Charlestown, N. H., over ninety-nine per cent. have hatched, and are apparently healthy.

It is the intention of the Commissioners to rear them artificially, till they are ready to go to the sea, which will be a year from next spring. In the fall (1869,) they will return, seeking the sources of the river, and will then weigh, it is estimated, from 3½ to 10 pounds, which weight they will soon double and quadruple. It is hoped before that time, that all obstructions at the mills on the Connecticut river will be removed, and that nothing will prevent the salmon from ascending the river as high as they like.

If the present plans are carried out in regard to stocking this river, a million or more of young salmon will be put in every year, and of such a size that they can safely go to the sea and return; and judging from data obtained by experiments tried in English waters, we are authorized to suppose that, by this means, the productive wealth of the Connecticut river will be increased millions of dollars annually.

Great credit is due in this matter to Dr. Fletcher of Concord, who, out of several that made the experiment, was the only one who succeeded in procuring salmon spawn for the New England rivers. It should be known also, that the merit of this undertaking of obtaining salmon eggs for these rivers, is due to the New Hampshire Commissioners, acting independently, and not to the New England Commissioners, generally, as has been before stated.

Should the promises of the present be only one-half fulfilled, the time will come before long when salmon will be a common article of food, and together with the vast quantity of shad, which are expected in a few years from our rivers, will very perceptibly reduce the cost of living in New England, and enable the poor man to have every day on his table, food that has long ranked with us among expensive luxuries. Salmo.

Charlestown, N. H., Jan. 26, 1868.

TIGHT BARNS.

One of your correspondents is in favor of tight barns for keeping hay, but he says nothing about keeping stock in the same barn with his hay. In some parts of this State, there are many barns where hay is kept and no stock in them; the hay being sold and the land that produced it kept in good heart by applications of fish manure, ashes, guano, poudrette, or some other material, without the aid of barnyard manure. Tight barns in such cases doubtless answer very well, but my experience goes to prove that where cattle are kept in tight barns without ventilation, it is impossible to keep hay in good condition in the winter season. The steam from the breath and exhalations of the cattle will gather in moisture on the hay and cause it to mould, and in fact will so effect the hay before it moulds that cattle, and especially horses, will turn up their noses at it. Barns should be tight enough to keep cattle comfortably warm and still have proper ventilation. Z.

Reading, Mass., Jan. 6, 1868.

SUMMER AND WINTER FEED OF COWS.

Many farmers, I think, might find it for their interest to pasture their cows in winter, and to feed them with hay in summer! I will explain. Several years ago, having turned a newly purchased cow into my yard, the other cows seemed to look upon her as an intruder, not entitled to equal privileges with themselves. Indeed, so great was their antipathy, that it was unsafe to keep them confined in the yard together. This being the case, when I turned them out of the barn, I let them range where they chose in the pasture. Having pursued this course one winter from necessity, and having made up my mind that they were all the better for it in the spring, I have pursued the same course ever since, from choice. This would indeed be inconvenient if one had not a lane leading to the pasture. But many farmers have such a lane, and many more ought to have one. If not used in winter, it would be found to be very convenient in summer. From this experiment and from more general observation, I have become convinced that a sudden change from hay to grass, or from grass to hay is injurious to cows. It is also obvious

that for the largest part of the summer season, they actually suffer in our almost barren pastures, for the want of sufficient food; and considering it bad policy at any time to feed mowing lands; and supposing that when the feed was the best in the pasture that some hay, by way of change, would be beneficial, I have for several years past fed them with hay during the whole of the pasturing season. With this treatment, they are kept uniformly in better flesh, are more healthy, make more butter, and of better quality than when fed in the usual way. E. B.

Derry, N. H., Jan., 1868.

THAT MACHINE—A WOOL DILEMMA.

Will the "Vermonter" alluded to in the FARMER of Jan. 25, who has a machine used for the multifarious purposes of a land roller, a clod crusher, a corn planter, a broadcast seed sower and a grain drill, inform us of his whereabouts and the cost of said machine?

Can you, Mr. Editor, tell those of us who make the raising of wool a specialty, or nearly so, what to do when labor is $25 to $30 per month, as it was last season, and $2.00 per day in haying and harvesting; thereby making the cost of raising wool 75 to 80 cents per pound; whether to hold on, or to let it slide at our highest offer, 40 cents per pound, about one half its actual cost? Be your advice as it may, I subscribe myself, under the circumstances, RETROGRADING.

Fairlee, Vt., Jan. 29, 1868.

REMARKS.—The allusion to the machine was copied from a Vermont paper, and we hope the inventor will respond to the inquiry. Our idea of the wool market is that the stock on hand is rather light and that the tendency of prices appears at present to be rather upward, still we do not feel competent to advise as to the sale. Our correspondent is not the only one who is seriously considering the alternative of "holding on, or letting slide." To some of r·, however, here in the city, another question is beginning to present itself, —Have we in reality anything either to hold on to, or to let slide? If the misery of "retrograding" loves company, it may be found among those who have not a lock of wool to sell. There are clouds in other horizons than that of the wool grower. It may be well for all of us to trim sails, watch the winds, and look out for "a storm about these days."

A GOOD VARIETY OF CORN.

While husking my corn this fall, I more than once asked myself the question, Why is it that so many farmers will persist in raising corn with kernels so small as scarcely to cover the big cob on which they grow, when by a little pains they might obtain a much better and more profitable sort? I do not think it good policy to raise corn that takes two bushels of ears to make one bushel of shelled corn. I have a variety that I have raised for several years, and have taken considerable pains to improve, and which, I think, is a little ahead of any other kind that has come to my knowledge. It is an eight-rowed variety, kernels very large, and cob very small, fills out entirely over the tip of the ear with large handsome kernels. Many of the stalks produce two good ears. It is quite early; has always escaped being injured by early frosts, even when planted as late as the first week in June. It is the prettiest corn to husk or shell that ever I handled. In husking, the ear readily parts from the stem, even with the lower kernels. After it was all husked out, I shelled one bushel basket of ears, and the product was *twenty-two* quarts of shelled corn, and there is no reason to doubt but that every bushel in the heap will yield equally as well. In short, it gives to me, at any rate, entire satisfaction, and I think very many of the ears this year came as near to perfection as anything that grows in the form of corn. Along with this note I send you a few specimen ears,—not those containing the smallest kernels, of course, nor yet the largest, but between the two. Please first feast your eyes upon them, and then tell me what they lack, if in anything, to make them perfect specimens of that noble grain that you so justly designate as the glory of the New England harvest! In your opinion, to what extent would New England be the gainer if no poorer variety of corn than this should be planted within her borders next spring? Would it not be to the amount of thousands of bushels of this most valuable production of her soil?

Massachusetts, Nov., 1867. I. N. WINCHESTER.

REMARKS.—We have "feasted our eyes" upon your beautiful specimen of the glory of our New England harvest, but do not see as we can improve on your description of it. We have also exhibited it to parties who wish to know your post office address.

DUTCH OR HOLSTEIN CATTLE.

A correspondent at Shelburne, N. H., inquires about the Dutch cattle. I can tell him that I know from my own experience that the cows are *good* milkers, and if he or any other brother farmer who is interested in raising good stock, will call on me and look at a pair of steers which I have that were three years old last summer, and never had any extra keeping, they will, I think, be satisfied that they are "good workers," also.

I have been engaged in farming for more than twenty-five years, but have never raised any stock that, with the same care and expense, would compare favorably with the Dutch in size, form and activity. Their color, too, is generally admired, being black, with a wide white belt around their middle. C. EAMES.

Northborough, Mass., Feb. 3, 1868.

FATAL POISONS AND OTHER REMEDIES FOR LICE.

I never before took up my pen to write a sentence for publication, but when I see such deadly poisons as unguentum and arsenic recommended for killing lice on cattle, I am constrained to write.

Your correspondent, M. M. Tallant, East Concord, N. H., recommends putting in a piece of unguentum under the skin near the ear. It is evident that this poison must be taken into the circulation in order to kill the lice on all parts of the body, in the incredible short space of four days. Your correspondent probably knows that it is dangerous to apply it on the surface, where the animal can lick itself, but if he can only get it under the skin, he regards it as perfectly harmless,—only to the lice. Now let every thinking man decide for himself, whether it is safe to use it or not. There are other things that will kill lice. Kerosene will, but if used freely will blister the skin and the hair will peal off; tobacco wash will kill lice, and I once came very near killing three calves by using it; ashes will rid cattle of lice, but there is danger of its starting the hair; soap and water is good, when the weather is warm, especially for calves; but I think we may take a lesson from nature. Every farmer knows that in summer when cattle have access to sand or loam they will rid themselves of lice,—calves excepted. Now to

imitate nature in this case, we will put a barrel or two of loam into the cellar in the fall, and after the cattle come to the barn, we will take an old dripping pan or other tin or iron dish, and fill it with loam, and after the "gude wife" has done with the stove oven for the day, bake it until morning or until the natural moisture is all evaporated, and we have an article that will dust like ashes. With this dust, your cattle once in a week or two freely, and give them a good chance to rub themselves, and the lice will disappear without danger of injuring your cattle. Deacon.

North Vienna, Me., Jan. 27, 1868.

Remarks.—We may congratulate ourselves on one effect of the recommendation of the use of these "deadly poisons." It has called out individuals who never before took up their pens to write a sentence for publication, and thus developed talents which ought not to be again "hid in the earth."

ALL HAIL YE FARMERS OF YE LATTER DAY.

Although seventy winters have passed since I made my first appearance on earth, I can not hold my peace. Though with a trembling hand, I must respond to my young friend "G. S.," in the Farmer of Feb. 1. I am made happy when I learn through your worthy paper, taken by my son, J. Baker, that the young farmers are beginning to walk in their own shoes, instead of plodding along in their father's old ones. I think "G. S." is right as to cutting hay. I have proved it by experience. What he says as to barns I know to be correct. I can say, give me a tight barn. I care not if it is lathed and plastered, with good ventilators. I would have the stables so tight that manure never freezes. Keep the stalls well littered with straw or meadow hay, and I will winter a stock of cattle on three-fourths of the amount of fodder that I can with the barn so open that I can thrust my hand between the boards. What folly to let grass stand until it begins to shell. Such hay is nothing more or less, in a word, than small grain and wood.

Go on, young farmers, investigate for yourselves, improve, experiment, and don't give over until you prove to the world that you are masters of your trade, and don't need ministers, lawyers or doctors to lay out your work for you. V. B.

Brookfield, Mass., Feb. 3, 1868.

UNGUENTUM IN THE BLOOD, FOR LICE.

I once assisted an experienced hand to insert unguentum under the skin of a number of calves, as recommended in the Farmer by Mr. Tallant; and in about the number of days that he mentions for the lice to be found dead, the best calf in the lot died, and the lice with him, and the others appeared numb and stiff in their joints for some time after, caused, as we supposed, by the poison. Previous to this cruel act the calves and lice to all appearance were in a thriving, healthy state. Inserting poison enough into the blood which is the life of the animal to kill the lice on the surface of the body is about as consistent as it was for the boy to set fire to the barn to rid it of rats. Both sure remedies, but not advisable. R. M.

Lincoln, Vt., Jan., 1868.

APPLICATION OF MANURES.

While enclosing my subscription I am halting between two opinions; whether to attempt to write a few lines as to my experience in the application of manures, or not to make the attempt. Some advocate, without qualification, the plan of spreading and ploughing it under; others, with equal positiveness, recommend harrowing it in. My idea is that neither system will answer in all cases. On some soils, and with some depths of furrow, it may answer to plough in the manure, but I have known heavy coats almost entirely lost by being ploughed under. But hardly feeling competent to appear on paper, I defer further remarks.

Hyde Park, Vt., Feb., 1868. Orson Hadley.

NARROW ROADS.

I have often thought that farmers were not as liberal as they should be in fencing out roads. It is frequently the case that these fences are not more than sixteen to twenty feet apart, which causes the snow to drift into the travelled path, badly. Except for the simple purpose of travelling and repairing, the land fenced off for the road belongs to the farm from which it was taken; and the public has no right to it or to what it produces, except as a passage-way. Until we have no land that does not produce good crops, let us be more liberal, and have wider roads. O. Foster.

Tunbridge, Vt., Jan., 1868.

AN EXTRA HEIFER.

I have a pretty little three-year-old heifer that is coming in in April. She gives now four quarts of milk per day, and seven quarts of her milk makes one pound of butter. Her feed is hay and slops from the house, without any provender. If any one has a better heifer will they let us know where she is? P. H.

Milton, Vt., Jan., 1868.

Remarks.—Probably every reader of the above "honorable mention," will regret that the writer has omitted to state to which breed or race this heifer belongs.

CURE FOR STIFLE.

I have cured two bad cases, by simply dashing cold water on the stifle joint, until it smoked well, and repeated twice. Cover the horse after you shower him. L. H. D.

Cornish, N. H., Jan. 20, 1868.

WHEAT IN HAMPDEN CO., MASS.

The Agricultural Society of this county awarded three premiums on wheat grown in that county last season, at the rate of 25, 37 and 38¼ bushels per acre. The following statements were furnished by the respective competitors, and are copied from the Transactions of the Society:—

On the 28th of September, 1866, I sowed 1½ bushels of wheat on ¾ of an acre of tobacco ground, with the following result:

Cost of seed	$4 50	
1¼ bushels of lime	80	
Ploughing and sowing	4 00	
Reaping, binding and carting	5 00	
Threshing with machine, and cleaning	11 00	
Total cost	$25 30	
Result: 28 bushels of wheat at $3		$84 00
1 ton straw		12 00
Profit		$70 70—$96 00

East Long Meadow, Oct. 1, 1867. L. C. Burt.

The sample I exhibit is a part of 38¼ bushels of Red Mediterranean wheat, grown on an

acre. The previous crop was tobacco that had been manured about five cords to the acre.

Chicopee, Oct. 1, 1867. L. B. CHAPIN.

My wheat crop was grown on a sandy loam, fitted in 1866, for tobacco, with probably eight cords of stable manure per acre. The wheat was sown September 20th, without manure at time of seeding. The land was harrowed well, and rolled after sowing on grass-seed. The result was 25 bushels of superior white wheat per acre for the entire piece of 2 acres less 8 rods, with straw estimated at one ton per acre. Some small portions of the piece winter-killed, and a few small spots lodged so early as to destroy the wheat. I estimate that the best one-half acre yielded at the rate of 35 bushels per acre. As the ground promises several good crops of hay without any additional manure, I estimate that not more than 1½ or 2 cords per acre of the manure in the soil went into the wheat crop.

Five bushels of the wheat produced 193 pounds *very nice* flour, and 110 pounds feed. I charge to wheat crop:

Ploughing 2 acres		$5 00
Seed 3 bushels at $4.00		12 00
Sowing and harrowing		2 50
Harvesting		8 00
Threshing and cleaning		12 00
3 cords of manure at $8.00		24 00
Interest on land		24 00—87 50
	Cr.	
47½ bushels wheat at $3.50	$166 25	
2 tons straw at $12.00	24 00—190 25	
		$102 75

I wish to add that I have attempted, during the past six years, three or four times to raise wheat, and this is the first time I have realized even *cost*. Very respectfully yours.

ETHAN BROOKS.

West Springfield, October, 1867.

A SHORT HORN DAIRY.

The following statement of the production of milk and butter by a herd of two pure and eight high grade cows belonging to W. R. Sessions, South Wilbraham, Mass., was made to the Hampden County Agricultural Society, which awarded a premium to Mr. S:—

Two of the herd I offer are pure Shorthorns, and the others high grades. There are three nine years old, four six years, two five years, and one three years. Their milk has been carried to the Wilbraham cheese factory the past summer. The cows averaged twenty-eight pounds of milk a day in May, thirty pounds in June, twenty-eight pounds in July, twenty-four pounds in August, and twenty-three pounds in September. The feed was simply pasture, with the addition of green corn-stalks the last part of the time. On the morning of the 23d of September the milk was tested for butter as follows: weight of milk, 139 pounds; yield of butter, 8½ pounds, of good color and quality—sixteen pounds of milk made a pound of butter.

The following experiments were made with four of these cows previously, in order to test their quality:—

Polly, a grade Shorthorn, now nine years old, calved in February when three years old. The following March she gave 655 pounds of milk and made twenty-seven lbs. of butter on hay alone. At four years old she averaged twenty-two pounds of milk a day for four consecutive months on grass, and an average day's milking, May 16th yielded 1 7-16 pounds of butter.

Daisy, another grade Shorthorn, at four years old, June 26th, gave 34¾ pounds of milk, which made 1¾ pounds of butter, and at that rate of product for three months, by actual weight of milk, on grass alone.

Fairy Bell, a pure Shorthorn, gave at a single milking, on the morning of June 15, 1866, 10¼ pounds of milk, which made seventeen ounces of butter; also on grass.

Beauty, a grade Shorthorn, at four years old, on the morning of May 8th, gave fifteen pounds of milk, which made thirteen ounces of butter. The week following she gave 224 pounds of milk, or an average of thirty-two pounds a day. It is not uncommon for her in the flush of feed to give forty-two and forty-three pounds of milk a day.

On single cows the society awarded the first premium to J. M. Thompson, Springfield, who said: My cow is seven years old, weighs 1320 pounds, and is one-fourth Ayrshire and three-fourths Durham; she calved September 20th, and averaged twenty-five quarts of milk a day up to October 1st. Her feed was grass and six quarts of shorts a day. Last June, on grass feed and seventeen months after calving she gave fifteen quards of milk a day. From the 3d of October to the 12th of November, she averaged thirty quarts of milk a day, and from the 12th of November to December 1st, twenty quarts. Since November 12th she has been kept in the stable and been fed with rowen hay, cornstalks and eight quarts of shorts a day.

The second premium to William Pynchon, Springfield, whose cow is seven-eighths Durham and seven years old. She calved the last of July. Her feed has been grass, corn fodder and rowen hay and she has averaged twenty quarts of milk a day since.

The third premium to A. B. Manley of same town, who made the following statement: My cow is a grade Durham, and nine years old. She made 283 pounds of butter from the 20th of March, 1866, to the same date in 1867, which sold at an average of forty-five cents per pound, or for $127.35. About 548 quarts of new milk were used at the same time in the family, worth at five cents per quart, $49.32; also $40 worth of sour milk were sold at two cents per quart. The calf at three months old

brought $25. She made about a cord and a half of manure worth $9. The total receipts from the cow in the year were therefore $250.67. She was kept in the barn most of the year, and fed, in addition to other things, two quarts of dry meal, night and morning.

IMPROVED STOCK IN CANADA.

Last March, our correspondent, Hiram French, Esq., Eaton, Can., sent us an account of a visit to the farm of H. M. Cochrane, Esq., Compton Centre, published at page 307 monthly Farmer for 1867. Mr. H. now informs us that the Suffolk Punch horse, which Mr. C. had ordered from England, at the time of his visit, arrived too late for service last season. He is described as a beautiful animal of some 1600 to 1700 lbs. Mr. Cochrane also imported last year two-year-old bucks, that weighed 325 lbs. each, last fall, with wool full ten inches in length. Mr. French remarks that an examination of the stock on Mr. Cochrane's farm is more interesting than the exhibition at any Fair he ever attended, and asks us to copy the following article from the Montreal *Gazette*, which he says is correct in every particular.

Mr. M. H. Cochrane has recently made an addition to his already large and superior herd of full-blooded stock, by the importation of a Shorthorn bull of the celebrated "Bates" or "Grand Duchess" blood. It is from the herd of Mr. Samuel Thorne, of Thorndale, N. Y., and cost $3000. This animal is equal to the very best in America. Mr. Cochrane has now over forty head of pure bred or pedigree animals, nearly every one of which has taken first prizes. We are informed upon the best authority that there is but one larger herd of pure bloods in America; namely, that of Mr. Sheldon, of Geneva, N. Y.

In addition to the pure bloods, he has grade animals of superior quality to make up his number to over one hundred. He has also commenced a flock of superior sheep, and has provided barn arrangements for three hundred head.

His farm contains about 700 acres of land, and a considerable portion of it is in a high state of cultivation. Last year, he raised twenty acres of turnips and four acres of mangel-wurtzels, and had a yield of twenty thousand bushels on the twenty-four acres. Also three thousand bushels of coarse grains; three hundred and fifty tons of hay; and one hundred tons of straw; all of which is being consumed by his stock on the premises; and fifteen tons oil-cake in addition. This gives an enormous quantity of rich manure for use on the farm. He also uses several tons of superphosphates every year, principally upon root crops.

His sales of surplus stock last fall amounted to over $7,000. His investments in farm, buildings, stock, &c., amounts thus far to $100,000.

The good influence of so valuable and conspicuous an example, is already beginning to be seen in that section of the Province in an increasing effort on the part of farmers to improve their farms and their stock.

THE DAIRY IN VIRGINIA.

A letter is published in the *Utica Herald* from a gentleman of Herkimer county, N. Y., now on a visit at the South, with special reference to the dairying business. Writing at Abingdon, Va., he says:—

I have examined a number of farms in the vicinity of Abingdon, and if my experience in the dairy business is worth anything, I pronounce them superior in every respect to the lands in Oneida, and may be purchased at one-third the price per acre. Good milch cows may be had for twenty-five dollars apiece, and owing to the clemency of the weather they can be wintered for less than one-third of what it costs in New York. The whole surface of southwest Virginia, which includes all that portion of the State from the Alleghany mountains to the Kentucky line, is formed upon a solid foundation of lime stone. A grass, identical with the famous blue grass of Kentucky, springs spontaneously from the ground, wherever the heavy timber has been severed.

The climate of southwest Virginia is exceedingly uniform and salubrious, the mercury in a Fahrenheit thermometer rarely descending to more than 20 deg. below freezing point in mid-winter, and seldom attaining more than 95 deg. above zero in the hottest days of summer. The robust figures and ruddy features of even the grey haired old men, indicate great health and longevity among the inhabitants.

The people of this pastoral district of Virginia, have extended to me, and all proper northern men, the most polite and generous hospitality. Instead of looking with a jealous eye upon the emigration of men from a more frigid clime, they are universally anxious to promote the material interest of their country, by procuring the introduction of northern capital and skill into their midst.

—English and French writers estimate that during the winter season it will take about two pounds of hay or its equivalent daily to each 100 pounds gross weight of the animal to sustain it, and that the quantity of food consumed above this will go to its increase. The average daily increase in cattle fed for fattening in these two countries is from 1½ to 1¾ pounds.

NITRATE OF SODA.

NY substance that is used as a fertilizer of the soil, to increase the crops which we cultivate, is worthy the attention of the farmer. It is with manures, as with machinery,—they come in new shapes, and under new names. We receive them with doubts, and test them, as we ought, sparingly, and critically. It would be as absurd to suppose that we have already availed ourselves of *all the fertilizers of the world*, as to suppose that the genius of man has exhausted itself upon the implements and machinery of the farm, and that no further improvements are to be made.

Here, we have under consideration a comparatively new fertilizer of the soil. *We have tested it*, and found it excellent. It is called *nitrate* of *soda*. What is it, and how obtained?

Nitrate of soda, says the *American Cyclopædia*, is found in beds among the hills which skirt the coast of Peru, for an extent of 150 miles, and very generally along the west coast of South America, impregnating the soil with other saline matter, and sometimes forming a thin crust upon the surface, but the only extensive beds known are in Tarapaca, between latitude 19° 30′ and 20° 45′ S., and long. 69° 50′ and 70° 5′ west. The nitrate of soda, as quarried, is very variable in quality, some yielding not more than 25 per cent., and some three times as much of the genuine salt. It is mostly worked with the pick and shovel, but is sometimes so compact that the beds have to be blasted. Portions of the salt are pure white, like loaf sugar, and others are colored reddish brown, lemon yellow, and gray. Its average composition was found by Dr. A. A. Hayes to be as follows:—

Nitrate of Soda	64.98
Sulphate of Soda	3.00
Chloride of Sodium	28.69
Iodic salts	0.63
Shells and Marl	2.60
Total	99.90

Saltpetre, also called *nitre*, is obtained in several ways. In India it is washed out of certain soils; in Europe, large nitre-beds are formed of various kinds of earths, the liquid and dung of stables, and animal matter; these are turned over occasionally, and yield an annual crop of impure *saltpetre*.

Mr. SQUIERS, in his account of Nicaragua, vol. I, p. 384, says,—"the practice of burying in the churches has always prevailed. The consequence is, that the ground within and around the churches has become saturated with the dead. The burials are made for from ten to twenty-five years, at the end of which time *the bones with the earth around them are removed and sold to the manufacturers of nitre!*" These are some of the sources of saltpetre, or nitre. *Soda* is usually obtained from marine vegetables, and in large quantities.

Where sulphuric acid, or oil of vitriol, as it is often called, is poured upon saltpetre and distilled, it makes *nitric acid*, and this last mingled with soda, is called *nitrate of soda*, which is the article of which we wish to speak.

Its use as a manurial agent is of recent origin in this country. The experiments which have been made with it have generally been such as to demonstrate its value, especially when applied as a top-dressing for grass land, wheat, &c.

A late Liverpool paper gives an account of an experiment made with it in the following words:—"On the 6th of May, five alternate ridges of wheat, measuring one acre, two rods and four perches, were sowed with 500 pounds of nitrate of soda. In a few days the difference between the ridges of the same size, could be discerned at a considerable distance from the field, which continued throughout the season. The two sorts were reaped, threshed, and measured separately, and the following is a correct account of the product:—

Nitrate wheat, 48 bushels. Weight per bushel, 56 pounds; straw of the same, 4480 pounds.

Of that part of the field on which no nitrate of soda was applied, the yield was 23 bushels; weight per bushel, 56 pounds; straw of the same 2509 pounds."

In the above experiment the quantity applied was rather large. Had one-half the weight applied been used, the result might have been just as favorable. In using concentrated manures, great care is required to adapt the quantity as nearly as possible, to the actual wants of the crop; as an overdose does no good, and sometimes is injurious. Salt, in moderate quantities, is a potent stimulant, but

when applied in excessive quantities, it proves fatal to most crops.

We would advise our agricultural friends to make a small, but fair trial with *nitrate of soda* on their various crops, and note carefully the results. It will not cost as much as some of the articles now in use, and we have many reasons to believe that it will prove an efficient and paying fertilizer.

MEADOW HAY FOR STOCK.

Once,—some years ago, but still within the memory of some of us,—it was common for some farmers to boast of *how little* fodder they had kept a cow or a pair of oxen upon through the winter! One ton of hay for the cow, two and a half for the oxen, and rather poor at that, they declared, was all that the animals had eaten; and the poor, cadaverous looking "critters," verified the truth of every word uttered. They were gaunt as race horses, lean as Pharaoh's kine, hunch-backed, cross-legged when walking, and strongly inclined to lean against the barn for support when standing up! Is it a wonder that such farmers lived mainly themselves upon salt junk, boiled cabbage and turnips, and starved the minds of their children as they starved their cattle, and thought the warm fireside and good cheer of the bar-room the elysium of bliss?

Well, customs have changed somewhat. Science and art have crept in among us and pushed meadow hay and Holland gin partially out of sight. As the cattle have grown larger and stronger, household comforts and conveniences have become more common. The churches and school houses are better; more books are in the homes of the farmers, and more of his children are qualified to enter upon the theatre of life, and act well their part there. The style and arrangement of dwellings are better; the highways improved; comfortable carriages introduced on the farm, numerous and excellent implements and machines employed, whereby human toil is greatly relieved, and some taste for embellishing the grounds about rural homes, is giving the country a cheerful and attractive aspect.

The days when meadow hay was king are gone by. It is a good thing now, as subject, but not as king. As a *portion* of the feed of young animals, and those producing nothing but their growth, it answers a tolerably good purpose. Let it grow, then, where reclaiming the land would be very costly, and feed it to stock when the appetite is sharp. As animals need variety, it is quite possible that a fodder-ing of meadow hay, which was cut at the proper time, and cured without being injured, may be as useful to them occasionally, as an equal amount of good timothy or red top. We are inclined to think it would, because food has other offices to perform, besides that of merely supplying nutritive qualities.

It is questionable whether even the best kinds of meadow hay can be profitably fed to sheep, otherwise than as a variation of their usual food. Few animals are so fond of variety in their food as sheep. They will frequently leave the succulent clover of rich bottoms, to feed on the parched herbage of sandy plains, and actually thrive better for the change. Besides supporting themselves, it must be remembered that the period of gestation commences about the time when the sheep are folded; and besides sustaining its own wear of carcass, a lamb has to be produced from that feed, which will weigh from four to twelve pounds when dropped, and one-third of the fleece has to be produced during the time they are in winter quarters, which require the best elements of animal producing matter to bring them.

A friend assures us that he used to feed on nothing but meadow hay till the lambs were dropped, for a number of years, but now feeds none, and finds better feed more profitable. This is varied experience, and therefore valuable. If any expect to make sheep husbandry profitable by feeding through winter nothing but meadow hay, they will scarcely realize their expectations. It will be *more profitable* to adopt the plan of our friend above. Give English hay, a little fine meadow hay, a few roots and a little grain. If this course is not found *cheapest* in the result, then the reader may go back to the days when meadow hay was king, and we will expostulate with him no more on the subject!

Calves brought up on meadow hay will be quite likely to make meadow-hay cows, or meadow-hay oxen. As well bring up your children on skim-milk and poor potatoes. That will not do. Generous feeding,—not luxurious,—gives courage and endurance, as

well as bulk. A little investigation will convince that it is poor economy to depend upon poor feed, or upon good feed in insufficient quantity,—and that if we are seeking for profit, we must use good fodder and feed liberally.

For the New England Farmer.

PAYING FOR A FARM.

ONE FARMER'S "STORY."

The call of "C. B. R." for information, awakens emotions of sympathy and feeling in at least one farmer. Having twice paid not only the "two-thirds" of the cost of a farm from the land, but having done about the same as to pay the other third also, I always feel much interest in the those young farmers, who, with limited means, are trying to get or pay for a good farm. Hence I am always ready to do or say what I can to encourage all such in their laudable undertakings. Although the best results of reading, observation and experience combined, would be much better than the simple "story" of "how I did it;" yet I infer from the remarks of "C. B. R." that the *story* is what he wants. This story is nothing very extraordinary; many have done as well, and some better, but if any good will result, it shall be told.

Something over twenty years ago, I found myself in a certain county in Western New York, destitute of means,—I had not even a cow or pig, but had to work out for a living. Having never worked out, and not having had much experience in farm work, I could do but little, at first, more than to keep along, and to live comfortably. But I soon learned how to do better, and began to save a little money. Taking land to plant on shares was a great help. By taking from eight to ten acres, and working out when not at work for myself, I could save about $100 a year. In this way I saved over $300, and bought a small place. There were thirty-one acres in this place, which cost $930,—$330 paid down, running in debt for the rest. This place in due time was paid for, and then sold for $1550. Then bought a larger farm for $3750; paying what money I had, and, as before, running in debt for the balance. Finished paying for this place October 1, 1864; all having been done on the farm, except a little over $600, my share of the property left by my father. But this was not received until it could make no other difference than a question of time. The farm was paid for a little sooner than it otherwise might have been, although this may be offset, in part, by over $400 expended on farm buildings during the time.

But how was it done? By industry, economy, and good, but not the very best management. One important point in my management was such a change of crops as to avoid as much as possible those that had been previously grown, and to depend mostly on crops that had seldom been raised on the land. Thus, the first place had been kept growing wheat until the crop was very light, and the land was said to be run down. Indeed, I was frequently told the place would not support me; that the land was worn out,—with much more to the same import. The land had been let out many years to neighboring farmers, and all the crops grown upon it taken off and nothing returned, and so it did look bad. But the year before I bought, it was well seeded to clover; and as it seldom, if ever, had been in clover, the seed took well,—probably all the better from being sown with oats that were so light as to yield only thirteen bushels per acre. This gave me a good clover lay to start with; and clover and corn were made my main dependence. With a good dressing of plaster on the clover, and plaster and ashes, and what manure I could make, on the corn, with thorough cultivation, these crops were generally good. A good clover lay was plowed for corn, which was followed the next spring with barley or oats, and the land again seeded to clover. This clover was mowed about the first of July, and the second crop saved for seed. The second year it was mowed, or pastured, as needed. Some of the best pieces were planted two years in succession,—the object being to have, each year, about all the corn I could tend with my own labor.

Another point in my management, which was not a little help on this place, was the use of oxen. My practice was to buy a good pair in the fall, winter them on corn fodder and roots, or a little grain, and after the spring's work was done, to sell them. By keeping them in good condition, I was always able to sell for from $20 to $30 more than they cost. This went far, at that time, towards paying for keeping, giving me a team to do my work at very little expense; besides it saved keeping them on pasture during the summer, which was no small item on a small place. And then, as I had no difficulty in getting a team to draw in my crops, by changing work with farmers, I had very little use for a team in the summer. In the fall I again had oxen,—the last few years I kept a horse, which I found very convenient, but not indispensable.

And then to good crops and good management, we added good economy. A great secret in the management of a small place, that many find it hard to understand, is that an industrious man will do all the work himself; consequently there is very little expense or outgo in his farming. In using oxen, the necessary implements and tools need not be numerous nor costly; nor need there be much expense to keep them in order. With such management and such economy, nearly all, besides expense of living, may be saved. We found no difficulty in living comfortably and saving $200 a year on this place.

The other farm was larger, but less than 100 acres. Much the same course of farming

ing was practiced on this place; corn and clover being the main crops. Here, too, the land had been severely cropped with wheat, and badly run. The first year or two, and until I could secure some benefit from clover, I could make but little more than the interest. After this I had no serious trouble. The debt was paid in ten years; and could have been paid in eight years, if it had been all due, or if the money would have been accepted.

Meantime the productiveness of the farm was largely increased, and, until during the last few years, the average has been from fifty to eighty per cent. more than was raised in the same time when I first commenced. This is mainly due to clover, which has been sown at every opportunity. No heavy crops of clover have been plowed under, but a good clover sod, and some growth, say from six to ten inches high, have been secured, if convenient. Never pastured clover in the spring, but saved all the growth that could be obtained to plow under for corn. By surface manuring in the fall, with well rotted manure, the clover would be well started when plowed under in May. I raised a good deal of clover hay, which made rich manure. I found it best to keep but little stock to pasture in the summer, so as to raise as much hay and other forage as possible to feed to make manure in the winter. This manure, largely mixed with straw and the butts of corn stalks, was piled up in the spring, and either applied as above mentioned, or worked into the surface before sowing winter wheat. I found, however, that such manure paid the best when spread on clover in the fall that was to be plowed, in the spring, for corn. In this way I have raised over eighty bushels of shelled corn per acre. I also found that the land was much more benefited by turning under clover, that had been mowed, than that which had been pastured. This appeared to be due to the much larger amount of roots where the clover was allowed to make a full growth, than where kept closely cropped. This was probably owing in part to the fertilizing effects of these roots, when plowed in while in full vigor, and partly to the loosening and ameliorating effects of the long tap roots, in the soil and subsoil.

Until recently I have made nothing by growing wheat. The first year on the place, I put in a few acres after spring crops, and harvested four bushels per acre. A summer fallow gave twelve bushels per acre. I then stopped growing wheat for some years. But during the last few years I have grown good wheat after clover that was mowed early, and a second crop turned under in August; the land being *well prepared* for the seed.

I commenced on this farm with a yoke of oxen and one horse. In a few years I raised a good horse team, and quit oxen. Have had three horses most of the time since. But I found a good lively yoke of oxen much the best and most economical team for a farmer that is largely in debt.

Now I don't see any very serious difficulty in paying one-half or two-thirds for a farm, and doing it all on the land. Three things are necessary,—industry, economy and good farming. The farmer must work, and work steadily. During the busy season he should take no more time for recreation, than is usually taken by a good hired man. In the winter there will be more leisure. But then it is well to try to earn or make a little money. My practice was to secure some work or job by which I could make from $30 to $50 each winter.

There must be good economy. The young man, heavily in debt for his farm, who buys high-priced horses, expensive carriages, with harness and other things to match, including costly apparel, and who frequently takes time to show all these things in riding about the the country, will hardly succeed. It is vastly better to pay for the farm and get these things, if they must be had, afterwards. To do this, there must not only be good economy of time and money, but of all things that can be used to make or save money.

To this economy there may seem to be one exception, and that is, all such farmers should deal liberally with their land. Not only should there be liberal seeding and manuring, but there should be sufficient labor applied to put the soil in the best condition for crops. And while this is done with a liberal hand, the farmer should study to do it judiciously; should see that there is no seed, manure, or labor misapplied, but that all are used to the best advantage. Here, too, is good economy; in fact a great chance for economy. The many small leaks,—with some, perhaps, not so small,—are often among the principal reasons why farmers succeed no better. Hence there should be close study to manage all these matters to the best advantage.

Care should also be taken to adopt a system of farming that will keep the land growing better. It is poor economy to reduce the soil while paying the debt. Many think it must be done; but they are greatly mistaken. Good farming, and the only correct course is, while constantly producing paying crops, to keep the soil constantly improving. By doing this, the farm can be paid for much sooner and easier, and will be much more valuable when this is done.

As "C. B. R." is looking for help and encouragement in the right direction, little need be said as to the benefits of agricultural books and papers. So, hoping that he will find some hints or suggestions in this that will be of use, and that what is here wanting will be supplied from the experience of other farmers, I remain A Common Farmer.

Western New York, Feb., 1868.

For the New England Farmer.

CALEDONIA COUNTY, VT., AG'L SOCIETY.

At the Annual Meeting of this Society held at St. Johnsbury, Jan. 21st, the following officers were elected for the year ensuing: President, Harley M. Hall, Burke; Vice Presidents, Chas. A. Sylvester, Barnet, John Bacon, 2d, St. Johnsbury; Secretaries, I. W. Sanborn, Lyndon, T. M. Howard, Elisha May, St. Johnsbury, Chas. E. Parks, Waterford; Treasurer, A. M. Cook, St. Johnsbury,

A committee was appointed to institute a series of meetings within the county for the consideration and discussion of agricultural subjects, at such times and places deemed best by the committee. The idea is to organize a sort of Farmers' Institute within the county for the consideration of all subjects pertaining to the interests of the farmer; and such an one properly conducted cannot but result in good to the agriculturists of the county.

The question of patent manures was discussed to some extent during the afternoon of the session, which resulted in the appointment of a committee to test by chemical analysis the leading commercial fertilizers offered for sale in the county, and report through the press as early as the first of April, next. It was further provided for the appointment of one in each town in the County whose duty it shall be to experiment with the said fertilizers the coming season, with as many crops and on as many kinds of soil as may be practicable, and report the results at the next Annual Meeting of the Society.

The object is, to determine as far as possible, What is the best commercial manure in the market for Caledonia County? and whether they can be made profitable, that is, whether they can be made to pay, at present prices.

This agricultural theorem is an important one; and one which the farmers of the country will be glad to see so practically applied as to read in truth—"Q. E. D." I. W. SANBORN.

Lyndon, Feb. 1, Vt., 1868.

For the New England Farmer.

IMPORTANCE OF MANURES.

The importance of manure to the practical farmer can hardly be over estimated. With its use, good farming begins, and in the neglect to use it, good farming ends. By cultivating a farm without manuring it, the crops are soon diminished in quantity, and the land in value. If this process is long continued the crops will be hardly worth gathering, and the land becomes a barren waste. There is no such thing as successful farming for any great length of time, without the use of manure.

Now, it would seem that an article of such prime necessity would be carefully saved by every farmer; but this is far from being the case. Vast quantities of manure are annually wasted, and what is much worse, a great amount of capital is expended yearly for imported fertilizers. It is easier to save what we have, than to pay for what we buy. It should be a question with every farmer, if manure cannot be manufactured at home cheaper than foreign manures can be imported here. Every farmer is supposed to have cattle, horses, hogs, &c. These, if furnished with the proper materials will make large quantities of manure. Although any way to save and manufacture manure is better than no way at all, yet it is always desirable to adopt the best way.

I once knew a farmer who had plenty of muck on his farm, but he would not draw the muck, for he said it was a great deal easier to buy guano or some other imported manure, than to draw his muck and make it into manure. This was some years ago, and an exhausted farm bears evidence, to this day, that ease obtained in this manner was far from being profitable. The farmer who has muck on his farm ought to use it; it will cost some labor, but it will pay well in the end.

Which is the best method of applying manure is still a contested point. Some farmers bury it in the soil with the plow or harrow, while others prefer spreading it on the surface of the ground. The best results, I think, depend largely on the kind of manure used and the nature of the soil to which it is applied. It is a point of interest to every farmer and each ought to experiment for himself.

I believe that those who use guano and other commercial manures would do a kindness to farmers in general, if they would give, through the columns of the agricultural papers, the result of their use. If it is profitable to use them, every farmer ought to know it; while if not profitable, the experience of those who have used them may save trouble and loss to those who have not. I presume the editors would gladly give the result of any well-conducted experiment in this department of farming; and certainly farmers ought to "*do good and communicate.*" O. T.

Lakeville, Mass., Jan. 20, 1868.

HORSE RACING AT ILL. STATE FAIR.

We published last week the vote of the Board of Directors of the Illinois State Agricultural Society abolishing racing at the coming Fair. The following comments on this decision are copied from the *Prairie Farmer*, published at Chicago:—

From time immemorial there have existed two parties upon the question of trials of speed at our agricultural fairs. On the one side have been arrayed those who look upon racing as a legitimate pastime, resulting in the amusement of the people and improvement of the equine stock of the country, the jockeys, the gamblers, who wish to gain by the sport, and the large crowd of spectators who love the excitement of the race.

On the other side we have had that large class of the community, who have had all their moral feelings outraged by association with the gamblers, pick-pockets, and bruisers that the race course in this country is almost sure to attract to its exhibitions, and by the open practices of gambling, betting, &c., that form the chief business of such characters upon these occasions.

It has been argued on the one hand that there was a demand for the race on the part of the great mass of fair attendants and that there could be no financial success without it; that the fair without the horse race, would be a dull, stupid affair; that the public would not attend and that its discontinuance would result in the breaking up of those annual gatherings that have resulted in so much good to the country in so many ways. Upon the other hand, the argument has been that the race track, with its concomitants has been the means of driving the moral portion of the people from our fair grounds and thus cut off receipts at the gates, while it has tended to turn the attention of the Society to the encouragement of one class of animals and one class of amusements to the detriment of other branches of industry that the Society is bound to foster and encourage.

Having long acted in accordance with the views of the first mentioned class, the Society has now determined to show a proper deference to the advocates of purely agricultural and mechanical exhibitions, and by resolution, at the late meeting of the Board, prohibits all trials of speed, by *racing*, at the fair of 1868.

By a very large number of our enterprising farmers, this act of the Executive Board will be received with great favor, and if their former statements were made in good faith, we shall see exhibitors at our next fair whose faces have not greeted us for years. We are glad of the decision of the Society, for we can now have the vexed question settled whether the people will support a fair without the usual attraction that has been offered by the race track. If they do not, then it remains to be seen if the pastime cannot be stripped of its disgusting and revolting features, and thus be allowed to add its attractions to our fairs; at any rate, we look upon the act of the Society as the beginning of a great reform in racing practices at our fairs.

How to Build a Corn Crib.—I have one that has stood for twenty years, and has never had a rat, and but one mouse in it to my knowledge. Posts 10 or 11 feet long and eight inches square; mortice 2 feet from one end; for side and end sills, 2-inch mortice with tusk. Taper post from sill to the end by hewing off inside until the end is reduced to four inches diameter; make smooth with draw knife, and nail on tin smooth half way to the end, below the sill. Let sills be eight inches square; also, end tie them and the rafter plates strong with moderate inter-ties. Brace well, and lath up and down with three-quarter inch lath; dovetail or countersink joists cross-wise; lay the floor, and board up the ends with ungrooved boards; let each bent be 12 feet long, 6 feet wide at the sill, and 7½ feet at plate, with 1½ feet floor, and if full to peak, it will hold 250 bushels. I never had an ear to hurt on account of the great width. If preferred, lay the floor with lath or narrow boards, with room for ventilation. Each post should stand on stone, about three inches from the ground, and each stone have a foundation two feet square and below the frost.—*J. S. Keith, Newton, Pa., in N. Y. Tribune.*

HOW WE KEEP OUR HENS.

We keep about fifty hens and four cocks. Our hen house is twenty feet long, ten feet wide, and ten feet high in front, with sloping roof, two windows on the west, and one long window on the south, across the whole end, swinging inward. Under the front windows are the boxes for the nests, made as seclusive as they can be, for a hen is as shy and retiring before she lays as she is bold and noisy after. Under the roosts a shelf catches the droppings. These are gathered every few days, and saved for the garden, and the shelf each time covered with ashes or lime. We whitewash inside and outside. On the south side of the house a yard is fenced in under apple trees, twenty by fifty feet. The earth at the bottom of the house, when frozen, is swept every day, and at other times is shoveled out often, and renewed with fresh earth. A large box, with fine coal ashes or wood ashes, is placed in a corner for a bath, and is often renewed. No food is given in the house which can sour the ground, and when such is given in the yard, like scraps from the kitchen, the earth is often taken out and renewed. A lime or oil wash is occasionally used on the roosts. The house is shut up pretty closely on very cold nights, (always the passage-way into the yard open,) but is often opened and ventilated. In weather not too cold the windows are left up and the door open, and the fowls are encouraged by the manner of feeding to roam away from their house about our place, but this in even moderately cold weather they are always reluctant to do, and invariably go back to their house in a few minutes, or huddle together in some warm, sunny place in a shed. There is nothing fowls like so well in cold weather as a sheltered place, where they can have a sun bath, and even in summer they seem to take great delight in wallowing in a sand bank under a blazing sun. We give them plenty of fresh water and pure food.

Now there is nothing very peculiar about this manner of treatment, into which, from habit, we have gradually settled, except in its results. We have lost one hen, found in the yard dead without apparent cause, but probably from apoplexy, to which they are subject, and otherwise than this we have not had a sick fowl in our whole flock from any cause during the whole fall and winter. The simplest medicines work the most wonderful cures, and we have always thought the simplest treatment of fowls the most profitable and successful, and we have had all kinds of

experience in the matter, not omitting the most expensive and profitless.—*Ruralist, in Country Gent.*

GOODHUE, MINN., FARMERS' CLUB.

A correspondent informs us that on a prairie 10 to 14 miles south of Red Wing, Minnesota, which a few years ago belonged to the Sioux Indians, there is now a "Farmers' Club" of over 100 members, with a library of over 200 volumes, furnished also with the leading agricultural and some other papers, where the "NEW ENGLAND FARMER, among others, is read by many a rough, but industrious and intellectual farmer of Eastern extraction, on Tuesday evening of each week."

The New England family that locates on a Western prairie needs advice and sympathy. Everything is new—the climate, the soil, the vegetables and the animals. The sun, moon and stars have a Western look. Even the wind that whistles around the cabin has its peculiarities. The neighbors may greet such a family with much cordiality, but still how lonesome they often feel!

Here is a grand field for a farmers' club, and we are glad to know that at least one such association improves it well. Our correspondent informs us that the Goodhue Farmers' Club furnishes each new settler with garden seeds, currant and gooseberry bushes, strawberry plants for a large garden bed, one vine each of the Concord and Hartford prolific grapes, with a lot of grape wood of several varieties. If unable to procure his seed wheat, potatoes, corn, oats, &c., he is furnished with them and then pays for them from the proceeds of his second crop. He has access to the library and reading room.

From statistics collected by this club, it appears that while the average yield of wheat for the whole State is put at thirteen bushels per acre, the average of this settlement, which has 7640 acres under cultivation, was 19.8 bushels per acre, the past year, on old ground. They raised 143,040 bushels of grain this last season. With harvest hands at $4.00 per day, $3.50 for team work, $2.00 per bushel for seed wheat, 12c per bushel for hauling to market, 7c per bushel for threshing, besides "finding" or keeping teams and men, and our own work at $2 per day, our Field Account, says our correspondent, shows a net profit of $14 per acre. Large farm houses, commodious barns, cattle sheds, substantial granaries and out buildings, well cultivated fields, good fences, well built school houses, three churches, tell of the fruitfulness of our soil. During the last season a large number of new farms were opened, some of 40 and some of 160 acres in extent.

We hope to hear again from our correspondent, who is also Secretary of the Goodhue Farmers' Club.

SUFFOLK HOGS.

Henry Cobb, Esq., of Amherst, Mass., furnishes the following statement of the weights of five hogs of this breed fed upon his farm the past season:—

	Live weight.	*Live weight.*	*Dressed weight.*
Hog No. 1.	Oct. 16, 354 lbs.	Jan. 7, 519 lbs.	451 lbs.
" " 2	Oct. 16, 348 "	Jan. 7, 492 "	432 "
" " 3.	Nov. 13, 211 "	Jan. 14, 352 "	300 "
Two Pigs	Oct. 16, 146 "	Jan. 14, 355 "	304 "

One of these pigs, cut up for home use, weighed 147 lbs; head, without cheeks, 6¾ lbs; feet 1¾ lbs.

Mr. Cobb obtained his stock originally of Mr. Stickney, and has taken much pains to keep it pure. Instead of deteriorating in his hands, he believes it has gradually improved until fully up to the Prince Albert standard. He fully endorses the commendation of the Suffolk in a late number of the *Stock Journal*, which says:—

"On the whole, there is no better breed in the country than the improved 'Suffolk.' They are a well-formed, compact, short-legged, hardy animal, equal in point of value to the best of the 'Essex' and superior in condition, and consequently better adapted for general keep, and especially for the cottager. Mr. Stickney, of Massachusetts, one of the first importers, deserves the credit of assisting the 'Suffolk' to the reputation which they have attained in this country."

Mr. Cobb alludes to a favorable account in the Amherst *Express*, copied from an Illinois paper, of the Suffolk breed in that State, but objects to the recommendation of the writer to cross them with the Berkshire. He thinks that the crossing of thorough bred swine results as unfavorably as in the case of horses and cattle. He is fully satisfied with his improved Suffolk, and is not willing to risk the loss of any of its good qualities by mixing with any other race.

His figures certainly show that he has a superior breed, as well as a most "excellent pail."

— The receipts of the N. Y. State Agricultural Society, during the past year, were $40,587.99, and the expenditures $27,637.48.

For the New England Farmer.

APPLICATION OF MANURE.

Many farmers have a prejudice against spreading manure and exposing it for any length of time on the surface of the ground. They believe a large portion of the value of barn manure is lost by evaporation if not covered by the soil. Others contend that little, if any, loss is sustained by the practice of surface manuring.

Several experiments made within a few years have inclined me to favor top dressing and surface manuring whenever circumstances seem to require it,—as, for instance, when the ground freezes up early in the fall, and you do not have time to haul out and work in all your manure as you desired. If I were caught in that way now, and had a lot of summer manure on hand, I would keep carting and spreading just as if the ground were not frozen. I would not put it in heaps large or small, but would spread it, all ready to be cultivated in at the first seasonable moment.

Last winter after the manure in the barn cellar became somewhat in the way, I carted out some dozen loads and spread it on about four inches of snow over a part of a field that was intended for potatoes. The remainder of the field was manured in the spring with the same kind of manure and as near as might be with the same quantity. The field was all cultivated and worked alike after the manure was spread. At no time during the growth of the potatoes could the least difference be noticed between that part manured the day it was worked into the soil, and the other part where the manure lay exposed several months.

I do not suppose the manure that was spread in the winter if taken up again in the spring and used to manure some other land would have been as good as that drawn directly from the yard. I suppose what it had lost the ground had taken and kept till the growing crops should call for it.

The fall previous, I hauled out several loads and left it in small heaps of about a quarter of a load each, to be spread in the spring on land intended for grass. The result of that experiment was that where the heaps lay all winter the grass was very early and heavy, and needed cutting many days before the rest of the lot, making the field look very uneven. I had to cut it when the early spots were grown or that part would have lodged and rotted before the other part would have been ready to cut.

I think, of all modes of disposing of manure, that of leaving it in heaps through the winter is the worst.

If manure can be left spread on the surface of the fields where it is to be used, without losing its strength only as the ground takes it, it is worth knowing. And now is the time for all who have manure on hand, that is in the way, and have tolerably level land on which to use it, to draw it out while the ground is frozen and the men and teams comparatively little to do. To most farmers, a day's time in April is worth two in January.

For top dressing grass, I have found the best time to be immediately after taking off the hay. On land suitable to top dress at all, the grass will usually grow up in a few days and completely shade the manure, keeping it moist so that every shower can carry down to the grass roots some portion of the value of the manure.

A. W. Cheever.

Sheldonville, Jan. 15, 1868.

For the New England Farmer.

METEOROLOGICAL RECORD.

These observations are taken for and under the direction of the Smithsonian Institution. The dash after figures indicates below zero.

	Oct 1867.	Nov. 1867	Dec. 1867.	Jan. 1868.
Av temp're	48°	35°	17°	1.°
" midday "	57°	40°	23°	25°
Coldest day	24th 36°	19th 11°	12th 5°-	13th 5°
Warmest "	18th 63°	11th 55°	27th 37°	21th 31°
Coldest mrn	—	—	11th 16°-	13th 9°-
R'ge of temp.	25 to 75°	4 to 55°	16- to 41°	9- to 39°
Bar. av. h'gt	29.30°	29.2.°	29.23°	29.25°
Hg't daily av.	29.?8°	29.53°	29.69°	29.58°
Lowest " "	28.94°	28 78°	28.85°	28.77°
Range merc.	28 83 to29.71°	28.51 to29.5.°	28.67 to29.70°	28.54 to29.69°
Stormy days	8	9	11	8
Inches rain	3.07	—	—	—
" snow	—	5.50	12 75	26.50
R'n &mel'd "	3.07inch's	2.42inch's	1.85 inches	2.65 inches
No. clear dys	2	0	0	3
" ent'y cld'y	3	6	1	9

October.—An exceedingly pleasant business month. Weather in every respect remarkably similar to that of same month last year.

The average temperature of October, 1866, was 48°; do. midday 58. There were seven stormy days with 3.30 inches of rain, one snow squall, two clear days, and five days of total cloudiness.

November.—An early closing in of winter especially distinguishes this autumn from the last—the weather all through being decidedly colder with but little rain.

The average temperature of November, 1866, was 38°, do. midday 44°. There were six stormy days, with 1 inch of snow and 1.15 inches of rain and melted snow; no clear days, and three days of total cloudiness and rain.

December.—This was one of the coldest months on record. Such a "spell" of zero weather as occurred from the 8th to the 15th has not been known since Dec., 1835. In the latter part of the month the cold was moderate. Little snow fell; with almost no sleighing. This record contrasts remarkably with that for same month last year.

The average temperature of December, 1867, was 24°, do. at midday 30°. There were no entirely clear days. Eleven stormy days, with 19.00 inches of snow and 4.73 inches

of rain and melted snow; two clear days, and two days of total cloudiness.

JANUARY, 1868.—A remarkably moderate, comfortable month. No thaw nor any material softening of the snow during the entire time. One of the best seasons for sledding known for several years. The "January thaw" did not come off according to appointment, but may be expected any day, and will be very welcome to many householders.

The average temperature of January, 1867, was 12°, do. at midday 18°. Eight stormy days, with 17.50 inches of snow and 1.85 inches of rain and melted snow; two clear days, and five days of total cloudiness.

For the New England Farmer.

DUTCH COWS AND OXEN.

Mr. EDITOR:—It gives me pleasure to look back and reflect that within the last seven years, I have been instrumental in saving a number of heifer calves from the knife of the butcher that were descendents of Mr. Chenery's Dutch Stock. The most of them have made first-rate milkers. The cow that I now propose to speak of is the most extraordinary heifer that I ever was acquainted with, excepting one native by the name of Nonesuch which was frequently exhibited at the Middlesex agricultural fairs. Before this Dutch heifer dropped her first calf, I noticed, one morning, that her bag was so large that it was chafed on both sides by walking in the pasture. She was then milked clean, giving a common Quaker pail running over full of milk. She was milked every day for four days, and on the fourth day gave a pail full and two quarts over. She was then milked twice a day and her milk measured, and amounted to eighteen quarts a day. After she dropped her first calf, she gave a good mess of milk more that her calf would take, and on the day that her calf was three weeks old, what it would not take measured eleven quarts. I then sold her to Mr. Jones Emerson, proprietor of the Medford House, for $150, reserving the calf for myself. I shall leave Mr. Emerson to make his own statement, of what she has done since. One of my neighbors told me he had seen her within a week. Within a few days she had dropped her third calf; and he regarded her as the best specimen of a cow he had ever put his eye on, and thought her to be worth $300.

As the Medford House stands about three rods from the horse railroad, I think some of the lovers of good cattle would be well paid by taking a ride either in the cars or in a sleigh and taking a look at this noble cow.

Last summer I sold two three-year-olds of the same breed to Mr. Wm. Jaques of the Ten Hills Farm in Somerville. I sold one two-year-old, after dropping her first calf, to Mr. Duren, living the west side of Woburn. Since then, Mr. Duren has told me that some of his neighbors thought she might be three years, and others that she might be four years old; but I know she is only two years old last spring.

As the Dutch breed are not much known for oxen I wish to say one word concerning them. Five years ago last spring, I raised a bull calf of the Dutch breed, and bought a mate for him of Mr. Chenery. They were broken to the yoke very young. I kept them till last April, when they were five years old. I considered them the very best cattle of their age and weight. I sold them to John Cummings, Esq. of Woburn for $300. I have never heard Mr. Cummings say one word for or against the cattle since he bought them. I looked them over a few weeks ago and knowing the hard work they did last summer and seeing how they had grown, and knowing that Mr. Cummings always keeps oxen for hard work, I made up my mind that he could not better himself by selling them for $500. ASA G. SHELDON.

Wilmington, Mass., Feb. 2, 1868.

For the New England Farmer.

SHEEP HUSBANDRY.

BY JOHN DIMON, OF POMFRET, CONN.

This being a stormy day, and having spent a portion of it with my sheep, I very naturally take sheep for my subject.

I am aware that sheep are a little unpopular just now, and that wool and mutton are low. But nevertheless, brother farmers, I think we had best keep a few woolly backs, and I think we shall not find it altogether unprofitable to do so. I will also tell you my plan of managing them, which, by the by, I do not claim to be the best way, but is the best I know at present.

I begin by selecting in the summer or fall, ewes of vigorous constitution, wide hipped, short-legged, early maturing animals, culled from the common flocks of the country, and have a *good* South Down buck which is turned with them as early as the 10th or 15th of September. They should have *good* pasturage; or, if you cannot give them this, feed them with a little grain, and keep them in good condition through the fall and winter, but do not get them too fat. Keep them through the winter by themselves, away from cattle and other stock. Have a variety of fodder provided for winter feeding, such as clover hay, rowen, corn stalks, and last, though by no means least, a good supply, when convenient, of good well cured weeds. Horse wormwood, when cut at the right time and properly cured and housed, is worth more, ton for ton, for sheep than good English hay. However, I like to have both, as it is very essential that sheep, as well as other stock, have a change of fodder. I give ewe sheep grain every day, during the winter. If you have proper accommodations for sheep, they require as little care, during the winter, as any other stock; but

they do require to be fed regularly, and to be kept dry, but not too much confined.

Lambs.

When your sheep commence lambing,—if in February, March, or April,—then they require great care, as by neglecting them then you lose the profit on the flock for the year. When the lambs are about three weeks old they will commence eating a little meal sprinkled in a trough, in a separate pen, with an opening too small to admit their dams. I usually feed oil meal. At first, they should be allowed but little; increase gradually until at twelve to fifteen weeks old they will eat a quart of oats and corn, or oil meal, each, per day, when they will have attained sufficient weight and maturity for the butchers,—weighing ten to twelve lbs. per quarter, and will always sell readily for the best price. They should be all sold and closed up certainly by July 4th. The ewes should be sheared early—by June 1st—and fattened after the lambs are taken off, and sold early, at a good profit, before our markets are flooded with mutton and late lambs,—thus closing the account within the year and be ready to start again.

Let your buck be a good one. Better pay $50 for a *good* South Down buck than have an ordinary one given you, if you have from twenty-five to fifty ewes. When you get one that is just right, keep him as long as he remains just right.

The above is a practical view of sheep husbandry, as practiced by myself, with a part of my sheep. I have sheep, however, that I do not sell to the butchers until they are old. I always raise a few of my best thoroughbred South Down ewe lambs.

Shearing.

This should always be done early, say the last of May or the first of June. It is better to shear early and house the sheep a few nights, especially if they are ticky, than to let them carry the fleece too late. Shearing should always be done by a workman,—by a man who understands his business, especially if the sheep are intended for exhibition.

Salting.

Sheep should have free access to salt, mixed with one part sulphur to three of salt at all times, both winter and summer. I am, of course, referring to sheep kept back in the country, away from the salt water and salt hay. Sulphur with the salt has a tendency to keep sheep free from ticks, and healthy.

South Downs.

For raising lambs for market, and for mutton sheep generally, I prefer the South Downs and their crosses to any other breed. I believe them to be the best for that purpose, and will pay the best for feed consumed. They are a quiet breed, and the ewes are good nurses and great milkers. Aside from this, they are, in my opinion, decidedly the handsomest breed in the world. For a definite description of South Downs and other breeds, and for the general management of sheep, I refer all who may read this to "The Practical Shepherd," by H. S. Randall. This is a book that every man who keeps ten or more sheep should possess, and should look at every month in the year.

I purpose giving you my views on stall feeding, &c., but will defer it now for fear of spinning my yarn too long.

Pomfret, Conn., Jan. 21, 1868.

THE ROBIN.

We have been requested to publish the following by one of our subscribers, who says the robins last year took almost his entire crop of Honey and Black Heart cherries, some four or five bushels, a large share of his strawberries and peas, and injured his Bartlett pears. The article is an extract from the report of E. W. Lincoln, Secretary of the Worcester County, Mass., Horticultural Society. After referring to the recent assertion of a naturalist, that the robin has got his bad reputation among fruit growers because his destruction of insects is carried on so early in the morning, the writer says:—

"He has beheld the very finest specimens of the strawberry and raspberry, in the development and exhibition of which he anticipated more pleasure than from their consumption, disappear down the instatiate maw of these statutory pets. Quite recently, before sunrise, when they ought to have been diligently occupied in works of matutinal usefulness, he has startled them, in the great flocks into which they gather before migration, from his Bartlett pears, where they had been presenting their bills and impressing their private stamp without Federal or proprietary license. But he prefers rather to rely upon the evidence of His Excellency the Governor, the commander-in-chief of an army and navy that yet was inadequate to save his pears; upon the testimony of ex-Gov. Lincoln, whose strawberries were sedulously tended, and when ripening were summarily stripped; upon Messrs. John C. Ripley, George Jaques, O. B. Hadwen and J. Henry Hill, gentlemen deservedly high in your confidence and in that of the public, who all concur in the opinion that the robin is an incorrigible thief, and an unmitigated nuisance. Gentlemen are they, also, of refined sensibilities, to whom the song of birds is as joyous as to those whose exquisite tenderness is wounded by the proposed outlawry of a single variety of the feathered race. Members of this society are constantly testing new discoveries in pomology, as much for the public benefit as for their private enjoyment. Their labor will be utterly nugatory, if its fruit is to be subject to legalized

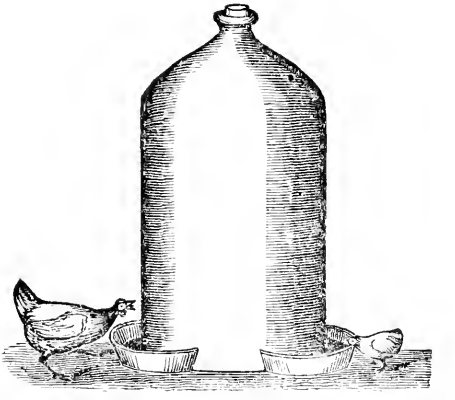
depredation. Your secretary would advise that the society address a memorial to the General Court, asking for a repeal of all laws that protect the American robin, or their amendment so far at least as to allow individuals to shoot them upon their own premises."

IMMORALITY AT AG'L FAIRS.

There was much complaint last fall of the gambling, pool-selling, drinking and other immoral and vicious practices which were permitted at and about the agricultural fairs in many parts of the country. We are glad to see that something beside expressing regret for these vicious attendants of our County and State Shows is likely to be done, in one county at least. The action of the grand jury of Dutchess County, N. Y., in presenting the following indictment, will, we hope, inspire the leading men in other places with courage enough to attempt a reform in this respect.

"We, the Grand Jury of the County of Dutchess, empanelled and sworn at the present term of the Court of Oyer and Terminer for said county, do present that the allowance of gambling and liquor selling at stands and in booths around the grounds where the Fair of the Dutchess County Agricultural Society is held, is productive of such vicious and criminal practices as to call for enegetic interference by the public authorities of the county. That the owners or occupants of the fair grounds, and the land adjoining them, have for several years been accustomed to letting such ground during the fair to unknown and irresponsible persons from distant places, who, at the stands and in the booths erected thereon, have carried on an unrestricted sale of intoxicating liquors, together with gambling and other infamous practices, which have grown from bad to worse, until they have become so criminal and shameless (as at our last County Fair) that we are surprised that no citizen, among the thousands present, could be found to cause the arrest of the guilty parties.

These and other immoral and vicious practices at and about said fair, have been the cause of drawing thither a crowd of vile and abandoned characters from our own and other counties, whose presence there has rendered life and property practically unprotected. So great has this evil grown that our County Fair, with its attendants, has become a disgrace to our county and a public nuisance, especially to all decent and law-abiding citizens. The commencement of our County Fair is but the inauguration for four or five days of a carnival of vice and crime and lawlessness, of so shameless and outrageous a character as to disgrace even a semi-civilized community. We regret that the want of evidence as to the identity of the guilty parties, and of the complicity with them of other well-known parties, prevents us from presenting them for trial by indictment, and we, therefore, take this method of expressing our condemnation of the practices alluded to, and of censuring, in the severest possible terms, those parties residing in our own county, who aid and abet them, and who, for the purpose of gain, let the fair grounds and the premises about them for the purpose alluded to. We are compelled, by the solemn obligation of the oaths that we have taken, to make this presentment, and we respectfully ask that it may be entered on the minutes of the court".



A WATER FOUNTAIN FOR POULTRY.

The above is a somewhat faulty representation of a contrivance for supplying poultry with water on a principle much like that on which the inkstand on the desk before us operates. The cut is intended to represent a common jug set in a pan or dish a trifle larger in circumference than the jug. The jug is filled or partly filled with water, and tightly corked. A small perforation is made in the bottom of the jug, through which the water gradually flows into the dish or pan in which it is placed, so as to secure a fresh and constant supply for the poultry. The same object may be obtained by the use of a glass bottle filled with water and supported in an erect position, with the neck or nozzle near the bottom of a dish or trough, beneath the surface of the water.

GRAPE ROT.—From a careful examination of the history of grape culture from the earliest ages, together with the analysis of the best grape soils, I am convinced that the disease has its remote cause in a want of certain natural combinations of the elements of the soil and subsoil, more or less influenced by meteorological phenomena and other causes referred to.

In all countries where volcanic deposits predominate in the soil, the grape is healthy. Now, by chemical analysis, we can certainly ascertain the components of the soil, and by composting manures, supply, in a great measure any deficiency that may exist—yet we can no more make a soil as it is in the volcanic districts direct from Nature's great laboratory, than we can take charcoal and mould a diamond, or form the gossamer fibre of the cotton plant. We may greatly simulate Nature—and in so much as we do, we will in the same proportion diminish the disease in any district, making all due allowance for unhealthy vines and meteorological influences, which may one

year favor the development of the disease and another prevent it.—*E. M. Walker, M. D., Gonzales County, Texas, in Rural World.*

From the Cornhill Magazine.

SPRING.

Here, where the tall plantation firs
Slope to the river, down the hill,
Strange impulses, like vernal stirs,
Have made me wander at their will.

I see, with half attentive eyes,
The buds and flowers that mark the Spring,
And Nature's myriad prophecies
Of what the summer's suns will bring.

For every sense I find delight—
The new-wed cushat's murmurous tones,
Young blossoms bursting into light,
And the rich odor of the cones.

The larch, with tassels purple pink,
Whispers like distant, falling brooks;
And sun-forgotten dewdrops wink
Amid the grass in shady nooks.

The breeze, that hangs round every bush,
Steals sweetness from the tender shoots,
With here and there a perfumed gush
From violets among the roots.

See, where, behind the ivied rock,
Grow drifts of white anemones;
As if the Spring, in Winter's mock,
Were mimicking his snows with these.

The single bloom yon furzes bear
Gleams like the fiery planet Mars;
The creamy primroses appear
In galaxies of vernal stars.

And, grouped in Pleiad clusters round,
Lent-lilies blow—some six or seven;
With blossom-constellations crowned,
This quiet nook resembles heaven.

THE LABOR QUESTION.

What a Hired Man Says.—A man in Herkimer County, N. Y,, writes as follows to the New York Farmers' Club:—

I work by the month in the summer, and by the day in winter, and make the most this way. I find that the less I know and the less I do on my own responsibility the better satisfaction I give. I have tried always to suit, but I find you do not want your hired men to know any more than your horses, though we are expected to behave better sometimes. There seems to be a sort of pride growing up among you to have a young man start in the morning and have no idea what he is going to do till he gets on the spot. The first season I got $32 a month, while a big Irishman got $35, though he could not run any kind of machine, or drive a team decently, but he had an abundance of muscle, and that was all that was wanted. If you want intelligent help you must pay for it. Again, you all complain that your hands do not take any interest in your work. This is true, but how can it be otherwise when you want to get as much work out of us as possible? For instance, a certain farmer, nearly through haying, told his men that they must rush through before night. All went to work with a will, each exerted himself to the utmost, and when the last forkful went over the beam, a cheer from the men proclaimed that haying was done at four o'clock Saturday afternoon. When the cheer was hushed the voice of the employer was heard telling the men to take the teams and haul out manure. There was not much interest in the work after that. Now, if you want your men to have an interest in things, treat them as men, and while at work as companions; let them know why a thing is done so and so, and many a blunder which you think arises from stupidity will be avoided.

AGRICULTURAL SOCIETIES.

Stock Breeders' Association.—The Association of Breeders of Thorough-bred Neat Stock held its annual meeting at Springfield, Mass., on the 12th inst., and elected the following officers:—President—E. H. Hyde, of Stafford, Ct. Vice Presidents—J. F. Anderson of South Windham, Me., J. O. Sheldon of Geneva, N. Y., Burdett Loomis of Suffield, Ct., J. W. Freeman of Troy, N. Y., and E. D. Pierce of East Providence, R. I. Secretary—J. N. Bagg of West Springfield. Treasurer—H. M. Sessions of South Wilbraham.

Ayrshire and Hereford Com.—George B. Loring of Salem, H. S. Collins of Collinsville, Ct., and William Birnie of Springfield.

Devon Com.—H. M. Sessions of South Wilbraham, B. H. Andrews of Waterbury, Ct., and E. H. Hyde of Stafford, Ct.

Alderney Com.—Jno. Brooks of Princeton, O. B. Hadwin of Worcester, and James Thompson of Nantucket.

After the meeting, the Devon, Ayrshire and Alderney Committees had a session over their respective herd books,—now nearly completed and soon to be published,—and cleared up some of the knotty points in pedigrees.

Maine State Agricultural Society.—President—Seth Scammon, Scarboro'. Secretary—S. L. Boardman, Augusta. Treasurer—Wm. S. Badger, Augusta. Trustees—Geo. W. Ricker, Seward Dill.

Woodstock, Conn., Agricultural Society.—President—Oliver H. Perry. Vice President—Wm. I. Bartholomew. Recording Secretary—John Dimon. Treasurer—Samuel M. Fenner.

DECAY OF MAPLE TREES.

A correspondent of the *Ohio Farmer* assumes that maple trees in that State are more rapidly failing than other forest trees, and says that since tapping with a bit has been practiced, maple trees have died faster than ever before. Is this true of the maple orchards of New England? This writer says:—

When an incision is made into the sap-wood only, it will heal up, but when made deeper, it never will, and all the adjacent parts will die, and often decay. Now, in proof of this, let any farmer examine two maples that have been tapped for a dozen or more years—one with the bit and the other with an axe or gouge—the cuts by the latter not made beyond the sap-flowing wood. The inner wood of the former and much of the surface will be found

dead, while the other, where it has sufficient time for healing, will be found to have formed a perfect gnarl, so tough and sound that it will be next to impossible to split a log of it, stove-wood length. Another proof of this may be made by noting the difference in the decrease of maples in different sugar orchards where the two modes have been practiced.

When a tree is tapped with a bit, the spile stops up the best flowing grains. When an incision is made with a large auger or gouge, more grains are opened, and of course a greater flow of sap obtained. It is a fact, however, that when trees are tapped in this way, the wind dries up the wood sooner than when a bit is used, but this is easily prevented by frequent freshing over.

AGRICULTURAL ITEMS.

—The Orleans County, Vt., Agricultural Society has located its annual fair at Barton, for five years.

—Michigan shipped over 11,000,000 pounds of wool last year.

—For the past month of January the average temperature near New York city was 18°; for 10 years previous it was 31°.

—The subsoil and "pan" of the Illinois prairies, according to Dr. McCord, are very rich in all the mineral elements.

—To prevent buggy peas the Canadian farmers sow as late as will just allow time for their maturity.

—A correspondent of the *Journal of Agriculture* says that sweet oil administered to a horse troubled with bots will effect a cure.

—To remove any foreign substance from the eye, make a loop of a bristle or horse hair, and insert it under the lid and then withdraw it slowly and carefully.

—Mr. Willard estimates that 55,600,000 pounds of cheese will be sent to England from this country in the year ending with May next, or about 9,000,000 pounds more than last year. The production of cheese in this country, last year, he estimates at 215,000,000 pounds.

—Wet prairie lands have been drained of late at the West to considerable extent by Mole Drains, or those made by an implement something like a subsoil plough. The *Prairie Farmer* is informed that in some cases the water washes out the soil under the sod so as to engulph domestic animals who pass over them.

—A correspondent of the *Kansas Farmer* recommends wind mills for "the purpose of banishing those pests of the land, called 'steam mills,' which are devouring our fuel in ruinous quantities, and confiscating a fourth of our grain, and complaining that they are not making anything even at that."

—A cattle raiser and feeder of Kentucky recently remarked that he considered a thousand dollars made with cattle nearly equal to two thousand made with mules, or grain grown and sold from the farm. The great beauty in handling cattle is the condition they leave the farm in; the pasture all clean, fence-corners all dressed out, and the land becoming more fertile year by year.

—Prof. Nash says that he once knew of a water pipe being taken up that was laid for a long distance on a dead level, in which there was enough white lead found to paint a small house, inside and out, and if taken internally would kill a small army, and yet the family that used the water for twenty years was perfectly healthy. The poison settled on the bottom of the pipe and was not forced into the house.

—A correspondent of the *Prairie Farmer* says that the friction of the stocking on the foot, and not on the boot, makes the holes, and advises washing the feet at least twice a week, and scraping off the rough scurfy skin from the heel and sole. As to the one who darns, let her take the stocking and line it on the inside of the heel, or on whatever part the trouble occurs, with cotton cloth, and she will find at least three-fourths of her darning saved.

—"The trees, like giant skeletons,
Wave high their fleshless arms and bare—
Or stand like wrestlers stripped and bold,
And strongest winds to battle dare.

It seems a thing impossible
That earth its glories should repair:
That ever this bleak world again
Should bright and beauteous mantle wear."

—The *New York World* estimates the number of workmen unemployed in New York city at 50,000, in Brooklyn at 10,000, and says that the depression in New England throws out of work at least 10,000 in Maine, 20,000 in New Hampshire, 30,000 in Connecticut and Rhode Island, and 100,000 in Massachusetts. This may be a high estimate, but the number "out of work" is large in all our cities, and the prospect for the future is far from encouraging.

—Several neighboring farmers lately met in Champaign county, Ill., to compare results of their farming operations. In respect to corn raising they made an estimate based on the daily wages of men and teams, which seemed to show that at the present time, corn cannot be raised for less than fifty cents a bushel, unless over forty bushels to the acre can be obtained, which amount was considered a full average for the western part of that county.

—In commenting on the vote of the Illinois State Board of Agriculture, that no trials of speed by racing shall be allowed on the Fair grounds, next fall, the *Turf, Field and Farm* wonders where all the old fogies that compose that Board came from, and says, "We had no idea that so large a body of old women, in men's clothes, could be scraped together in the healthy, vigorous West, and especially in the enterprising Prairie State, as we find in this Board." If racing is the manly

business claimed by the above extract, why have the gentlemen of the ring so generally thrown off their old mantle and borrowed a new dress of somebody—we do not say an old woman—as they have done in substituting "Horse Fair" for the old term *Horse Race?*

—Rennets have been imported to some extent by the Herkimer County, N. Y., dairymen from Bavaria. The *Utica Herald* says they are put up without salt, and look much like a dried bladder. In fact the stomach of the calf is "blown up" like a bladder, the orifice tied, and thus while filled with air suffered to dry. These rennets, so far as we have seen, appear to be very sweet and free from taint, and they are said to be of extra quality as to strength.

The following extracts I think contain much practical wisdom. As it is many years since I saw them in print, I may not give the exact words. E. B.
Derry, N. H., Jan., 1868.

—Do not all you can; believe not all you hear; tell not all you know.

—Never worry about what you *cannot* help; never worry about what you *can* help.

—Who does the best his circumstances allow, does well; acts nobly; angels could do no more.

—Long credits, poor fences, and unruly animals cause many quarrels.

—Delay in fulfiling contracts, and want of punctuality in general, will ruin any one's credit and standing with his fellow men.

—One who uses all the natural light of day will find less occasion to use the less healthy and more expensive artificial light of lamps.

—The farmer who improves all the fair weather will find little occasion to work out of doors in storms of rain and snow.

—Borrowing tools when the borrower ought to own them; an unwillingness to make them good when injured, and neglecting to return them at the proper time, are causes of much vexation.

For the following suggestive sentences we are indebted to the head and pen of our correspondent, W. D. Brown, of Concord, Mass.:—

—A farmer provided with a good grindstone, is apt to cut his way smoothly through the world.

—The best way to apply the whip to your team, is to give it in the shape of oats—in the crib.

—It is better to sell milk and beef, than hay or grain.

—The stomach of the swine resembles the human; therefore his need for warm, cooked food.

—Canada exported into the United States $71,576 worth of flax last year.

—A bill is now before the legislature of New Jersey to regulate the sale of vegetables by weight.

—The animal and vegetable productions of a farm are usually alike in quality and abundance. A farm is not wisely managed where both do not improve each year.

—Hospitality provides a good tie-post with chain and spring hook, where the guest may safely fasten his steed.

—A harness is stronger, and more comfortable, and lasts better, when kept soft and pliable with neat's-foot oil.

—The square form in building gives the cheapest inside room. Too many little structures are a great tax on the owner.

—The property of the country is enhanced in value by improved roads. From field to market there should be the fewest hills; no loose stones or needless sand.

In communicating the following "items" Mr. H. Poor, of Brooklyn, N. Y., formerly of Andover, Mass., remarks, "If any one thinks I have 'wheat on the brain,' I can only express my regret that the 'fever' is not more contagious!" He adds, Maine is waking up and the other New England States should rouse themselves, as he predicts that the annual tax of some $50,000,000 will be grievously felt, if, as he fears, manufacturing is to become less prosperous. He also believes that the severe drought at the West, which prevailed during seed time, the past summer and fall, will materially reduce the crop of the coming season.

—Maine has seventy thousand farms. Three acres of wheat to each farm, at 15 bushels per acre, will give seven hundred thousands barrels of flour, allowing four and a half bushels to the barrel. Population 650,000. One barrel flour to each person would leave 50,000 barrels surplus. At $18 per barrel it has cost the State over eleven millions of dollars per annum the past two years.

—New Hampshire has about thirty-five thousand farms. Three acres of wheat to each farm, on the foregoing estimate, would give 350,000 barrels of flour. Population 350,000. Her annual tax the past two years, for flour, has been six millions.

—Vermont has about the same number of farms and the same amount of population as New Hampshire, and her annual expences for flour about the same.

—Connecticut has about twenty-six thousand farms. Population about 500,000. She would require six acres of wheat to each farm, allowing fifteen bushels per acre, and one barrel flour to each person. Her flour bills at $18 per barrel, amount to nine and a half millions dollars per annum.

—Massachusetts has thirty-six thousand farms. Population about thirteen hundred thousand. She would require nine acres to each farm. With twenty bushels to the acre, it would give fourteen hundred thousand four hundred barrels flour. This State has paid annually twenty-three millions dollars the past two years for flour.

—Rhode Island has five thousand four hundred and six farms, (average ninety-six acres each.) Population about 200,000. It would require eleven

acres to each farm, on a basis of fifteen bushels wheat, to feed her people. This State has paid about $3,600,000 per annum, the past two years for flour. Notwithstanding its general sterility, it has some good wheat lands.

EXTRACTS AND REPLIES.

TREATMENT OF AN ORCHARD.

I have taken your valuable paper for the last three years and would not do without it for twice the cost. I take two agricultural papers and pay for them both in advance. I am a farmer by occupation, and like many other farmers am not accustomed to writing; and but for your promise to make all smooth, I should not have had courage to come forward with this, my first epistle.

I have an orchard situated upon a cold piece of land with an easterly aspect which is too rough for cultivation. The trees are mostly young and grafted, but look sickly. They blossom full but do not mature but little fruit.

The land has been mowed, or rather gone over with the scythe, for the last twenty years. What can I do to the trees to make them thrifty and return me pay for labor expended? I wish to do something with them the coming season. Can I make it profitable to buy calves, at their value as veal, and raise them with but little milk, providing they have every other necessity? HENRY BELL.

South Halifax, Vt., Feb. 3, 1868.

REMARKS.—Probably your trees are simply starving to death. You say the land has been mowed, or rather gone over with a scythe, for the last twenty years. Would you expect to raise good hills of squashes, potatoes, corn, tomatoes or any other fruit or vegetables "cultivated," on the same spot for twenty years, just as you have *cultivated* your trees? Did you read an article in the FARMER of Sept. 5, 1867, about the "Best Orchard in Massachusetts?" Wouldn't such treatment make your trees shout for joy? "In the sweat of thy face shalt thou eat"—apples! Don't you remember how Mr. Pierce said he kept the ground cultivated and rich enough to raise squashes, how he fought the canker worms and caterpillars, and how he used $80 worth of mulching? If, however, you do not wish to plough up your orchard, try mulching. Coarse hay or straw, leaves and mould from the woods, or even brush, sods, muck, or good soil spread under the branches may, if your orchard is not too far gone, prove beneficial. When trees are "at home" in the woods, think how nicely they cover up their roots to protect them from the pinching frost and the burning sun, with a light and warm carpet of leaves, and then can you wonder that yours "look sickly?"

MAPLE SUGAR—TAPPING, SPOUTS, ETC.

Your correspondent, Mr. Field, of Charlemont, has written an article on sugar-making, with which I beg leave to disagree. He says, "The rough bark should never be hewed off, as this injures the tree." If there are others of this opinion I should like to hear their reasons for it. It is often necessary to remove the rough bark to prevent the spout from leaking, as well as to save it from injury from driving.

Mr. Field objects to shaving the spouts down on the top. I have used those made in that way and dislike them because they cannot be sufficiently cleaned. I scald them both before and after using them, and give them a thorough cleansing, which I find cannot be done as effectually if they are whole. Mr. Field says, "Never set more than two tubs to a tree, or more than one spout to a tub, and bore into the tree as far as the wood is white and sound." If a tree is to be bored as far as the wood is white and sound, I should recommend but one spout, and the smaller the bit the better. I have hundreds of trees in my orchard, about three hundred of which I set out thirty years ago, and their wood is white nearly through. I cut down a tree last spring about three feet through, and the wood was almost entirely white. I put only one spout into those a foot in diameter, and bore about one inch into the wood. I bore the large trees about two inches, put two tubs to a tree, and two spouts to a tub. I have learned by observation that the sap flows more freely near the bark, and that deep boring injures the tree more than the proportional gain in sap. As to boring near the ground, it will do as well for a few years, but in time it will amount to girdling the tree. I am satisfied it does not injure the tree as much to vary from one to four feet from the ground, as to have the wounds in a circle, as is the practice of some at the present time. L. M. HUNT.

Sunderland, Mass., Feb. 17, 1868.

REMARKS.—The inquiries of "A. B.," of Essex, Vt., as to the distance from the ground is it best to tap the tree, and as to the depth it is best to bore, are answered in the above communication.

BIRD HOUSES.—STARTING PLANTS EARLY.—WILL BEANS MIX?

I wish to inquire through your interesting and instructive columns whether it is best to divide a bird house into compartments, or let it be all in one? If divided, how large should the rooms be? Are Martins the most desirable kind of birds, and how get them?

Will beans mix if planted side by side?

How shall I start my plants early and not expensively? I have a window sash, can I make use of that? What kind of soil? When sow?

A CONSTANT READER.

Campello, Mass., 1868.

REMARKS.—Scarcely anything is more social than a family of martins near the dwelling. Their house should be placed upon a pole not less than fifteen feet high, and away from buildings and trees. If a pole is placed upon a roof it must be quite high, for martins seem to have an instinctive knowledge that cats can climb poles of moderate height. The rudest building, if tight, is as acceptable to them as one that is carved and gilded. God has "set them in families" as well as ourselves, and the house, therefore, should be divided into rooms. A room nine or ten inches square is none too large, as they carry in considerable material in building their nests. The hole to admit them is quite often made too small. It should be four inches high and three inches wide. Martins will amply repay your care for them by their cheerful music and the destruction of insects upon which they feed.

Beans.—We have planted a variety of beans, side by side, for many years, and have never

known them to mix, though it is the opinion of some persons that they do mix.

Early plants.—Make a hot bed in March, or scoop out turnips, fill them with rich soil and sow seeds in them. Of course they must be put in a warm place and kept properly moistened. Fill any box, one that raisins or starch or salt came in, with rich soil, thoroughly mixed with fine manure, and sow tomato or other seeds on it. Set it in the kitchen, keep it properly moistened,—not too wet, —and where it will have the sun a portion of the day. Almost any quantity of plants that a farmer may need, may be secured in this way. Thin so that they may have plenty of room, and when two inches high transplant and set still wider apart; at four or five inches high transplant again. This will cause the plants to grow stocky and strong, instead of tall and slender. If transplanted with care, even a third time, they will be all the better for it.

The best soil is a sandy loam, made rich by manure that is old and well rotted. Sow at different periods so as to have plants coming in succession; then if some fail, those coming may take their places. These are mere suggestions; practice will enable you to succeed in obtaining what you want.

HORSE RACING AT AGRICULTURAL FAIRS.

I was heartily glad when I read that the Board of Directors of the Illinois State Agricultural Society had voted to abolish horse racing at their next fair. I feel quite confident that they will be so well satisfied with the result, that they will never return to the former practice again. I wish that all other State and County Agricultural Societies would adopt a similar course. Then would our Agricultural Fairs more properly be what they purport to be; then there would be a greater gathering of farmers, mechanics and manufacturers and others, with their contributions, and an increased interest in the examination of the best specimens presented for competition, &c. How often we hear the remark made that "This horse racing is destined to run our agricultural fairs all out." To say nothing of the *cruel* and *immoral* practice, which in a less civilized age or country than the one in which we live, might not have appeared so objectionable, who does not know that the practice not only shortens the life of the horse, but renders him less serviceable for the use for which he was intended? Then why not abolish "horse racing" at *all* our Agricultural Fairs?

ELLIOT WYMAN.

East Westmoreland, N. H., Feb. 8, 1868.

RAISING AN ORCHARD FROM THE SEEDS.

I have been thinking, for some time I would write something for your valuable paper, but being of a timid nature, I feared you would not take notice enough of anything I might write to prepare it for publication. I will, however, attempt to give some account of my experience in raising an orchard.

Some twelve or fifteen years ago, I saw that something must be done or soon my neighborhood would be without orchards, for the old ones were fast going to decay, and there appeared to be no new ones taking their place. Being a young man, I thought I would try and see what I could do in raising an orchard. I got some pomace at the cider mill in the neighborhood, and after preparing my ground, sowed it. The next spring I had seedlings enough. When they were one year old I transplanted some two or three hundred, and in the fall after they were three years old I budded them with such varieties as the old orchard on the farm afforded. Two years after budding I set out twenty-five, and sold the balance to go out of the neighborhood, for my neighbors believed that my trial in orchard raising would be a failure. But by perseverance and industry I have got a nice young thrifty orchard, from which I picked more than three bushel of good marketable apples one year ago last fall Many that saw them said they had never seen such a sight before in their lives—trees so small and so full of apples. My success has had just the effect I expected—others have determined to have an orchard too. But I fear that some will be disappointed. Those who put out trees and do not take care of them, certainly will. I can tell them in advance that there is no use in trying to raise an orchard unless they make up their minds to tend the trees well and to keep the cattle out of their young orchard.

Biddeford, Me., Feb. 6, 1868. J. W.

REMARKS.—Our young friend is right about the care necessary to raise an orchard, and his experiment, we presume, will show that still greater care is necessary to keep up its productiveness. But it will pay. We hope he will find it so, and that he will let us hear from him again.

SAP SPOUTS AND CORN COBS.

With all due deference to age and experience, I would say that I do not like the directions of our venerable friend, P. Field, in FARMER of Feb. 1, for making sap spouts. Spouts made whole will clog up with ice in cold nights to such an extent that it is necessary to take the spout out of the tree and clean it. If this is not done the sap in the tree will force the spout out, whereby there will be a loss if not seen to. My method of making spouts is simply this: I take medium-sized shoots of sumach of about two years growth; cut them off nine inches long and then saw them half off, an inch from each end, but on opposite sides of the stick; then, with a sharp pointed knife split from one cut to the other; burn them out with a heated wire, chamfer them off to fit the bit, and they are finished faster than I can tell how. Two hands will make from 50 to 75 in an hour with ease. I agree with him in discarding metalic spouts, thinking they injure the color of the sugar, besides communicating an iron taste which it is impossible to remove.

I will say to "E. B." of Derry, N. H., that when I see a man advocating the use of corn cobs it reminds me of the old miller who stated that sawdust was a splendid article to fatten hogs on; but in practice, he mixed a peck of meal to half a pint of sawdust, saying "the more meal the better."

Ripton, Vt., Feb., 1868. RUSTICUS.

AMOUNT OF SEED FOR POTATOES.

In reply to your Derry correspondent "E. B." in regard to the Lady Finger potatoes—26 bushels raised from one peck, by Judge Baxter of Bellows Falls, Vt.,—the eyes, if my memory serves me, were planted four inches apart. This was "liberal" seeding in the drill. It seems that the product in corn and potatoes in "E. B.'s" experiment was larger in drills than hills. The Long Island farmers plant potatoes in drills, cutting off the small eyes, then cut into quarters, preferring three stocks to five in a cluster. "E. B." says that four butts in a hill will give the greatest product by weight, but admits that such a large quantity of seed will

give more small potatoes. The marvel would seem to be, that they are *not all small potatoes*, if by "butts," he means four potatoes with the tips cut off. If they were of the usual varieties, say, Jackson White, Orono, Mercer, or many others, four butts to the hill would give from 50 to 60 vines—enough for eight hills for a healthy, large growth. Should this excessive seeding be adopted, there would scarcely be potatoes enough for seed in New England when planting time arrives. The present price of potatoes, $5.50 per bbl. here, will necessitate great economy in seeding the coming spring. While at the East, recently, I was told by one farmer that he never raised so large a crop as last year, from simply planting the eyes. I was much gratified to learn by the statement of "E. B." that drills were most productive, and that flat hills yielded as well as those built up higher. It has been a mooted question whether hilling corn or potatoes, was not only labor lost, but actually injurious, as thousands of roots are cut off. The rains are thrown from the hills, and the necessity of hand hoeing greatly increased. H. POOR.

Brooklyn, L. I., Feb., 1868.

EARLY GOODRICH POTATOES.—OXFORD DOWN SHEEP.

Can some of the readers of your excellent paper give information whether there are two kinds of Goodrich potatoes, early and later, as there is a great deal said in favor of *Early* Goodrich potatoes? Also, can any one inform me where I can obtain Oxford Down Sheep Ewes, as they are in great reputation? AN OLD FARMER.

Georgia Plains, Vt., Feb. 3, 1868.

REMARKS.—The Rev. Chauncey E. Goodrich, of Utica, N. Y., who died some years since, experimented extensively during the latter years of his life, in raising potatoes from the seed balls. Among the thousands which he produced—one of his best seedlings being No. 310—few comparatively proved valuable additions to our choice varieties. Among the best known of his seedlings are the Gleason, Calico, Buckeye, Prince Albert, Early June, several known only by their numbers, the Garnet, Chili, and Early Goodrich. The introduction of these varieties entitle him to the rank of a public benefactor. The word "Early" is used simply to convey the idea of early maturity of the kinds to which it is applied. We do not remember whether any other of his varieties bear his name, or not.

We do not know where the Oxford Down Sheep can be purchased, probably somewhere in Essex County, this State, as Mr. Richard S. Fay, who bred them largely, had his farm in that county.

LICE ON CATTLE.

Permit me to say that I have obtained much valuable information from reading the NEW ENGLAND FARMER, and should hardly think of farming without it. The Extracts and Replies are particularly interesting and often instructive, although some of the ideas expressed are not in accordance with my own. For instance, "A Subscriber," at Waterbury, Vt., says that thoroughly dried *sand* sprinkled over cattle will exterminate lice. Pure sand does not, I think, trouble lice much. To keep the cattle and horses from slipping, I find that a very little sand will answer when I use sawdust, meadow mud, or loam, for an absorbent, and I always use something of the kind in sufficient quantities to take up *all* the liquid droppings, as my lean-to floor is perfectly tight. Now my remedy for lice is thoroughly dried loam, or very fine dirt, sprinkled on them occasionally from nose to tail. It is a sure *preventive*, and will in most cases clear them off, when on. If I happen to buy an animal that is quite lousy, if the dry loam does not prove effectual, I apply unguentum to the parts where the lice are the thickest, and they will soon "skedaddle,"—dead or alive, I don't care which.

Northboro', Mass., Feb. 3, 1868. C. EAMES.

BURNING LAND, AND COOKING FODDER.

In the Weekly FARMER of August 10, and Monthly, 1867, page 438, is an article against "Burning, as a Means of Subduing the Rough Places," which I think would be of great benefit to very many farmers, if the suggestions there made were acted upon. But it is difficult to convince one that a course which he has long pursued is wrong; and when so convinced, it is difficult to induce him to change an old inveterate habit. I think that any one would admit that the ashes of a load of hay would be far less valuable than the same quantity converted into manure by any other process. Still people continue to burn rubbish which might easily be made into good manure, and it is frequently burnt by the roadside, where what little value the ashes may contain is lost.

The same writer, "N. S. T." gives us an excellent article on "Feeding Stock, and Cutting and Cooking Fodder," in the Weekly, of Oct. 9. and Monthly FARMER for 1867, p. 503. His views are somewhat at variance with the common opinion and common practices; but are, I think, quite consistent with common sense, and supported by sound reasoning. E. B

Derry, N. H., Feb., 1868.

"DOMESTIC ECONOMY, OR HOW TO MAKE HOME PLEASANT."

Please inform me through the Extracts and Replies columns of your valuable paper, the price of "Domestic Economy, or How to Make Home Pleasant," and you will *greatly*, *greatly* oblige A LADY.

North Auburn, Maine, Feb. 11, 1868.

REMARKS.—The papers referred to have only appeared in our columns, as yet. They can be had in our bound Monthly (price $2.25 by mail), which also contains, besides these and other articles of interest to "Ladies," most of the agricultural matter that appears in the Weekly FARMER during the year.

GARGET IN COWS.

T. Cross, of Montpelier, Vt., will probably find his cow benefited by twenty grains of Iodide of Potash, given three times a day in her drink. One ounce makes twenty-four doses of this size. We know of no better remedy for the garget.

VALUE OF CORN COBS.

Will "E. B." of Derry, N. H., deduce any other idea of the value of corn cobs from the statistics of the State Reform School, than that published in the weekly FARMER of Nov. 23; or will he produce more reliable statistics from which we may learn their value as food for farm stock? It has long been the opinion of some good feeders that cobs were not only worthless but injurious. Bees will gather sawdust and carry it into their hives in the same manner as they do pollen. Is it a mis-

taken instinct, or is the sawdust a substitute for pollen. Because cattle will eat bones and boards, does it follow that bones and boards possess a value as food? The question is not whether a given article contains nutrition, but whether its use can be made to pay as food for our domestic animals. F.

Mast Yard, N. H., Feb. 6, 1868.

MANAGEMENT OF GEESE.

I have nine geese and seven ganders; and it seems to me that the ganders disturb one another so much that I shall not get a single gosling this year. What I wish to know is, how large a pen is necessary for each pair, and also if water enough to drink is all they need. I have two books before me, "Diseases of Animals," by Mr. Cole, which says they do well with water enough to drink; and "Country Life," by Mr. Copeland, which says they must have deep water. Information from one who knows by experience will greatly oblige a reader.

I have now 164 chickens, from the size of a quail down to those ten days old. Who beats this? I intend them for the Boston "big bugs" to eat with asparagus next May. Anser.

Taunton, Mass., Feb. 5, 1868.

Remarks.—Will some one who understands "Goosey Gander" by experience give our correspondent the needed information. In keeping geese we have always supposed that a "goose pond" was about as essential as a "cow pasture" in keeping cows. Indeed, Mr. Bement says the chief requisites for goose keeping are a pool of water and a pasture for grazing. The latter is essential, as the bird is graminivorous, as well as granivorous. An occasional cabbage leaf with any spare vegetable fragments will be very acceptable during the winter season. Water of such size and depth as will permit at least a daily "paddle" is essential, while a large flowing stream is apt to tempt them too far from home. The same writer says he thinks two geese sufficient for one gander, though one or two more are often allowed. For a gander and his three or four partners there should be house-room of not less than eight feet in length by six in width, with a height sufficient to allow the person who cleans it out to stand upright, with an open space beneath the eaves for ventilation. As soon as released in the morning, the geese resort to the water and then ensues the intercourse from which an increase to their numbers may be expected—"the presence of water appearing essential to the fertility of eggs."

VALUE OF CORN COBS.

I see the inquiry is made, will it pay to grind corn cobs? About fourteen years ago there was a dry summer, hay was short and the farmers had to economize everything in the shape of fodder for their stock the ensuing winter. Having a good pile of corn cobs, we added less than a bushel of grain to two of cobs, and had them ground. We had one horse then. When I built a fire in the morning, I took water boiling hot and made a mash, using about six quarts of the meal a day, being careful to have it thoroughly mixed, and fed it warm, which I think is much the best in cold weather. Fed very light with hay. That horse came out in fine condition, smooth and smart. In all cases where we have used ground feed warm, the cost has been decidedly less than when dry oats were used. We always use good English hay.

About the first of January last, I took eleven bushels of oats, about one and a half bushels of corn, and fourteen bushels of cobs, and had them ground together. I find that four quarts of oats weigh the same as five quarts of this meal. We calculate to feed the same weight of meal that we would of oats, and we expect our horses to work as well as if fed on dry oats. I wish to hear from others. That is the way I learn. R.

Troy, Vt., Feb., 1868.

BRAHMA FOWLS AND MUSCOVY DUCKS.

I send you my fowl account for the year past. Owing as I think to the wet season, of 316 chickens hatched, 189 died; of the 63 turkeys hatched, all died before they were 10 days old. The weather for ducks was good, and out of 69, I lost but 3. The eggs I sold averaged 38c per dozen, as you will see by the account.

ACCOUNT CURRENT FOR 1867.

January 1, 1867, *Stock and Cost of Food.*

12 old fowls at 75c., $9.00; 2 roosters 1.50 . . .	$10 50
26 pullets, 26 00; 16 ducks, 16.00	42 00
3 turkeys, 4 50	4 50
Bought in May	
44 hens and chickens, 26 50; 6 turkeys 3 00 . .	29 50
58 bushels corn, 76.90; 31 bushel oats 29 45 . .	106 35
20 bushels meal 25.85; 20 bushels c. corn 25.85	51 70
50 bushels fine feed 26.90; 4 bushel oat meal 4.40	31 30
314 pounds scraps 6.88; laths and nails 1.58 . . .	8 46
49 dozen & 10 hens eggs set, at 38c per doz. . .	18 93
6 dozen & 6 duck eggs set, at 40c per doz . .	2 60
Dressing poultry	4 00
	$309 84
Profit	72 93
	$382 77

January 1, 1868, *Stock and Sales, &c.*

28 old fowls, at 75c, $21.00; 2 roosters 1.50 . .	$22 50
24 pullets at 1.00, 24 00; 3 roosters, 3.00	27 00
12 ducks 12 00; 59 late chickens 19.50	31 50
Sold	
249 dozen & 9 hens eggs, average 38c per dozen	94 90
29 dozen & 1 duck eggs, 40c per doz	11 64
80 chickens 46.78; 60 ducks 60 56	107 34
9 turkeys 14.25; 36 barrels manure 37.45 . . .	51 70
5 hens 3.75; 6 ducks 6.00; consumed in house .	9 75
51 dozen & 2 hens eggs, at 38c, used in house .	19 44
17 dozen & 6 duck eggs at 40c per doz	7 00
	$382 77

Number of eggs laid during the year, 350 dozen and 9 hens eggs; 53 dozen and 1 duck eggs.

I have 18 chickens hatched Feb. 2d, and 15th, 9 each.

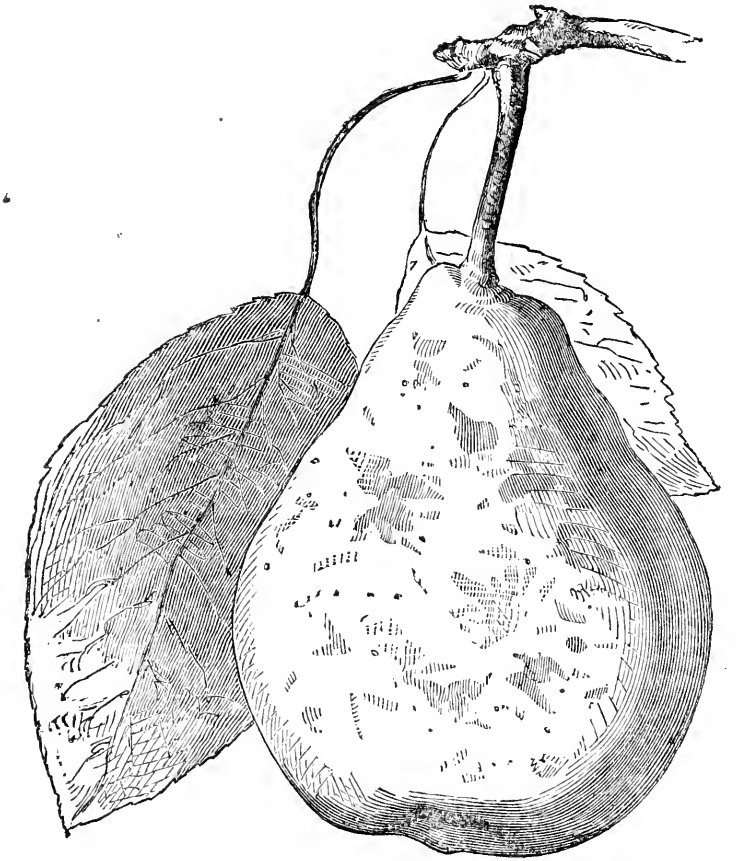
Salem, Feb. 16, 1868. James Buffington.

A GOOD COW.

I have a cow that was five years old the fifteenth of last October. She calved May tenth, 1867 June fourth, sold the calf for $9.50. From that time up to the tenth of the present month, she has made 208 pounds of butter, which sold at an average of 33⅓ cents per pound, or $69.33⅓. About 360 quarts of new milk were used during the time, in the family, worth seven cents per quart, or $25.20; also, milk sold, $8.50; sour milk given to swine at three cents per quart, $18. The total receipts from her in nine months are $130.59. She is coming in the first of April, and now gives five quarts of milk a day. Her keeping is common stock hay and one pint of shorts, and one pint of meal a day. She is one of the natives. H. W. M.

Concord, N. H., Feb., 1868.

Remarks.—Did your swine "foot the bill" for sour milk at three cents per *quart?* Didn't they measure by "the gallon?"



THE NOUVEAU POITEAU PEAR.

The Hon. M. P. Wilder, of Dorchester, Mass., has been very successful in the cultivation of pears, both on quince and on their own stocks. Our cut represents a specimen of a foreign variety raised on his grounds, which, though prolific, large and "very good," has not fully sustained the high expectations which were excited by its early promise. As different varieties of pears require different soils, and as this difference is not well understood, even by experienced pomologists, it is well for those who propose to set out trees to ascertain what kinds do best in their respective neighborhoods, and on soils and in locations similar to those in which they propose to place them. In the vicinity of Boston pears have been as easily raised for several years past as apples, and we believe their cultivation should become more general throughout the southern part of New England.

For the New England Farmer.

FENCES AND FENCING.

As it is rather seldom that I see in print any thing about fencing, I thought I would say a few words on this subject. Fencing is one of the first and most important matters upon the farm. Our lands may be rich, and our cultivation careful and laborious, but if we have not good fences to protect our crops, these avail but little. The truth of this is seen, in

some instances, in the utter annihilation of our crops. As a general rule, we do not see thrift and order in anything connected with a farm, unless there are good fences to protect the crops.

Fences are important to the peace of neighborhoods. The man who keeps good fence is usually a good citizen and neighbor. Some farmers act as though they thought every day's work in building or repairing fences was lost. I go to my neighbor and tell him that his fence is down and needs repairing. Perhaps he will say, "Well, I will fix it up." But he procrastinates, and it is not attended to. Again I remind him that his poor fence exposes my crops. Again he promises, but the job is not done. Finally I go and repair it myself. Now, do not such men lack a principle that holds the community and the world together in peace and friendship. Some depend largely on dogs for fencing purposes. This almost invariably leads to trouble,—hard words or hard feelings.

I have found that posts cut from the first of December to the first of March, last better than those cut at any other season of the year. I have put the top end in the ground sometimes, but find, as the top end is the smallest, it will rot off quicker. I want my posts large. If in a clay soil, they need to be put three feet deep, and the dirt tamped in hard, so that the post will be as solid as if it grew there. If in sandy or gravelly land, two or two and a half feet is as good as more, as they will not heave out.

Of late years, I have cut my logs for fence from ten to eleven feet long, and have them sawed into boards from nine to twelve inches wide. I set a post at each length of boards, without a middle post, so that, if any of the posts heave out, there is no harm done to the boards. Where boards are 16 to 18 feet long, you must have a middle post which breaks or splits the boards in case it is raised more than the posts at the ends of the boards. Lumber is growing scarce, and soon we shall have to resort to stone for fence. Stone wall is the most permanent and durable of any fence, and the cheapest in the end. But it is quite a trade to take large stone and put them into a good wall.

I look around to see the young men who are learning this trade, and though I regard it as a matter of much importance to be able to manage the large boulders that lie in our fields, there are none in my neighborhood who are serving the necessary apprenticeship.

On my own farm, I take care to divide all the outside fences with my neighboring abutters, and to have such division properly recorded. This makes it a permanent thing, and I am not troubled by any change of ownership that may take place in the adjoining farms. O. FOSTER.

Tunbridge, Vt., Jan., 1868.

For the New England Farmer.

THAT MORTGAGE ON THE FARM.

How we Lifted It.

In the FARMER of January 25, "C. B. E." calls for experiences on lifting mortgages from a farm. To encourage him and others in like circumstances I attempt, for the first time, to write for the press.

Twenty-five years previous to my purchasing the farm which I now own, I worked at the boot and shoe business; but being out of employment for a longer or shorter time every year, the wheels would sometimes roll backwards in spite of me.

Hoping to better myself and get my boys away from the temptations that always surround the young in large villages, I began to look for a farm; and by the direction of a kind Providence, came to Dudley in February, 1855, and bought at auction a farm of one hundred and ten acres for $3000. The 1st of March moved on with wife and two boys, one in his sixth and the other in his seventh year. For farming tools, I had a wheelbarrow, shovel and hoe, and $800 in cash to pay for farm, stock, tools, horse, carriages, harnesses and hay. I also owned one hundred acres of uncultivated land in Illinois, which a few years before cost me $350, which I sold and received the pay for it in small driblets, so that at the expiration of six years, I was in debt over thirteen hundred dollars.

To begin with, I bought, for cash, a yoke of five-year-old oxen of good size, a horse, wagon, harness, ox cart and a few other implements of husbandry, leaving but about five hundred dollars to pay for the farm. For the balance, I borrowed money and gave two mortgages. It was all borrow, borrow, and get trusted.

Began with two cows for a dairy, two pigs, and a few hens. The first year was a hard tug, I assure you. Things looked not only dark but *black* sometimes. But we put our trust in God, worked hard and took a long look ahead. Our crops came in well, sold all we could, and by the time winter came, had our large cellar literally crammed with provisions and vegetables.

The first winter we milked three farrow cows, gave them plenty of carrots, made butter all winter, which sold readily, and as we thought, at a great price, thirty cents per pound. This was a great help.

We have increased our stock from year to year, now generally numbering eight cows, from which we make butter, except in the very heat of summer we make new-milk cheese,—rarely making both at the same time. I sell but very little grain and no hay from the farm. Sell some pork, beef, apples, butter, cheese and vegetables, and have sold yearly, perhaps fifteen cords of wood, of which there is about forty acres on the farm—not very heavy, but young and thrifty.

Since purchasing the farm I have raised the

barn, turning it one-quarter round, and putting a cellar under it; moved a shed back its width; built a henery, and a milk and cheese room, 12 by 25 feet; raised the roof of wood room half story, and have a carpenter's and shoemaker's shop over it; have shingled all my buildings, using more than fifty thousand shingles; and this year have repaired, improved and painted the house. Many improvements have been made on the farm, such as ditching, digging rocks, laying new stone wall, and resetting old walls; setting out fruit trees nearly every year; improving mowing land, so that I now cut at least one-third more hay than at first.

My stock now numbers fifteen head, mostly full grown. In contrast with those I began with, my farming tools now consist in part, of a mowing machine, bought seven years ago; horse wheel rake; ox wagon, carts, and all other necessary implements of husbandry, on farm and in the house, as I had much rather lend than borrow.

Our two sons, now in their nineteenth and twentieth years, have attended school at the academy, one and sometimes both, nearly every term for the last three years, except while teaching last winter and this, and yet have worked out enough to pay for all extra help we have had besides doing our own farm work.

All these things have been done and all mortgages were cleared off two years ago, and besides we have always had something to spare for benevolent purposes. But in order to do all this, it has required unremitting toil and great economy in doors as well as out. Our motto in respect to food is, an abundance, healthy, and well cooked; as to dress, that which is comfortable, substantial and respectable; a large share of it being made up in the family.

Now if "C. B. E.," or any other "live young man" with a *suitable* helpmeet will do these things, they can lift almost any amount of mortgage from the farm, and at the same time live more independently than almost any other class of people around them. C. E. K.

Dudley, Mass., Feb. 1, 1868.

REMARKS.—"J. D.," of Weathersfield, Vt., who belongs to the class of "indebted young farmers," and who seconded the request of "C. B. E." in a note which has not been published, will see that "C. E. K." has anticipated his request to "tell us how to pay for our farms without denying ourselves the comforts of life, and without foregoing the higher privilege of doing something to make society and our neighbors better and happier."

We have another response to the appeal of "C. B. E.," which will soon be published. The writer was brought up on a farm in England, and his illustrations of How to do It, and How not to do It, are drawn from English experience, and will, therefore, be doubly interesting to American readers.

THE CASTOR BEAN.

The culture of the castor bean is much like that of corn, being regarded by many as less laborious and expensive. Good corn land is suited to the castor bean. If not fertile, it should be heavily manured, as the plants are great feeders. The ploughing and dragging should be done in the most efficient manner. Plant when the frost is well passed and the ground has become warm. The hills should be at least four feet apart each way. Some cultivators prefer seven feet. One plant to the hill is enough, but several seeds should be planted to guard against accident. Sometimes a space is left once in four rows wide enough to admit a farm wagon, so as to facilitate harvesting the crop. The ground should be cultivated several times, that the plants may attain a vigorous growth. Scarcely any crop pays better for thorough cultivation than this. Twenty bushels per acre, is a full average yield. The market price is variable. During the past winter the beans in the St. Louis market have ranged from $3.90 to $1.25 per bushel. As the cost of growing does not differ materially from that of corn, the approximate profits can be calculated. At the present depressed condition of the market, an acre of beans would yield about $25, leaving but little margin for profit. The oil is quoted at $2.10 to $2.25 per gallon. As the yield of oil is about 68 gallons per acre, the manufactured oil would amount to about $150 per acre. This gives $4 to the manufacturer to $1 to the producer, a division which cannot be regarded as equitable. Formerly the castor bean was largely cultivated in the southern counties of Illinois, but had become unprofitable previous to the rebellion. This event, causing an advance in price of two hundred to four hundred per cent., revived its culture from almost nothing in 1860, to many thousand bushels in 1864. St. Louis is the great market for the crop, more oil being manufactured there than at any other point in the country. The receipts at St. Louis from all sources during the last year, exceeded 50,000 bushels.—*Prairie Farmer.*

—In an article in the *Iowa Homestead* urging the importance of tree planting, the writer, the Hon. J. B. Grinnell, says: "In our climate fuel costs the prairie farmer more than his bread. I have made personal observation in from sixty to one hundred counties, and examined in the official field notes of Iowa, to arrive at the conclusion that but one in ten of our counties has a sufficiency of timber, and even these are losing rather than increasing their supply."

Ladies' Department.

From Chambers' Journal.

GRANDFATHER'S PET.

This is the room where she slept,
Only a year ago—
Quiet and carefully swept,
Blinds and curtains like snow.
There, by the bed in the dusky gloom,
She would kneel with her tiny clapsed hands, and pray!
Here is the little white rose of a room,
With the fragrance fled away!

Nelly, grandfather's pet,
With her wise little face,—
I seem to hear her yet
Singing about the place;
But the crowds roll on, and the streets are drear,
And the world seems hard with a bitter doom,
And Nelly is singing elsewhere,—and here
Is the little white rose of a room.

Why, if she stood just there,
As she used to do,
With her long, light yellow hair,
And her eyes of blue,—
If she stood, I say, at the edge of the bed,
And ran to my side with a living touch,
Though I know she is quiet, and buried and dead,
I should not wonder much;

For she was so young, you know,—
Only seven years old;
And she loved me, loved me, so,
Though I was gray and old;
And her face was so wise, so sweet to see,
And it still looked living when she lay dead,
And she used to plead for mother and me,
By the side of that very bed!

I wonder, now, if she
Knows I am standing here,
Feeling, wherever she be,
We hold the place so dear?
It cannot be that she sleeps too sound,
Still in her nightgown drest,
Not to hear my footsteps sound
In the room where she used to rest.

I have felt hard fortune's stings,
And battled in doubt and strife,
And never thought much of things
Beyond the human life;
But I cannot think that my darling died
Like great strong men, with their prayers untrue—
Nay! rather she sits at God's own side,
And sings as she used to do!

DOMESTIC ECONOMY;

OR,

HOW TO MAKE HOME PLEASANT.

BY ANNE G. HALE.

CHAPTER IX.

CHILDREN'S CLOTHING.

"An' sure it's not *sich* a price as ye'll be askthin' for the thrifle, nor meself wud be wullin' to't, at all, at all—"

"But the rid gowld jist here in me hand to pay for't, mem," sputtered the pertinacious customers, who, in the shape of two Irish girls, one to choose, the other to buy, had tried the patience of a young shopwoman to its utmost, in tumbling and fumbling over her choicest embroideries of muslin and cambric.

"I can take no less; the trimming is well worth that," was her quiet reply.

"Casting pearls before swine," she thought, as in answer to their first inquiry she had timidly opened this box of daintiest array; and it went to her heart to see how the delicate things shrank and shrivelled like sensitive plants at their rude touch, wilting and falling from the hot moist hands that roughly tested their beauty and their strength,—"jist to thry if they'll stahn' washin', mem." Still, as shopwomen must, she bore it in silence, only a shiver and a sigh escaping unwittingly as she named the price, her eye glancing over the tattered and soiled raiment of the questioners, rather suspiciously, it must be confessed, for both seemed in greater need of comfortable and clean clothing than of anything ornamental.

There was then more smoothing and pulling of the muslin, and a closer scrutiny of its fanciful device, accompanied by audible whispering of outlandish jargon ending in the remonstrance recorded above. But the shop-woman was inflexible. Nora and Bridget exhausted all their logic and had begun to use a little "blarney;" all the while stretching over their red hands and grimy wrists the piece of goods, which had had the good, or the ill fortune to please them, when the shrill shriek of a steam-whistle and the hasty peal of a bell put a stop to their chaffering. The last train was on the point of leaving, and twenty miles of railroad between them and "Mairy and her babby," for whose christening-robe the embroidery was to be bought, decided the question at once.

The "rid gowld," thrown upon the counter, went gleefully singing and dancing towards its new mistress, glad to escape from the greasy sheepskin purse which had been its prison since it left the banks of the blue Shannon many months previous. But the hasty tearing of the muslin, separating sister

"buds, and leaves, and sprigs,
And curling tendrils, gracefully disposed,"

gave forth a shrill, sharp sound, their parting farewell, dismal as the cry of a banshee. Alas, alas for human hopes! Was it, indeed, that prophetic wail? The christening dress of "Mairy's babby" before the week came round served for poor Mary's shroud.

It is the old, old story of a mother's self-sacrificing love: during all the cold weather she had been poorly clad, and denied herself needful food, in order to provide this finery for her infant. The little woman o'er the way, who always wore soft clothing and lived daintily, had worked herself almost to a skeleton to make an outfit for her firstborn; and why shouldn't she, in her small way, do what she could to beautify and adorn her darling, she asked herself a hundred times during those cold, hungry dismal days.

They were both actuated by the same morbid sentiment which, had Irish Mary been spared long enough, would have shown itself in splitting the wood and bringing the water to cook her son a nice dinner and to "do up" his linen, while he loafed at street corners, or spent in bar-rooms, or gambled away, all that he could coax or steal from the little hoard which her self-denial counted over and slowly increased against "his setting up for himself."

And in her Yankee neighbor it will take form in dressing her boy in all the foolish frippery of a precocious dandy, and in indulging him in sweetmeats and amusements, which will gradually merge into the flash and bluster of "a gentleman of the ring;" oyster suppers and champagne, billiards and fast horses; till by-and-by there is a defalcation, and the motley garb of the prison, its hard fare, and its irksome toil become the young man's portion; while in the shame and silence of her desolated home, the mother weeps bitter tears over those pretty garments of his long-lost innocence, the first out-growth of her mistaken fondness.

When will mothers learn how much the habits of their children's maturer years depend upon early impressions? A single folly thoughtlessly indulged may turn the current of a whole life. One false notion exemplified in her conduct may counteract all her teachings to the contrary. As soon as her child's eyes can catch the love-light in her own, his plastic mind is ready to receive the stamp of her tastes, of her aspirations, of her hopes, which she manifests involuntarily in mien and manner; in the tones of her voice; in the choice of her recreations, of her associates, of the colors and arrangement of her dress; no less than in display of affection for him, or her studied neglect; in the playthings and sports by which she intends to develop and educate his capacities, or in the dress and the trinkets which she selects to adorn his person.

Do not make your children images of vanity and frivolity by loading them with gewgaws and finery; nor foster their pride by making their clothing or their appearance of the first importance. Awaken in their hearts as early as possible a love for simple and ordinary things. Teach them to distinguish the real and the good, and to be content with these; so that they shall not be blinded, nor dazzled by the glitter and the glare, which, hiding hollowness and insincerity, lure so many to destruction. Let them see that beauty depends not on form nor color, but on propriety; on its fitness and agreement with everything that is good and gentle; or that can arouse high and pure thoughts, that can lead to generous and noble action; that nothing is worthy of admiration that makes them haughty, or envious, or covetous, or jealous—in one word, selfish. Help them to realize that self-forgetfulness, self-renunciation, is the highest virtue; and, therefore, the greatest beauty. For beauty is of the mind and the heart more than of the person, and increased with every act of self-denial, with every thought for the welfare of others; and delights in simplicity, and meekness, and gentleness.

And this is all materially hindered or helped by the way in which they are led to regard dress. Clothing, especially with children, has great significance in the relation which it bears to these matters of daily life. See, then, that they are comfortably and neatly clad; that no great nicety of material or excess of ornament, neither any ill-fitting or shabby garment, be a trouble or a danger to them, either physically or morally.

In making the clothing of children, aim especially to give them freedom of motion and gracefulness of position; while closely adapted to the form there should be no tightness nor constraint upon any joint or muscle. At the same time, no part of the body should be unduly exposed. Many a mother, if she be not answerable for the early death of her child, has laid the foundation for years of suffering, by dressing it in such a manner that neck, arms, and other parts of the body have no protection against cold and dampness even in the most inclement weather. Fond of displaying what she considers its beauty, she excuses her foolish pride by pretending that this is the way to harden and strengthen the child,—about as sensible a process to accomplish this as would be the giving of a daily dose of poison in order to prepare the system for its accidental use at some future time.

Keep your children always clad warmly enough; don't be afraid of making them delicate by this means; it is easier to ward off a cold or a fever than to cure one, and health is more likely to be made delicate by frequent attacks of disease than by precaution against its approach.

In the winter season, be sure that their feet are always warm and dry. Make for infants the softest of socks, knit or crocheted loosely of the warmest worsteds. Any mother who can handle knitting or chrochet needles can quickly provide these, needing no guide but the tiny foot they are to fit. Or, with bits of thibet and flannel she will like to exercise her ingenuity in forming a miniature shoe, that shall be warmly wadded, and prettily bound and buttoned about the chubby ankle.

For larger children make good stout stockings; by the time they are seven years old they ought to be taught to knit these themselves. Make them of the best yarn you can get; for children keep their feet in such constant motion that the thickest stockings soon wear out. Line the heels and toes, and also cover them, if you find they are getting thin before the rest of the stocking-foot gives out; when these are worn through renew them. When the instep breaks through, and there is a general thinness and falling away, cut off the foot above all weak places and knit it again of new yarn. If the stocking be shrunken or out-

grown, take up the edge of the top and knit the desired length, finishing the edge by knitting each stitch with its next until all are gone, as in binding a heel—it must be done very loosely.

Good stockings for children may be made by cutting over those that are too much worn to be of use to grown persons. Cut them according to the directions for such work given in the chapter upon women's apparel,—after fitting them to the ankle and stitching on the wrong side.

The color of children's stockings should in some measure correspond with the color of their dress. Many persons may agree with aunt Hoskins, in the story of Leslie Goldthwaite, who believed in "white stockin's, or go athout. Bilin' an' bleachin', an' comin' out new, none o' your aggravations 'v everlastin' dirt-color." But for boys who frequently go through all the mud and wet that they can, so that their boots and shoes get saturated and stain their stockings, drab is certainly more desirable than white; while even for the common wear of girls, except with light-colored dresses, most mothers will choose the more delicate shades of drab and slate. With the little ones they will allow all the brightness and whiteness that they have time and means to afford.

As to shoes, the very word has an appalling sound; it is so difficult to find anything in the name of boot or shoe that is not constantly getting trodden down at heel—screwed at one side—burst at the edge of the sole—stubbed at the toe,—or kicked, or scuffed, or knocked into pieces generally. If it is a bootee, gores are torn or stretched out, eyelets or buttonholes broken down, lacings lost or knotted, buttons gone and the tongue pulled out; the sole is scrubbed through to the quick, and the upper leather gets rough and brown; and all this in an incredibly short space of time. I believe some parents would willingly put up with the noisy clamping and clatter of the wooden *sabots* worn by the French and Swiss peasants for the sake of their durability.

There did seem some prospect of a slight relief from a portion of this trial by the introduction of copper toes and iron heels. But after their novelty was over, the youngsters began to think it was too much like punishing them for misdemeanors beforehand, and most of them now demur at their use;—perhaps the silver-tips may have a more permanent charm for them.

No doubt boots and shoes would last much longer if children were taught how to wear them; that is, the proper way of placing the foot when standing and when walking. Not one in twenty supports the weight of the body by setting the heel squarely and firmly. And so not only are boots and shoes trodden out of shape, but an awkward gait is acquired, and the person's figure gets askew and awry. Then, too, the little matters of lacings and buttons and straps should always be kept in order, and straightly adjusted; and linings and heel-stiffenings tidy, and in their proper places; all of which need a mother's watchful eye, and, many times, all the ingenuity and skill of her tireless hands.

The use of rubber boots for extremely wet weather or for deep snows, at first thought, seems necessary; but young rogues—girls as much as boys—do so love to go to the extent of daring when protected by them, not unfrequently *accidentally* toppling over into danger, that I sometimes think they are better off without them. Nevertheless, they are a good protection from dampness; yet their constant use is deleterious to health, they are so completely air-tight as well as water-proof. Rubber shoes over good leather boots are on this account much to be preferred.

All children when old enough to wear out-of-door boots and shoes should keep such boots and shoes expressly for that purpose, changing them for slippers as soon as they enter the house. Directions for making house shoes and slippers have been given in previous chapters; they should be taught to embroider these in simple patterns with worsteds or braid; some children take great pleasure in such work.

Moccasins, or Polish boots, are very good to wear over the walking shoes or bootees of girls, in cold and snowy weather. Knit them of coarse yarn, following the shape of a laced boot. The sole should be of felt, to which the knit boot is strongly stitched; copy the form of this sole from that of the leather boot, making it a size larger. Then cut a pattern of the upper leather of the boot, and begin to knit your yarn one by casting stitches enough to go around the edge of the felt sole. Knit it in seams or ribs, and narrow it to the right shape through the centre of the foot over the instep. Be careful not to narrow it so much as to get the ankle small. Knit them nearly to the knee; but for the last six inches take the stitches all on one needle and knit it open, the whole width, as a heel is knit; thus, like an unlaced boot, the moccasin is more easily put on and off. When within half an inch of closing off, which is done as when stockings are lengthened—treated of above—make a row of holes half an inch apart, by knitting two stitches together and looping the yarn over the needle at the same time. Through these holes lace a stout woolen cord—twist it of the yarn—to draw the boot up and to keep it in place.

Woolen buskins are very warm, and not so burdensome as these boots. Knit these also of coarse yarn. Begin at the top and knit it ribbed, and as if for the leg of a stocking. When the ankle is finished, instead of setting the heel, in its place close off one-third of the stitches, and knit the rest backward and forward, in the style of a heel, for an instep. Close off this instep when it reaches to where the foot begins to taper. Cut rubber or leather straps about an inch wide, and stitch them to the ankle to pass over the heel, and to the sides of the instep, in the middle of its length, to go around the foot.

In this variable climate of ours, children who go out-doors need woolen under-waists and drawers during seven or eight months of the year. Make them of soft flannel or yarn, for small children crochet or knit them of split-zephyr worsted. It requires no great ingenuity to form them, only be sure that they are large enough to allow for shrinking, a great deal for those who perspire freely. The drawers should reach to the stockings and be fastened to them with buttons; proper holes for which should be knit or wrought in the stocking-top. The waist and the drawers should be buttoned together at the belt. Be sure that neither fit tightly in any place, or draw uncomfortably from any movement of the wearer; sometimes the union of two portions of cloth cut from different ways of the web causes this. The waist should cover the neck well; for the coldest weather the sleeves should reach to the wrist,—for milder only three or four inches below the shoulder. In summer, substitute cotton for the flannel drawers, and in making these garments always cut the cloth, whether cotton or flannel, lengthwise of the web.

The under-linen of children should be made in the easiest and plainest manner possible, of a gored or sack form gathered into a narrow yoke that lies lightly upon the shoulders; the sleeves short, and just full enough to admit of putting on and off quickly. It should be finished with a neat hem, and have no ornament save a narrow edging around the sleeves and yoke; a very narrow cambric frill, or Smyrna lace or its imitation in crochet or tatting, is very good for this purpose: button-hole work in scallops, or braid embroidery, or laid-work, or cut-work, besides being uncomfortable where it comes in contact with the skin, is difficult to keep as clearly white as the rest of the garment without scrubbing it so hard in washing as to injure the fabric. Night-gowns, also, should have no stiff, hard trimming to annoy and fret them; they should be long and loose, gathered into a yoke that fits easily to the neck from the throat to over the shoulders, or merely drawn by means of a hem and tape closely about the throat. The best sleeping garments for children are long, loose trowsers reaching from the throat, where they are snugly drawn and tied, to the ankle, and there gathered into a band. They should have full sleeves gathered into narrow wristbands. Buy unbleached cotton for these garments and bleach it yourself, according to the rule given in Chap. VI. Some prefer cotton flannel for winter wear, especially for night-gowns. Others say that cotton flannel is unhealthy, that it prevents the free passage of insensible perspiration.

The linen or linen-cambric or muslin undergarments of infants should be merely a width of the material, to cover the waist; the cutting out of the arm-size made to form a narrow shoulder-band; and the garments left open behind, or closed at the sides, according to fancy. These should have the least possible trimming, nothing more than a row of fagot-stitch at the hems.

Infants' blankets and all children's flannel skirts should be white; a nice wide hem neatly stitched is sufficient border. If you embroider them, those that are in common use and need frequent washing should not be done in silk; the white of silk being a dye, the only white dye known, (so says the *Scientific American*) is soon washed out, and you have the original dingy yellow of the floss; nice worsteds or worsted braid make pretty embroidery.

A simple embroidery for the edge of hems or any seams in flannel, is the brier-vine, done with worsted or coarse silk: begin at the left hand end of the seam—take your needle through from the wrong side— lay the thread in a slanting direction *towards your right hand*—take up three or four threads of the flannel with your needle, as if to stitch it, above the thread, which is kept in place by the left thumb; make three or four stitches in this way—keeping the thread in its position by them—then turn the thread *from your right* for the next three or four stitches; this forms a point, with the briers facing all one way. Holding the thread more or less inclined makes these points or waves of the vine more or less sharp. Two stitches, or even one on each side of the point, make a narrower, and for small seams, a prettier border.

When flannels become thin in those portions that receive the most wear, line them with half-worn pieces of the same material; if holes appear they may be darned with fine worsted to these pieces so neatly as to escape observation. When skirts are getting thin at the hem, reverse them, and take the belt edge for the hem,—if the edge of the hem be very much worn, cut it off and take it for a facing to this new edge. By this management the garment will look well and be comfortable a long time.

White cambric and brilliant are the best fabrics for infants' dresses; after these the same goods or calico of the tiniest designs in the most delicate colors. Don't make them too long, nor too full,—seven-eighths or three quarters of a yard is long enough for common wear, a yard and a half wide enough. Give this skirt a hem two inches deep and gather it into a loose, narrow belt. For some dresses this belt may be of insertion, between which and a lining, a narrow ribbon of some delicate and becoming color may be drawn as a waist fastening. Avoid all fanciful styles of waist and sleeves. The easiest and the prettiest waist is of moderate fullness—three to three and one half inches long—gathered to the belt, and, again, to a narrow band that lies loosely about the neck just at the shoulders; the band plain and drawn a little snugly with a small tape,—or of insertion, with ribbon, as at the belt. Cut a wide, easy arm size. Make the sleeve of a straight band, about an inch and a half wide, with a neat, very narrow hem and edging. It should just fit the arm-size.

But a full sleeve gathered into a band with ribbon, like the neck of the dress, is much prettier and will last much longer. Have no buttons, nor hooks, nor pins, to fasten infants' clothing—use tape or ribbon for this purpose.

Bibs and short tiers any mother can make out of small pieces of cambric or brilliant, binding them with very narrow strips of pretty lawn or muslin, or setting around the edge a row of tatting or crochet in cotton. These save much washing and ironing of dresses, as well as much wear. But a baby four months old, or even younger, should be supplied with long-sleeved tiers drawn high about the neck; made of gingham or calico; full enough to cover the dress well—hanging loosely around it and being fastened at the belt, behind, also at the neck. These tiers are such a saving to the clothes of children, that all should be furnished with them, to wear about their play within doors, till they are twelve years old. And girls should wear them several years longer, when assisting in housework. The skirts of calico and gingham dresses that are outgrown can be used to make these tiers, though of course new goods will last much longer.

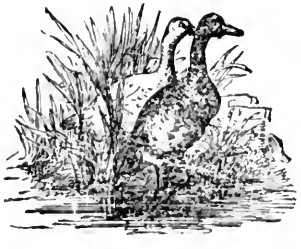
A baby needs a small woolen sack to wear over its low-necked and short sleeved cambric dress in cold weather. To make this, take one-third of a yard of flannel, of some pretty color, and fold its two selvages in a crosswise manner to the centre, forming a double point; the selvages lying upon one cut edge of the flannel, the other edge being the front opening of the sack. From the centre, which makes the top of the point, cut a small semi-circular piece,—thus forming the neck-hole. The crosswise folds fit the slope of the shoulders and are the centre of the sleeves, which are formed by cutting the flannel parallel with those folds, at a proper distance from them to make the sleeves sufficiently wide; for the length of the sleeve extend these cuttings to within two inches of the arm size, and finish it at the hand according to your taste. To shape the body of the sack, cut out gores under the arm, and then stitch a seam there; also stitch up the sleeves. Cut the corners of the front to a circular shape, and then pink the edge of the sack or cut it in small scallops. A yarn or worsted sack may be knit or crocheted of the same shape.

For the winter dresses of a babe that is old enough to dispense with a wrapping blanket, use nice flannel or thibet or all-wool delaine. Plain is prettiest, though they are often printed in small, neat designs. Don't get gaudy colors or showy figures; and make the dresses large enough to last two seasons. A good way to make these woolen dresses is to have the waist only a continuation of the skirt, arranging the fabric in plaits at the belt, which are stitched in their folds to a lining that fits the waist smoothly yet loosely. Cut the sleeves as for cambric dresses, and bind both them and the neck with silk or velvet.

A long, loose sack, lined and lightly wadded, to be used as a morning wrapper or dressing-gown is a very convenient garment, not only for babies but for all children. Its advantage for warding off colds and chills in a half-warmed room should not be overlooked, nor yet its economy in saving much hard usage of better dresses. It can be made at very little expense—by taking two or three breadths of the skirt of your old thibet or delaine dress and using as much taste and ingenuity in fabricating it as you would in making a man's lounging coat.

A baby's outside garment should be of the most delicate flannel; or else of thibet, lyonese cloth or all-wool delaine of a quiet color; made double, of the same material, or lined with soft, colored cambric of the same shade as the outside. Cut and make it in the fashion of a woman's water-proof circular, with a hood attached, having also a cape to wear with it when much exposed to cold.

[This subject will be further considered in a subsequent chapter. The next chapter which will appear in our May number of the Monthly Farmer, will treat of Woman's Out-door Work, Gardening, &c.]



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MAY.

MAY day, poetry of the Father land; May-poles twined with flowers; the Queens of the May, with their bevy of fair companions, crowned with garlands; and all the sports of the green, of which we so delighted to read in the days of our childhood are sadly out of season with us. From such scenes we are separated by the cold waters of the broad Atlantic, and the icebergs rolling and tumbling in its stormy waves, and our fair damsels, instead of weaving the mazy dance in the open air, with their arms bare, and heads covered only with flowery wreaths, are still wearing their furs and shivering under the folds of woolen garments. But the season for putting in the seed has come, and "he that will not plough by reason of the cold, shall beg in harvest, and have nothing." The work must go on. The spring time has come,—the seed time promised,—and it must be improved. We must act in accordance with nature's laws, and the time and the season are as much fixed by her laws as any other conditions on which success depends. Would that we understood her laws better, and observed them with more care. Living in the presence of nature, and in constant communion with her, how greatly would the farmer's happiness be promoted by a knowledge of her laws,—of the natural sciences. He is constantly observing effects. Why should he not know the causes which produce them? While nourishing and cherishing vegetable life,—while engaged in covering the earth with beauty,—in bringing forth the flower and fruit, and perfecting the harvest, how much pleasure would he find in a knowledge of vegetable physiology, which would reveal to him the processes and the instrumentalities by which all these results are accomplished. Some rare plant, some new and beautiful flower, arrests his attention. Could he call to his aid the knowledge of botany, and learn its habits, its uses, and its name, how much would his pleasure be increased? Almost constantly delving in the earth, how would his labor be lightened by an acquaintance with geology which would teach him the nature and composition of the soil he is working? As he follows the plough, and opens the bosom of the beautiful soil, he would be

able to read lessons of divine wisdom written upon its teeming furrows. As he sees the matchless beauty of the blade springing from the seed which he has scattered, first gay with flowers, and then loaded with rich fruit to fill his storehouse and feed himself and those dependent upon him, would he not find great satisfaction in knowing how this wonderful result has been effected? An apparent miracle has been wrought in his presence,—and yet it it is no miracle, for it has been wrought in accordance with law. Shall he not seek to understand this law of beauty and growth, and thus feel that in laboring for the same result, he is a co-laborer with nature? Living in the open air, he observes the movements of the clouds, and spans the firmament with his eyes. How grateful to him would be a knowledge of the philosophy of light and air,—of the winds and storms,—of rain and drought. And the movements of the heavenly bodies, and the eternal laws which govern the solar system, how would a knowledge of these elevate his mind and quicken his devotion.

All these matters, and many others of the same class are closely connected with the practice of husbandry, and the advancement of agriculture, and do they not contribute to the daily enjoyment of the farmer himself? It is to be hoped the time will come, when the farmer shall be familiar with such knowledge. Never, till then, will he feel the strength of the position which he occupies. Then let him press onward, seeking for knowledge, not only as a means of success, but as a means of ennobling both himself and his calling.

What the farmer needs most to know is the principle that governs,—the philosophy that underlies and controls, every operation. His farm is a mighty laboratory,—every operation an experiment. While these are going on, he should watch them with an intelligent eye, and trace effects to their causes, and understand how his plants are fed, and on what they feed; how much food they need, and how it should be modified to promote their health and growth, and how they are affected by climate and season. In short, let him study the laws of nature. These are uniform and certain, and only when he learns to conform to them, and act in accordance with them, will he achieve satisfactory results, and comprehend the true nobility of his work.

AMERICAN WOOL.

Mr. Edward Harris, the great Rhode Island manufacturer, wrote a letter, dated January 30, 1868, to the Congressional Committee on Ways and Means, in which he says that in thirty-seven years' experience in manufacturing he has never seen the business so depressed as at present; that for the best goods, the South American wools are necessary; that the present tariff on this kind of wool amounts to 30 cents per cleansed pound, in gold, and consequently the drift of his letter is to convince Congress that the depression in manufacturing is the result of the operation of the tariff on wool. In commenting on this letter, Dr. Randall says in a late article in the *Rural New Yorker*, that he knows of only two other manufacturers—Mr. Hazard, of Rhode Island, and Mr. Slater, of Massachusetts,—who agree with Mr. Harris in his views. That the great body of manufacturers in the country do not sympathize with him appears from the fact that the following resolution was adopted unanimously by their National Association at its last annual meeting, October 2, 1867:

Resolved, That the present tariff on wool and woolens is as well adapted, as any legislation which can be devised, to promote the growth and development of wool manufacturing and wool growing, and the interests of consumers and the public revenue.

In addition to this, Dr. Randall publishes the following letter from another "manufacturer of reputation," whose name he does not feel authorized to give, in which some of Mr. Harris's positions are directly controverted:

"In answer to the letter of Mr. Edward Harris I will say, that few of the manufacturers of cassimeres and cloakings have closed their mills. I will only name a few that have not. The Riverside Mills, Lippet Mills, Ouby & Metcalf, near Providence, R. I., Ed. S. Hall, Millville, and Messenger & Wright, of Worcester, Mass., and many others in the vicinity of Mr. Harris' Mills; the Globe Mills and Steam Woolen Mill at Utica, the Empire Mill at Clayville, the Elbocuf and Mohawk Mills at Little Falls, the Mowry and Huntoon, Eaton, N. Y., the Troy Woolen Mills, the Washington Mills at Lawrence (whose goods were so handsomely noticed at the Paris Exposition;) the Burlington Mills and S. Woodward's of Vt.; the Yantico Mills, Franklin, N. J., and the Newark Woolen Mills, Geo. P. Evans' Mills, of Philadelphia, and a great many others make as fine goods as Edward Harris, or can make them, and all made or nearly so of American wool. Many of the mills mentioned make medium goods as well as fine. I saw as fine a piece of goods of silk and wool, within a week, that was made in Indiana, as Edward Harris can make. Did the manufacturer get his wool from South America? Not a bit of it. It was raised in the United States. There is plenty of fine wool and at fair prices, to those who can give good city paper or cash. If the mills named

are losing money, the consignee of foreign goods is losing more.

"The importations are falling off, and if the tax of two and a half per cent. is taken off, the manufacturer will survive in spite of the pauper labor of Europe. In Austria 15 cents is the price per day of a man's labor! We have as fine a wool-growing country as there is in the world. West Virginia has produced the finest wool in the world, according to the statements contained in the work of Aquilla Brown, of Philadelphia. We can and should grow our own fine wool; and it will be done unless such theories as Mr. Harris' prevail. It is the manufacturers' interest to use our own wools and encourage our own growers. The staple is stronger and better adapted to our business than South American wool.

"What ails Mr. Harris is that he has held his goods, many of them old styles, for one and two years; and he now finds it hard work to compete with most of the mills which sell their goods in the season for which they were made. He has another trouble. He is the largest individual manufacturer in New England, and has an enormous new mill running equal to fifty sets of cards. Has he not a little overdone it? Don't he need more customers and less South American wool? A ten set mill is considered a large one, and is large enough for any prudent man. What troubles the large concerns are the small mills. If they can be crushed, the large ones will have a good time. Take the tariff off from wool, the farmers will kill their sheep, and the small mills break. The large mill owners will in that case become the lords, and the people will become the serfs."

COMPLIMENTARY.

Although we are much encouraged by the many good words that are spoken of the FARMER, by our correspondents and contemporaries we do not often think best to make our own columns the medium of their complimentary notices. We must, however, be excused for manifesting our appreciation of the source of the following, by waiving our general rule on this point.

THE NEW ENGLAND FARMER.—There are three things which New England men in middle life, who have migrated from the country to the city, remember, as particularly associated with the old farm homestead,—*Scott's Commentary, Robert B. Thomas's Almanac*, and the *New England Farmer*. This sterling agricultural paper is one of the institutions of New England, and its visits to the firesides of thousands would be missed as much, almost, as those of brothers, sisters, or cousins. The genial, pleasant, instructive essays of the farmer-editor, whose cottage upon the banks of Concord River is the home of so much refinement, social happiness, and generous hospitality, lend a charm to its columns which is found in but few publications. The *Farmer* often speaks words of kindness and encouragement, but never those of bitterness or envy. The agricultural interests of New England and the country, in their present advanced condition, are greatly indebted to the *Farmer*, and long may it continue to exert its healthful and elevating influence.—*Journal of Chemistry.*

—The Iowa Agricultural College will open for students next fall.

"THE OLD FARM."

BY FRANK M. BAKER.

I've been, dear George, to "our old place,"
Where you and I were born,
But meeting no familiar face,
It made me feel forlorn.

Where father tilled, now strangers till,—
Our father's house is not;
A stranger's home stands on the hill
Where stood our humble cot.

The old red barn is torn away—
A new one stands there now—
What fun we've had in that old bay!
What frolics in the mow!

The old well-sweep has disappeared,
Instead there is a pump;
The farm how changed! The land we cleared,
Is now without a stump.

And those "back acres" where we mowed,
(*Back-achers* true they were,)
A boy upon a mower rode
And cut, while was I there.

The rattling reaper rapid run
The waving grain among,
Where erst beneath the broiling sun
Our cradles oft we swung.

Those reapers, George, have truly hung
Our cradles "in the shade;"
The only *cradle* now-days swung
Is where the baby's laid.

Our mother's grave, dear George, I sought,
There wept—I know not why;
I felt the changes years have wrought
On all—on you and I.

For the New England Farmer.

YOUNG ORCHARDS.

We recommend, in setting out a young orchard, to plant the land previously to corn or potatoes, ploughing very deep. After the crop is off the land is ready to receive the trees. Set them from thirty to forty feet apart, (thirty-five feet is a good distance,) and do not hurry to put in the trees, but set them carefully, reserving all the top soil to go around the small roots; and it will pay to pour a pail or two of water on the roots of each tree, when the holes are about two-thirds filled. As soon as the roots are covered with the top soil, work the trunk of the tree to and fro, to settle the earth around the fibres of the roots, then tread down firmly with your feet, apply the water, fill up, and the work is done. If the soil is quite damp, no water will be necessary; but as a man will bring, in an hour, from the house-well, by hand, all the water that would be required for twenty-five or thirty trees, it is decidedly, in my opinion, good policy to use it in most cases. No person should ever allow a hired man to set out his trees. He should take his man or boy and do it himself, with their assistance. Nor should the holes be dug long before the trees are set. If you have many trees to set, first stake the ground and then set a man or men to digging the holes, while you, with a boy, set the trees.

which should be set into the ground two or three inches deeper than they grew in the nursery row, and after the soil becomes well settled around them, they will not be too deep. It is important to set a stake by the side of each tree, on the side the prevailing winds come from, to which the tree should be attached with something that will not chafe the bark. No man should trust to his hired help to remove his young trees from the nursery, unless he has different help from what is usually found on a farm. The life of a tree is in its roots, and care should be taken to preserve as many (especially the smaller roots,) as possible, and all that are cut with the spade should be cut off smoothly with a knife, in an oblique direction, in order to allow them to grow on and become perfect roots. If you are not ready to set the trees, as soon as taken from the nursery, take them to a shaded place and "heel them in," throwing the earth well up over portions of their trunks and branches, if not too large, to prevent too great an evaporation of the sap. The top of the tree should be trimmed to correspond with its extent of roots. Begin with the lower branches, and end by shortening in such of the top branches as may be necessary. O. T.

Lakeville, Mass., Feb., 1868.

CHEESE FROM THE MILK OF SHEEP.—The January number of the Report of the Department of Agriculture, furnishes a curious statement in explanation of the art and mystery of "Roquefort cheese." It appears that in the neighborhood of Roquefort, France, 8,000,000 pounds of cheese are made each year from about 400,000 sheep of a native breed, which are all that can be kept there. The factory is called a cave, and is niched high up in the rocky table land. The sheep are milked twice a day. The milk stands a short time, is then warmed and partly skimmed for butter, made into cheese, sprinkled with wheat flour, inoculated with a bit of old cheese, and carefully deposited in the "cave." Either from some peculiarity of feed or influence of the scent of the cave, this cheese is inimitable, and other sections near by have failed in all their attempts to produce the genuine Roquefort cheese.

KANSAS COLLEGE GROUNDS.

In June, 1865, says the *Kansas Farmer*, Prof. Kelsey took charge of these grounds, and forty acres were broken up. In 1866 he planted nine bushels of osage orange seed, 8000 apple grafts, one bushel apple seed, one peck elm, three bushels maple seed, and about 40,000 little evergreens. In 1867, eight bushels osage orange seed, five bushels peach seed, 18,000 apple grafts, and a quantity of sycamore, ash, and honey locust seed, and twenty-five acres of black walnut, oak, hickory, maple, osage orange, cotton wood, white pine, cedar, larch, arbor vitæ, &c. About $1200 worth of trees and plants were sold last spring, and probably $2000 worth will be sold this spring. Already 250 acres are inclosed, and preparations for fencing 640 acres are nearly completed. Additional orchards, forests, hedge seed, peach and apple grafts and seeds, and several miles of hedge fence are to be put out this spring. The trees have nearly all succeeded well, and the forests are in cultivated ground and kept free of weeds. They have cost $7 to $10 per acre, and are planted in rows twelve feet apart, the trees in the row one to two feet apart, and cultivated between the rows.

PERRY'S IMPROVED MOWER.

This machine, represented in our advertising pages, was invented by Mr. John G. Perry, of Kingston, R. I. It has two driving wheels, the frame is made of wood, and it is claimed that every part is made of the best material and in the best manner; that it will run slow or quick, and do the work well; that the machinery is simple and compact; that it avoids the noise common to other machines; that it is well adapted to uneven surfaces; and that it will mow around corners without stopping or backing the team to start anew. Since its invention it has been awarded the following premiums:—

Medals.—Rhode Island Society, 1866; World's Fair, Paris, 1867; Worcester County Association, 1866.

Highest Prizes.—N. E. and Vermont Societies, 1866; N. E. and Rhode Island Societies, 1867; also at Bristol Co., Middlesex Co., Eastern Hampden, and other Agricultural Fairs.

NORFOLK AGRICULTURAL SOCIETY.—At a largely attended meeting of the society, March 25, the following gentlemen were elected officers for the year:—

President—Hon. Marshall P. Wilder, Dorchester.

Vice Presidents—Hon. Amos A. Lawrence, Brookline; Hon. Otis Cary, Foxboro'; John Gardner, Dedham; Stephen W. Richardson, Franklin; Elijah Tucker, Milton; Henry Grew, Dorchester.

Corresponding and Recording Secretary—Henry O. Hildreth, Dedham.

Treasurer—C. C. Churchill, Dedham.

SOW AND PLANT GOOD SEEDS.

One of the vexatious experiences of the farmer is in the use of seeds which he supposed were good, but which never come up. This is not only vexatious, but in some cases involves a heavy bill of cost, as in the case of seeding land to grass. After all the labor of harrowing, leveling, sowing the seed, working it under and rolling, the work is to be gone through with a second time, and a new cost incurred for more seed. In addition to this, the prime season for the germination of seeds, and early growth of the plants, has passed away, so that the crop is sickly and lean through the entire season. The whole crop, indeed, may be affected through two or or three seasons from the want of a heavy and vigorous start.

Thus the want of success in this operation, and the necessity of going over it again, occupies the time of men and teams that ought to have been devoted to other crops,—so that unless extra labor is brought in, the business of the farm is deranged throughout the season. In such cases, hurry and discomfort are introduced, where thrift and order usually prevail; these penetrate the inmost recesses of the family, and give it a tone of disquiet which is all unlike its common character. All this may spring from a want of *good seed.* The old adage is proved in the result: "For want of a nail the shoe was lost; for want of a shoe the horse was lost; for want of a horse the *rider* was lost!" "Behold! how great a matter a little fire kindleth." So it runs through all the business of life. One little act of treachery involves the city in ruins, and the loss of many lives. One little piece of rascality in selling seeds that are known to be bad, results not only in the loss of crops to a great extent, but to unhappiness,—perhaps ruin,—in many upright and worthy families.

There should be inspectors of seeds, as well as inspectors of flour and steamboat boilers,—and any infraction of law in relation to seeds should by punished promptly and severely.

Line upon line, and precept upon precept, has been given to farmers upon the importance of using good seeds, but the losses continue as great as ever. The surest way to secure those that are good, is for the farmer to raise them himself. It is much more easy to do so than most farmers think it is. For garden purposes, two or three beets, parsnips, carrots, onions, turnips, &c., &c., are all that are necessary to secure an abundance of good seed.

For field use, increase the number, but tend with equal care. Even grass seeds may be saved with little extra labor, when once the farmer becomes acquainted with the best manner of taking care of the crop and of harvesting the seed.

Machines are common now for the latter work, which accomplish it rapidly and perfectly—and a single machine would accommodate a whole neighborhood. The cost of grass seeds to our farmers may seem small in single instances, but in the aggregate it swells to an imposing sum.

There were 35,601 farms in the State of Massachusetts in 1860. The average cost of grass seed cannot be less than six dollars to each farm,—it would probably be double that sum,—but that amount would make a total of $213,606 annually! A very large portion of this seed is produced beyond the limits of New England.

The whole number of farms in the New England States in 1860, was 183,942. At six dollars for each farm, the total would be $1,103,652 annually, for grass seed! It is believed that nine-tenths of this seed may be produced by the farmers themselves, and at a very trifling cost. Look at the immense labor, and the untold exchanges which the products of the farmer must pass through, in order to raise the money and pay it out for this grass seed.

As a general rule, the farmer handles little money, compared with many other classes. It should therefore be his object to produce, within his own labors, everything that can be economically produced, so as to devote his money to the payment of taxes, purchase of machinery, clothing, furniture, and such other articles for consumption or use as he cannot produce from his soil or manufacture for him-

self. We can save a million, annually, in New England, by raising our own grass seeds.

With a bit of advice to farmers from the old Roman writer, *Columella,* and a few lines from one of *Virgil's* Georgics, we will close this article. The first named says:—"I have this further direction to give you, that, when the corns are cut down, and brought into the threshing floor, we should even then think of making provision of seed for the future seed time, for this is what Celsus says:—'When the corn and crop are but small, we must pick out the *best* ears and of them lay up our seed separately by itself.'" Virgil says:—

"I've seen the largest seeds, though viewed with care,
Degenerate, unless the industrious hand
Did yearly cull the *largest*. Thus all things
By fatal doom grow worse, and by degrees
Decay, forced back into their primevous state."

For the New England Farmer.

"DIFFERENCE IN SEED POTATOES."

Mr. Knapp gives his experience, and here is ours:—In the spring of 1866 I received by mail from Thomas Edge, Esq., of Londongrove, Pa., among other seeds, one of Goodrich's Cusco potatoes and one Mercer. I also obtained two each of the Goodrich Early, Garnet, Chili, and Calico. I had previously Jersey Peach Blows, Prince Alberts, Mountain Junes, Davis Seedling, Irish Apple, and California or Jenny Lind, and several other varieties.

The Cusco, having clusters of eyes, was divided into twenty-eight pieces, some of them not larger than a filbert, each containing one eye which made twenty-eight hills. The other new varieties having less eyes made fourteen hills each, containing one and two eyes. The old varieties were with two or more eyes on each piece. By stepping the left foot in each hill and dropping one piece each side of it, the distance between the pieces is regulated to six or eight inches. The rows were three feet apart and the hills about thirty inches. The soil was a light sandy loam, on which the clover was winter killed. We made holes two or three inches deep, and covered the potatoes first with manure then with dirt. They received the same culture and treatment, and although the season was unfavorable, we harvested as follows:—

2 potatoes,	Cusco, ...	28	hills . . .	2	bushels.
" "	Early Goodrich .	14	" . . .	1¼	"
" "	Garnet Chili . . .	"	" . . .	1⅛	"
" "	Mercer	"	" . . .	¾	"
" "	Goodrich's Calico	"	" . . .	¼	"
Usual amount of seed,					
Jersey Peach Blows		"	" . . .	⅜	"
Davis Seedling		"	" . . .	1	"
Prince Albert		"	" . . .	⅞	"
Mountain June		"	" . . .	½	"
Irish Apple		"	" . . .	⅝	"
California		"	" . . .	1¼	"

The last season was still more unfavorable in northern Vermont, but notwithstanding the almost unprecedented drought, I raised over eighty bushels of the Cusco, sixty-five of the Early Goodrich, and forty of the Garnet Chili, and planted only about three-fourths of the Garnets. None of them rotted except the Mercers, which I discarded the first season.

I have formerly been troubled with the rot in my bins, especially near the top of the centre where they were piled high. I therefore raised the floor so that the dirt can be cleaned out easily, and slit the bottom planks to about six inches, wide, and left spaces three-fourths of an inch wide between them, and now the potatoes, though deep, keep as sound as when put in.

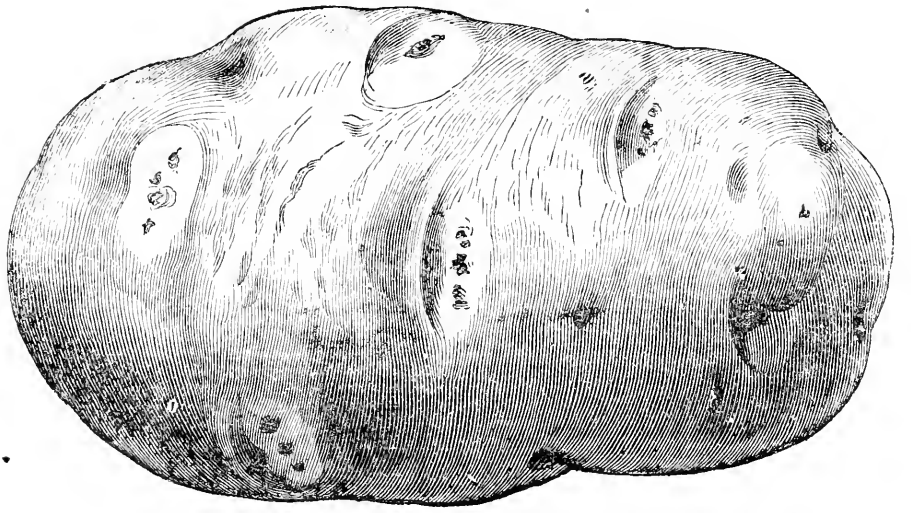
We should like to hear from other farmers, that each may profit by the others' experience.

O. C. WAIT.

West Georgia, Vt., Feb., 1868.

AN EXCELLENT FERTILIZER.

One of the very best artificial fertilizers used upon our farm, for all the cereal grains and root crops, we have prepared in the following manner: Take one barrel of pure, finely-ground bone, and mix with it a barrel of good wood ashes; during the mixing, add gradually about three pailfuls of water. The heap may be made upon the floor of an outbuilding, or upon the barn floor; and, by the use of a hoe, the bone and ashes must be thoroughly blended together. The water added is just sufficient to liberate the caustic alkalies, potash and soda, and these re-act upon the gelatine of the bone, dissolving the little atoms, forming a kind of soap, and fitting it for plant aliment. In this way, the most valuable constituents of bones can be made immediately available, and the addition of potash and soda aids in the formation of a fertilizer of inestimable value. The water added is not sufficient to make a mass, difficult to dry, but is enough to liberate the strong alkalies from the ashes. This preparation is so cleanly, convenient, and useful, every farmer should prepare as much as possible for his crops during the coming season. A gill placed in a hill of corn will work wonders. It is excellent for garden vegetables, and for all kinds of roots. It must be used in small quantities, or in about the same way as the so called superphosphates. A barrel of this mixture is worth two of any of the commercial fertilizers, and the cost will be but about half as much. It remains to be added, if the bone meal and ashes are very dry, four pailfuls of water may be required; but care must be exercised not to have it inconveniently moist. It will be ready for use in a week after it is made. *Pure, raw, finely-ground bone* and the best of ashes should be employed. We think the *Journal* readers will thank us for calling their attention to this excellent fertilizer.—*Journal of Chemistry.*



EARLY ROSE POTATO.

It is claimed that this variety was originated from a seedling of the "Garnet Chili," by Mr. Albert Breeze, of Vermont, who, after being satisfied as to its superior quality, sold his stock to D. S. Heffron, of Utica, the disseminator of the "Early Goodrich." After testing it two years, Mr. H. sold most of his stock to two gentlemen in New Jersey, and gave the following description of the potato:—"Skin thin, tough, of a dark bluish color; flesh white, solid and brittle; boils through quickly, and is very mealy." He also says, "It has uniformly ripened ten days earlier than the Early Goodrich, produces less small tubers, is equally healthy and productive, as that justly celebrated variety, and its superior in table quality. It is the best early potato that I have ever grown or seen, all things considered"

Dr. John P. Gray, (superintendent of the New York State Lunatic Asylum) who raised a small quantity for Mr. Heffron, speaks of it in the highest terms, and fully endorses all that is claimed for it.

If future cultivation shall prove that the "Early Rose Potato" is earlier than the "Early Goodrich," and is in other respects worthy of all the praise which has been awarded it, it must be a great acquisition, especially in view of the miserable specimens of this indispensable vegetable which we have had upon our tables the present season.

For the New England Farmer.

MINERAL MANURES.

In your paper of March 21st, under the heading "Manures—Organic and Inorganic," I am invited to consult two gentlemen of Milford, Mass. respecting their success in applying *mineral fertilizers* to their land, according to the theory of Mr. Dodge Hayward. I shall endeavor to obtain the information, and hope that others who have adhered strictly to the teachings of that gentleman will forward for publication the results of their experiments.

I offer some thoughts suggested by the article referred to.

In our experiments with minerals, it should be borne in mind that our want of knowledge is not so much in regard to what organic or inorganic elements our plants and fruits are composed of, as in what proportions, and by what methods and expense of time and money they can be returned to the exhausted soil, and be made to operate there as when supplied by the action of the forces of nature.

Chemists profess to be able to tell me precisely the quantity of minerals any portion of my land may contain, but they cannot tell me before hand what amount of minerals to use, how to use them, and at what expense this can be done, with the certainty of raising profitable crops, and continuing the land in a

fertile state. Mr. Dodge Hayward, who I do not understand to be a practical chemist, professes to do this, but whoever carefully considers the positions he takes, or assumes, and the conclusions he arrives at, by making them the ground of his reasoning, will be compelled to admit the truthfulness of the first two lines of the second paragraph, in the second part of the article I have above referred to, where, in speaking of Mr. Hayward, the writer says: "In regard to the truth of his theory, its proof rests on the test of practical experience." In his lectures, Mr. Hayward makes propositions, then talks about them and draws his conclusions apparently in ignorance that the proof of any position depends not on the positions that *follow*, but always on those which *precede*.

The mode of reasoning adopted by Mr. Hayward, leads him to conclude that unless we depend on minerals to restore our lands to a state or capacity called productive, we shall be driven to give up farming as unprofitable; but time will discover to all the real causes of the fertility of our lands being less than formerly, are the abundance of new land, the high price of labor, and comparative scarcity of money in the hands of small farmers.

What made the barren sands of Belgium the most fertile farms and gardens on the continent of Europe, but the poverty to which the people were reduced by the destruction of their former means of support? This they accomplished by the use of green manures and rotation of crops. Two hundred years ago men travelled fifty miles on the road in England without seeing a single fence; on both sides were heath and swamp, where now are seen such farms as would astonish the intelligent farmer of New England. The change there was brought about by the use of the same means as in Belgium. In the latter place, by the poor farmers with the spade; in England, by the lords of the land employing the spade and the plough; but in both cases the system of manuring was the same. As land in the hands of intelligent cultivators here becomes scarce, and they have money to enable them to wait the necessary time for remuneration, the same system of cultivation will be adopted by them as is followed in England, so far as climate will allow. For the present, our best plan seems to be to select our best fields, sell from them as little of what they produce as possible, and extend our farms only as fast as we have abundance of barn-yard manure, and time and money to afford to bring up our poor lands by plowing in green crops, and by reclaiming our meadows.

To the remarks of the writer of the article referred to, on what he calls the "preaching of the *all-importance of ammonia*," I will leave the "leading agriculturists who preach them" to reply. I believe in the judicious use of both barn-yard manure and minerals. I believe, also, that if we had no minerals to use as manure, we could then farm with profit. What I do not believe, is what Mr. Hayward contends for,—"that ninety per cent. of barn-yard manure is useless on all lands." If Mr. Dodge Hayward will test the matter here in Sherborn, he can do so; he being at the expense only of his presence here, and his superintendence. If he should succeed, he must be aware that his secret would bring a handsome price. If he should read this article, I wish him to recal to mind our conversation in the blacksmith's shop in this town.

I have seen farms in eleven counties of England, where the system of manuring I suggest has been followed, and I wish the farms and farmers here were as rich as they are there.

Our friend speaks of insects in peas, and of borers in trees, as the result of a want of mineral in the land. In England I do not remember having seen any insects in peas exposed for sale in windows and stores the year round; nor do I remember, in my residence in the valley of the Severn for twenty-three years, to have heard a word about borers in apple or pear trees. I cannot see the force of such a remark. England is old,—there is as much scarcity of mineral in her orchards in the valley of the Severn, and in her pea fields, as there is here.

Mr. E. W. Bull is quoted. He uses mineral in his vineyard. True, but the vineyard is on a low and frosty piece of land on which nothing but his great experience, intelligence, and constant care enables him to succeed. On such land there is abundant moisture, and mineral is all that is wanted there for Concord grapes. Leave this vineyard and go to his land on higher level, and there, with the same culture under which the Concord grape is luxriant, the Iona, Isabella, Adirondac and others scarcely live. Give these some barn-yard manure, regulating the amount by the requirements of each variety, and they will be as thrifty as the Concord, on which nothing but mineral is used. I have about twenty varieties of grape vines, and all and each require different treatment or different soil, and some of them require both. I would not risk any of them except Concord, Hartford and Rogers on poor soil, unless they could have a large amount of oxygen and hydrogen—water.—supplied in some form other than is recommended by Mr. Dodge Hayward. And when our farmers notice how the little roots of plants fix themselves in the lumps of barn-yard manure in dry weather, they will probably believe the same in regard to other plants.

JOHN FLEMING.

Sherborn, March 23, 1868.

—Apples and other fruits and vegetables have long been dried and are common in every market, and a gentleman in Baltimore has invented an apparatus for slicing and drying the sweet potato of the South, and is confident of success.

The Old Way.

The New Way.

BAG HOLDER AND TUNNEL COMBINED.

INVENTED AND PATENTED BY E. C. FAIRCHILD, SUNDERLAND, MASS.

Steady, friend "Old Way," or you will spill the "precious grain," although the more difficult task, that of picking the bag from the floor with the full half-bushel in your hands has been accomplished. Who, that has ever put much grain into bags, does not sympathize with you? And who does not congratulate "New Way" on his erect position and the ample tunnel, which, though not well represented in the cut, is three inches wider than the largest diameter of the half-bushel. See, too, how nicely the bag is held by four little sharp steel hooks on the outside of the tunnel; how the tunnel can be raised or lowered to suit bags of different length, by means of an iron plate with three or more "lugs," on the standard; and how the whole can be placed on platform scales for weighing, &c. This plate and lugs may also be attached to any upright in the granary, or to a wagon for field use.

SOILS FOR PEAR TREES.—Mr. L. C. Kingsley, of North Auburn, Me., inquires about soils best suited to pear trees, and whether standards growing one rod apart may have dwarfs planted between them. He states that he digs the hole for his trees three feet deep, and inquires whether these should be filled with compost. We reply: The soil in which pears generally thrive best, is a well drained clay loam; but many kinds will thrive in a sandy soil, if well cared for. Dwarfs may be set between trees one rod apart, if the soil and culture are good, but we should prefer to set standards twelve feet apart, with nothing between them. We think a depth of three feet is unnecessary, and involves too much labor. Half that depth is generally sufficient. Two thirds of this depth may be filled with compost, if it is well rotted. Raw manure should not be put in contact with the roots of a pear or apple tree. Turfs and sods do well to fill up the hole with. They soon become a good mould.

We prefer the spring for setting trees, and they should be set as soon after being taken up as possible. Trees transported long distances are very uncertain.

EXPERIMENTS WITH MANURES.

FINDING the space usually allowed to our correspondents hardly sufficient at present for the publication of all their articles which seem to demand an immediate notice, we propose to place upon the editorial platform the following interesting account of some experiments made last season by our friend "W.," of Blackstone, Mass., in the home manufacture of several special fertilizers, and of their effect in comparison with that of stable manure.

Superphosphate of Lime.

Last spring he obtained about 600 pounds of bone, costing, at 1¼c per pound, $7.50. The breaking up of these bones cost $6. He then purchased 174 pounds of oil of vitriol, at an expense of $6.24, including freight. Making the whole cost of these material $19.74. A molasses hogshead was then sawed in halves, and an equal quantity of the bones put into each. After wetting the bones with about two pailsful of water to each cask, half of the vitriol was poured upon one lot, and half upon the other, all at once. The bones, however, were not as completely dissolved as could be wished, and Mr. W. proposes in his experiments this season, to put in a part of the vitriol at first, and after effervescence, to add the remainder. This mass of bones and vitriol was reduced so that there was as much as one horse could draw, but Mr. W. thinks it would have been better if he had made two loads of it, instead of one.

Muck and Mineral Composition.

Adopting the suggestions made by James R. Nichols, M. D., in a lecture delivered before the Massachusetts Board of Agriculture, and published in the *Agriculture of Massachusetts*, for 1866–7, pp. 232–4, Mr. W. made a compound of muck, crude nitrate of soda, Epsom salts, bone meal, salt, plaster, and wood ashes. In his formula, Dr. Nichols assumed that a cord of barn manure weighs 3000 pounds. Of this amount, 2456 pounds are water, 138 pounds sand, and 332 pounds carbonaceous matter, no more valuable than muck, peat, straw or chaff; leaving only 74 pounds "which really is all that is valuable."

"In this 74 pounds," says Dr. Nichols, "there is the nitrogen, potash, soda, lime, magnesia, phosphoric acid, sulphuric acid, chlorine, iron and alum. In estimating the market value of these substances, we may obtain the nitrogen by the use of crude nitrate of soda, or sulphate of ammonia, at a cost of $2.60, the potash, soda, &c., in one and one-half bushels of good wood ashes, at 35 cents, and fifteen pounds of common salt, ten pounds of bone-dust, three pounds of gypsum will supply the remaining constituents, at a cost of fifty cents. If we estimate the carbonaceous matter at ten cents, we have, as the actual cash value of all that promotes plant-growth in 3000 pounds of barn-yard manure, the sum of $3.35. There are but few localities where the farmer can purchase manure at less than $7.00 the cord; and when to this we add the expense of hauling and applying to fields, we find there is a wide margin between the cost of the isolated valuable constituents of manure, and the article as furnished in its natural condition. Barn-yard manure may be imitated by thoroughly composting with a cord of seasoned meadow muck sixty-five pounds of crude nitrate of soda, two bushels of wood ashes, one peck of common salt, ten pounds of fine bone meal, two quarts of plaster and ten pounds of epsom salts. The cost of this compost will not be over $3.50 the cord, and ought, other things being equal, to serve as good purpose in the field. In practical trials of this mixture I have found that while it serves a most admirable end, giving very satisfactory results, it does not act so rapidly and energetically as manure; but its effects are more lasting. In short, the same salts and organic matter as found in the dung-heap, have a higher money value, and seem to exert a more specific influence upon plants than when presented in artificial mixtures. By substituting nitrate of potassa, or saltpetre, for soda, the compost is greatly improved, while its cost is enhanced. If the salts are dissolved in water,—those that are soluble,—and the bone is ley, and good muck is employed, a compost is formed very nearly as valuable as seasoned excrement. Very nearly, we have said—why is it not of equal value?

We have reason to believe it is owing to a minuteness of the subdivision of atoms, which we can neither produce nor comprehend,—a degree of comminution which sets at defiance all mechanical and chemical manipulation. Besides this, there is, however, a peculiar condition arising from, or communicated by, the contact of vital forces, which science is incapable of explaining. A physician once brought to me a jar of ox's blood, with the request that I would extract or isolate the metal iron therefrom, and place it in his hands. In answer to inquiries as regards its uses, he stated he wished to employ it as a therapeutic agent under the impression that iron once assimulated would have a higher and more natural influence when passed again through the animal economy, than the usual forms of the metal from other sources. His hypothesis was undoubtedly correct, and while it was quite within the power of chemistry to isolate the iron from the blood, it was impossible to secure it in the *condition* in which it existed in that fluid. That condition is indeed a peculiar one, and its presence is not indicated by any of the usual chemical re-agents. If we applied to it simply the usual manipulating processes, chemistry would fail to show that there was an atom of iron present in the blood of men or animals. This may illustrate the difference between the fertilizing influence of metals and salts, as found in animal excrement and as existing in other, or the usual forms. The iron as found in the blood, if administered to an enemic patient, would without doubt immediately, and by direct and easy processes, again pass to its appropriate place, and restore the sanguineous fluid promptly to its normal condition.

But chemistry can never furnish it in that form, neither can it supply the mineral constituents re-

quired by plants, precisely as found in manures; but this must not lead us to disparage science and reject its teachings.

On these suggestions Mr. W. constructed his "composition" or mineral manure.

Sulphate of Soda and Sulphate of Magnesia.

This compound was made from a recipe in the *Farm and Fireside*, and was recommended particularly for potatoes, but no description of how it was made is given. Mr. W. simply says, "I tried it, but it did not do anything."

Poudrette and Gas Lime.

How these materials were prepared or how applied we have no information further than what appears from the following table, which gives the comparative appearance at three different observations, of two rows of corn which were planted for the purpose of testing the five different kinds of manure mentioned.

Result of the Different Manures

	July 11.	Aug. 2.	Sept. 1.
Poudrette	No. 1	No. 4	No. 4
Stable Manure	" 2	" 5	" 2
Home-made Phosphate	" 3	" 1	" 1
Muck and "Minerals"	" 4	" 6	" 3
Sulphate of Soda and Magnesia	" 5	" 2	" 5
Gas Lime	" 6	" 3	" 6

General Remarks.

In applying the home-made superphosphate to corn in the field, the same amount was used as is commonly used of Bradley's Superphosphate of Lime, and Mr. W. adds that in some cases too much was applied. Its effects were very satisfactory, although the amount of the crop is not stated. Some of the stalks, however, were as tall as a rake handle, and one and a half inches in diameter. Some of the corn cobs were double at the top, showing a luxuriant growth. In husking eight bushels, one evening, eight such double ears were found, all but two of which were well filled out. In one case, six distinct ears were found in one set of husks,—the longest being twelve and the shortest three inches in length.

Of the mineral compost, our correspondent says, "I don't think much of it. It did not do well."

Three-fourths of an acre of land were turned over last season as soon after haying as convenient, on which six cords of good stable manure were spread with some superphosphate from another batch made of 400 pounds of bones and 164 pounds of oil of vitriol. This land was harrowed, bushed, seeded, and bushed again. Before the frost came the grass was more than six inches high, and neighboring farmers remarked that they never saw such a sight before. On about half of this lot turnip seed was sown about the middle of September, from which 140 bushels of clean turnips were harvested, leaving the tops on the ground as a mulch or dressing.

The second lot of superphosphate cost $14.97, which added to $19.74, the cost of the first lot, make $34.71. An equal quantity bought in market by the barrel would have cost $60. Mr. W. says he would give more for bones thus treated than he would for good stable manure, though he admits that some do not think so. He also raised oats the past season on land to which horse manure was applied. Some of the stalks were over five feet and six inches high and nearly as large as one's little finger.

We hope our correspondent, who says that he believes he cannot get too much manure upon his land, will continue his experiments and communicate the results, whether favorable or unfavorable, for the benefit of other farmers who are anxious to avail themselves of every profitable fertilizer. Although his experiment in the use of the "philosophical" cord of manure was such as to lead him to remark that he "did not think much of it," still as it stood No. 3, on the first of September, we wish he had given a fuller account of its cost, and of the manner in which it was composted.

IMPROVEMENT OF TURF GAMBLING.

Now that the racing season is rapidly approaching, we trust that our turfmen will make an effort to open a subscription room in New York where bets may be registered, to be conducted after the style of Tattersall's in London. The enterprise could be made to pay with an energetic man at the head of the movement. With a club room conducted on the Tattersall plan, the business transactions of the turf, in a measure, would be systemized. It would help to do away with the poolseller's vulgarity, as with the books open for the registration of bets, the next step would be to book-making on the race course. Speculations on the turf should be conducted in a more quiet and gentlemanly manner than they are. *The noisy wrangle of a cracked-voiced auctioneer is far from pleasant, to say the least of it.* Since the pool stand has been made the medium for the practice of bare-faced robbery by an itinerant scoundrel, it should be removed from the race course. Some of our leading turfmen are moving in this matter, and we trust that they will persevere until they succeed in establishing a club house in New York on the Tattersall plan.—*Turf, Field and Farm.*

The writer of the foregoing paragraph must have been present, we think, at the

exhibition of one of the Massachusetts county Agricultural Societies that we attended last fall. The sentence we have put in italics describes a part of that "show," and its effects on our nerves most perfectly. While sauntering about the grounds on the afternoon of the last day, our attention was attracted by a crowd of people at some distance, and by a more distressed screeching than is often heard. Whether it was the last wail of some rinderpest-smitten, "cracked-voiced" bull, or the vigorous protest of a captured greased pig, we could not tell. On approaching the ring we felt relieved by the discovery that all those fearful sounds proceeded from one man, and he alive and well! though we did not then know whether he was an "itinerant scoundrel" or a gentleman. He was exclaiming at the top and bottom of a sadly "cracked-voice,"—"Thir-tee d-o-o-l-ars in the p-w-o-u-l, thir-tee d-o-o-l-ars in the p-w-o-u-l!" &c., &c.

If turfmen themselves are disgusted by the poolseller's "vulgarity" and "bare-faced robbery;" if they find it necessary to say that "*speculations*" [gambling,] "on the turf should be conducted in a *more quiet* and gentlemanly manner than they are," what shall be said in relation to these "exhibitions" on the grounds of our agricultural fairs?

For the New England Farmer.

MANURES---ORGANIC AND INORGANIC.

In as few words as possible I wish to state a few ideas in regard to manures; not for the purpose of teaching others, so much as to call forth an expression of opinion from those so much better fitted to speak on this most important of all subjects to the farmer, than I am.

We divide the elements of which all matter is composed into two classes, organic and inorganic. The organic elements (carbon, oxygen, hydrogen and nitrogen,) are such as compose, or assimilate with the atmosphere. Oxygen and hydrogen are the elements of which water is composed, and are so restored by nature as to require no consideration as manures. Carbon in the form of carbonic acid—carbon and oxygen—is taken into the roots to the amount of about one-third the quantity necessary to the plant. The other two-thirds are absorbed through the leaves of the plant. The constant decomposition of organic material by decay, combustion, &c., continually furnishes it to the atmosphere, while the rains restore to the soil all which the plant can ever require. The only benefits in the application of carbonaceous matter to soils are said to be its absorptive and retentive power of nitrogen, and its power of dissolving inorganic compounds. In this manner scientific authorities bring us down to the simple point, in regard to organic matters, that the only element whose artificial application or retention is necessary for plant food is *nitrogen*. Nitrogen combined with hydrogen forms ammonia.

Could a perfect plant food be continually applied in sufficient quantities, and at a sufficiently small cost, there would seem to be no particular necessity in the application of solvents. Some of the alkalies, however, are not only indispensable for plant food, but act a double purpose in the dissolution of inorganic substances. With no important exception, all the elements contained in different animal or vegetable organizations are the same—the difference being in respect to their proportions and other peculiarities of construction and life. If space were not too valuable, and the access of all so easy, I would give the names of the inorganic elements. Suffice it to say, the following are all the elements whose artificia lapplication to soils is ever required, the others being inexhaustible in all soils. I take, first, Professor Ville, of France, for authority, whose receipt for a perfect plant food is composed of phosphoric acid, lime and potassa. Dr. Nichols adds, for New England soils, magnesia. (See Sec'y Flint's 14th Annual Report, page 248.) Where some of these elements are plenty and in a proper condition, their artificial application is unnecessary, until they become exhausted somewhat. Meanwhile the application of an imperfect mineral manure, tends to make the soil barren by exhausting the properties not contained in the manure, from the soil, This is what farmers call "drawing land." Where these properties are not restored by the wash of streams, or from mountains, or by some such unusual means, their artificial application is indispensable; and no amount of ammonia, which many farmers seem to consider the main thing required, will prevent their exhaustion. Of course they can never evaporate, or be returned by rains or snows.

Many leading agriculturists preach this *all-importance-of-ammonia*, without seeming to consider that a certain amount is returned to the soil by nature, from the atmosphere, while these equally important minerals are not so returned.

Now the principal points on which I wish to be enlightened, are these: to what extent is ammonia of value to soils? Does nature restore it to soils in sufficient quantities for the production of plant food? If its artificial application increases the quantity of crops in any case, does not it proportionately diminish their quality, by giving them an undue proportion of organic matter, compared with the inorganic? It is the lack of phosphates and

other bone-making materials in our grass, which is supposed to produce those diseases manifested by cattle, in gnawing bones and other hard substances. The working of bugs in peas, so common here, is not usual in new countries with unexhausted soils. Mr. E. W. Bull uses only plaster, bones, ashes and other mineral manures for his grape vines. Animal manures give them a too rapid growth, which is "loose," "spongy," "unripe," and subjects them to the liability of various diseases and winter killing. (See 12th Annual Report of Sec'y Flint—1864, pages 64-70.) Is not this same loose, spongy, unripe, *unhealthy* growth of our fruit trees, this lack of solidity, just the preparation required for the working of the borer? I advance no opinion! I simply inquire after the truth. There are other illustrations which I would give, but for the sake of brevity. Certainly no lack of organic food can ever conduce to these results.

There are no organic elements which are not being continually conveyed through animal and vegetable organizations—through the atmosphere, the waters, the soils—always on their ceaseless rounds. Now does Nature, in her workings, give any evidence toward the solution of this problem? I mean in relation to the use of nitrogen. How is it in her continued production of vegetation without local exhaustion of plant food, where no artificial application of this element is made?

Take the prairies for example. They have been known to Europeans for more than two and a quarter centuries. Huge crops of vegetation have grown, and by the processes of decay or combustion have been decomposed; the principal part of their organic matter having been thrown off to the atmosphere, the *ashes* remaining. Thus you see those immense crops have been maintained while in a state of nature, and the soil still kept in an inexhaustible state of fertility, by the simple application of their ashes. And we all know how small this application must be. We all know how burning or decay will reduce a heap of hay, vines, brush or other animal or vegetable substance; and thus we see how small a portion is mineral and how large organic. And here is no artificial application of nitrogen! What it obtains is all from the great storehouse of nature. But how is it with mineral properties? When these soils are cultivated and the crops removed, then their exhaustibility becomes apparent. Their inorganic fertilizing properties are then carried off, while their organic properties are removed just as much, and no more, than when in a state of nature.

But where does the adoption of a theory which makes the artificial application of organic substances unnecessary lead us? *I have not adopted it, remember;* but I ask the question. Burning only disunites the elements composing any substance, leaving the ashes; while the organic properties pass away; therefore, burn up your manure heap, and you still have its full value remaining, only in a concentrated mass. There is where it leads us. Professor Nichols tells us that in a cord (3000 pounds) of common barn-yard manure, there are only seventy-four pounds, or a trifle less than two and a half per cent. of fertilizing materials. These are the "mineral salts," and they contain some substances which he does not give in his receipt for a perfect manure. (See Sec'y Flint's 14th Annual Report, page 232.) Some of the best chemical authorities give the amount of water—pure oxygen and hydrogen—in fresh cow dung, at within a fraction of ninety per cent.; and thoroughly rotted dung at about sixty per cent.. (I quote from memory.) Now, as an artificial manure, farmers give no attention at all to water, and so we see that a very large per cent. of our farm yard manures are useless, whatever our opinions may be in regard to other elements.

The statements made above in relation to the diseases, consequent upon the lack of bone material in food, which cattle suffer, lead to another application of the principle, as it relates to the *preparation of food.* Dr. Allen, in his physical history of various nations, alludes to the increasing decay of teeth; mainly resulting, he says, from the extensive consumption of fine flour, from which that portion has been bolted which contained the principal part of the bone material.

The people of new countries and mountainous regions,—the soils of which contain a large proportion of inorganic fertilizing materials,—are larger and more bony, than those of older portions of the country, where the soils are partially exhausted, and the crops are consequently less highly stocked with these mineral substances.

According to Liebig, all the animal excrements, liquid and solid, produced from a crop, can never supply all the material for the reproduction of that crop,—a part of the material having been appropriated by the consumer in the manufacture of bones, and other portions of the physical system.

Now do not the facts which we see in nature seem to give evidence, (I will not say proof, which may require a combination of evidences) that if a crop is reduced to its ashes, either by decay or combustion, those ashes *fully restored to the soil, in their perfect condition,* will reproduce that crop with the simple aid of nature, as she universally manifests herself?

Some of the ideas expressed above, were suggested by Mr. Dodge Hayward, in his lectures.

In regard to the truth of his theory, its proof rests on the test of practical experience. And to give Mr. Fleming an opportunity to learn something of the results of its application, I will refer him to two citizens of Milford, both men of a high degree of intelligence and reliability. These are Mr. S. P. Carpenter

and Mr. Elias Whitney. The former is well known in Holliston and Milford, and was formerly a boot manufacturer. The latter is one of the overseers of the poor, and a special policemen of Milford. If the statements of these gentlemen are of any value, Mr. H.'s compound is a *success*—private opinions to the contray, notwithstanding. I have no personal interest in it, farther than its effects on my farm are concerned. Let us give it a thorough trial, and report the result. I wish to say a few words in regard to the comparative fertility of the soils of different localities, to which allusion was made in the FARMER for the 18th of January.

I take standard scientific men for my authority.

The inorganic elements of all soils are composed of disintegrated rock. The surface mould is formed by the accumulation of decayed organic substance. Its prime advantages seem to be mechanical, such as the results of the former appropriation of its minerals, which have thus been reduced to a peculiar state of fineness and solubility, and rendered more immediately fit for plant nutriment. Also its absorptive and retentive powers, &c. This organic matter is of very slow formation; but in particular localities as on the prairies, it has washed to a great depth, and is the accumulation of ages,—perhaps of a length of time as great as that in which, according to Prof. Agassiz, the minute coral Polyps were at work, forming the whole Peninsula of Florida. I have forgotten, but it must have been a great many thousand years.

Dr. Nichols says, in his *Chemistry of the Farm and Sea*, that the pure granite is the parent rock of all; containing all the elements of all other rocks, which vary from *that* in their lack of certain of its elements. So it appears that a soil formed of pure granite is perfect in its supply of all the elements of inorganic plant food. While soils formed from imperfect rock are lacking in some of these elements, but may contain a large proportion of alkalies and other valuable fertilizing substances of great manurial value. Nearly all limestone is of animal origin, and was produced from the waters of the sea, where its vast accumulations were once held in solution; while marble seems to have been made up from the relics of these minute creatures still apparent to the eye, by aid of the microscope, even in their stony combination.

Asking pardon for the undue space I have unintentionally occupied, I will close with an allusion to the theory of Agassiz, concerning the formation of our agricultural soils. North of thirty-six degrees he says, from the Atlantic to the Pacific, it is mostly of foreign origin. Instead of being composed of portions of the original surface rock, the materials of which it was made were brought down from the North, embedded in the glaciers of the drift period, all this region having been covered with vast fields of ice. These facts account for the difference between the loose boulders of our surface soils, and the original surface rock beneath.

* *

Massachusetts, Feb. 1, 1868.

For the New England Farmer.

ENGLISH FARMING ON RENTED GROUND.

SUCCESS AND FAILURE.

In looking over some of the back numbers of the NEW ENGLAND FARMER, while sitting alone this evening, I thought I would drive dull care away by writing to the young farmer who inquires for the practical experience of older farmers in paying for farms which they bought by running in debt for one-half or two-thirds of the purchase money.

I will now bring before your notice two farmers with whom I was particularly acquainted, to show you how one succeeded and the other failed, both of them upon one farm in England.

The one that succeeded commenced farming with the money saved from the wages of himself and wife, both being farm servants, without any education.

The amount of their savings was about £240 sterling, or $1200. This man hired a farm of three hundred acres of land, and had to keep eight horses to work the farm and men in proportion, it being a grain farm. He never had a horse worth more than forty or fifty dollars. He paid something like twenty-five shillings ($6) per acre rent, besides taxes. This man lived to the good old age of ninety years; brought up a family of five children, four boys and one girl, all of whom worked hard while young. He gave to his daughter, at different times, somewhere in the neighborhood of sixteen hundred pounds sterling, ($8000) and bought a small farm for each of the boys, and paid the last mortgage for the same six years before he died, besides starting two of the boys upon rented farms previous to buying. One of these failed and was started again upon one of the farms that he had bought. The fourth boy went to London to be a merchant, but on commencing business for himself soon failed. He was then started by his father upon a small farm that he had bought. The old gentleman was a good farmer, a good moral citizen and well respected. When he lost his wife he retired from farming and lived with one of his grandaughters, whom he had brought up.

The other farmer who succeeded him on this place was a young man, full of health and vigor, whose father was comfortably off in the world, and who started him with eight large fat horses, good wagons, carts, tools, and indeed everything that such a farm requires. This young man boasted that he would show them how to farm; saying that the land had not been managed as it ought to be, &c., &c.

In one word, he was going to do great things and made a great show. Well, what was the result? As the good Book says, you did run well; who did hinder you? No one but himself. He soon got a notion of spending his time at shoemakers', tailors', and carpenters' shops, and of going to neighbors' houses to smoke his pipe, and by attending to other peoples' business, neglected his own, and left his men to do that which he ought to do himself, and to do it in their own way. He kept his horses in the stable when they should have been in the field. The result was that in less than ten years everything he had went under the auctioneer's hammer.

Now Mr. "C. B. R." and other young farmers, you see in the above statement how one man succeeded and another failed on the same farm. Both of these men have their representatives in America, as well as in England.

To pay for your farms, then, as others have done, you must, in the first place, get good tools, and a pair of good hands to work them, but not in kid gloves! Let the farm have your undivided attention. Give up smoking and drinking, and loafing at stores, &c., and if there is any difficulty about farming that you do not fully understand, inquire of some good practical farmer. Do not place much confidence in the advice of men that can farm for other people, but cannot, or do not, succeed in farming for themselves; but write to the NEW ENGLAND FARMER, or any other agricultural paper, and I doubt not but some one will give you the required information. But above all, let PERSEVERANCE be your motto. E. H.

Jeffersonville, Vt., Feb. 7, 1868.

THE HORSEMAN.

The horseman should be one of the most patient men in the world. His temper should always be under perfect control. Blind passion should never get in the ascendant—if it does, the poor horse will suffer. But the horseman should not only be a patient man—he should also be a kind and good man. He should not like to inflict any unnecessary pain or punishment—his heart should be too kind for that—for it is by the law of kindness, after all, that the horse should be trained. His education should proceed precisely as a child's—but the child has a great advantage over the horse, for it can understand language, and the poor horse cannot. The child must learn his alphabet before it can spell and read, and it should not be punished for not knowing how to read before its letters are learned. The horse, too, must have his a, b, c's taught him—so to speak. He has certain lessons to learn—and these lessons must be taught with patience and kindness. Only one thing should be taught at a time, and that should be thoroughly understood. Then another step in advance can be taken; and when that is thoroughly learned, again proceed, and so on. There will be no difficulty. Every thing proceeds by simples—every thing is understood. Many men do things by force. They give the horse's understanding the go-by. They don't seem to think he has any understanding or senses—but has he not? Cannot he feel and smell, and see and hear and remember, as well as any of us, and even better? He must be taught through his senses and memory. Should not the horseman be, then, not only a very patient, a very kind and good man—but should he not love the animal which engages his attention! If he does not, he is not a genuine horseman. He will not treat him with that kind and tender regard that he should, if he does not love the noble animal which he handles.—*Rural World and Valley Farmer.*

IMPORTED HORSE CONSTERNATION.

I write for information concerning the imported horse "Consternation," a fine portrait of which is given in the Monthly FARMER for 1853, page 513, but with few particulars about him, and I think you have not mentioned him since. I have seen in some agricultural journal a statement that the horses of a portion of the State of New York had been very much improved by said horse, but it did not say when he was imported or by whom. I have an acquaintance who claims to know that he has been kept in Herkimer county, N. Y., as a stock horse, and that he is well acquainted with his stock. I expected to find all necessary information concerning him in "Wallace's American Stud Book," but he is only mentioned twice, and then simply as sire to two celebrated trotters, Julia, six years old this spring, and Lady of the Lake, ten years old this spring, both chestnut mares belonging in the State of New York. One reason why I wish to know particularly about this horse is that I like to be well posted in regard to all good breeding stock in the country, both horses and cattle, and another is, I have purchased a fine pair of mares, sired by him, for breeding purposes. They are splendid animals and were raised by a Mr. Read of Herkimer county, N. Y. Please inform me by whom this horse was imported, where kept, with as particular a description as you can give. JOHN DIMON.

Pomfret, Conn., March 5, 1868.

REMARKS.—We have ransacked the Transactions of the New York State Agricultural Society from 1845, the year in which "Consternation" took the first premium on "blooded horses" down to the present time, and also "Frank Forester's Horse and Horsemanship," without finding as complete an answer as could be desired to the inquiries of our correspondent. Mr. Herbert, "Frank Forrester," gives the following as the pedigree of the imported horse

"Consternation—Foaled, 1841, by Confederate out of Curiosity; Confederate by Comus out of Maritones; Curiosity by Figaro out of a Waxy mare. A horse of great size and strength, imported especially to improve the breed of ordinary horses."

The only other mention of this horse which we find in this work is an incidental allusion in the following paragraph:—"I have often wondered that among the many importations of stock by our spirited and enterprising breeders, who are doing so much for the improvement of horses and cattle in America, no one has thought of importing some fine, roomy, sixteen hands, half or two-third parts bred mares by highly reputed sires. I am satisfied that such mares judiciously bred to the strongest and most powerful of our American or imported stallions,—such horses as Consternation is reported to be, or as Boston is,—would do more to improve the stock of the United States, in size and substance, without loss of speed or blood, than any other plan of breeding can effect."

In the Transactions of the New York State Agricultural Society for 1845, we find the following statement, but no further description of the horse:—"For the best stallion, four years old and upwards, the first premium, $20, was awarded to the imported horse 'Consternation,' belonging to C. T. Abbott, of Oneida county, N. Y."

In the Transactions for 1849, we find the remark, by the awarding committee, that "the horse Consternation, owned by J. B. Burnett, of Syracuse, was shown, but having received the first premium in 1845, a certificate is awarded him as the best horse on the ground."

In 1851, a diploma was given him by this society.

In 1852, the committee of the New York State Society on Thorough-bred Horses, of which Thos. Motley, Jr., of West Roxbury, Mass., was chairman, say:—"A thorough-bred stallion, Consternation, owned by J. B. Burnett, Esq., of Syracuse, eleven years old, was in the opinion of your committee a very superior animal, and to say the best horse exhibited would indeed be faint praise. His pedigree as shown to your committee, was not only *perfect* but *brilliant*, and his stock, of which quite a number was shown, is a sufficient guarantee of his character as a 'getter' of superior stock. Having taken the first premium heretofore, excludes him from receiving a premium."

We have also examined the series of articles written for the *Turf, Field and Farm*, but without finding any allusion to this horse. Probably Consternation was not distinguished as a racer, and therefore little notice has been taken of him in our American horse books, which are largely confined to animals that have acquired a turf reputation. Enough, however, has been said, we hope, to provoke some one who can do so to furnish a more satisfactory history of this horse.

For the New England Farmer.

"AID TO SPECIAL EDUCATION."

In an article in the FARMER of Feb. 22, with the above title, "J. B." objects to any grant in aid of the Agricultural College, on the ground that "it is a specialty; that the whole community is to be taxed for the benefit of a class; that only within certain limits the prosperity of agriculture implies the prosperity of the State;" and that the only encouragement and assistance farmers need should come from their own resources, and from the stimulation to be derived from the general prosperity of other pursuits.

In the eastern part of the State, where the consumers of the products of the soil far outnumber the tillers thereof, and maintain a great preponderance in business, in wealth, in position and influence, there may be those who regard agriculture merely as one of the many specialties of her citizens, and farmers, as one of the useful classes to whom a higher education would be beneficial, would elevate their avocation, and, in time, would redound to the honor of the Commonwealth, upon the principle that the good of the individual is the good of the community; but who hold that the number of farmers is so small, and the amount they produce for the subsistence, or contribute to the business of the community so trifling that any legislation in their behalf, would evince a spirit of favoritism unjust to other classes of citizens. Only keep commerce active, and the factories and workshops fully employed, and agriculture will follow in their wake, and take care of itself.

But suppose this view of the subject were extended beyond a thirty mile radius of "the hub," so as to include the whole State, or what is better, the United States, what is the effect of their reasoning? The grand old maxim that agriculture is the basis of commerce, manufactures, and the industrial arts, would be annihilated by it; and the wealth now being gathered from fertile soils, and which can be increased for generations to come, dwindles into insignificance beside the riches to be derived from other resources. No longer could any of the products of the soil be crowned king. A bountiful crop of wheat or corn, giving a large surplus for shipment, would be about the same to the country as a meagre crop. Two million bales of cotton would be rated about the same as five, for only "within

certain limits the prosperity of agriculture, implies the prosperity of other pursuits." The Bureau at Washington should be abolished, for agriculture is only a "specialty;" all direct legislation for its promotion should cease, for the grants of land by Congress for establishing agricultural colleges constitute dangerous precedents for the various professions, trades, sectarian schools, &c. Therefore protect the manufacturers and miners, legislate for commerce, inland navigation and railroads, and let agriculture depend upon its own resources for its higher and better development, for its reflex influence on public prosperity is too slight to claim aid or sympathy.

But no country can thus ignore its agriculture; nor is the natural order of things so changed here in Massachusetts that her agriculture is not still of vital importance, nor is she reaping such riches from her many and varied pursuits that she should not condescend to take a little more profit out of her soil. Her wealthy and liberal minded citizens have always manifested a lively interest in rural life and occupations, and her legislators have lent a helping hand to the societies established for the promotion of her agriculture. Shall her present representatives refuse to recognize its claim, and withhold such assistance to its long expected college as shall put it upon a level with other educational institutions? The school or college is but an inherent part of agriculture itself; the men there educated, and the principles and methods there verified and promulgated, will go forth to every part of the State to make their influence felt through every town and district. Money given for the endowment and support of an agricultural college, is better appropriated than when donated to the different societies to be offered in premiums. A premium is often bestowed for a chance production,—the receiver neither understanding how he obtained his success, nor able to repeat it. A thorough education is the basis of real progress; it enables men to trace the relation of cause and effect, so that when they have attained a certain end, they can again go through the same process with the same results, and can tell their neighbors how to do likewise. The graduates of such an institution will go forth into every part of the State to extend a knowledge of the principles and methods there taught and verified, and to make their influence felt in every town and district.

Were the benefits of the project confined to the farmers themselves and to their immediate precincts, or did they carry their produce out of the State for sale, the various classes of consumers might object to any public aid in its behalf; but the relation of the consumer and producer in this State is somewhat peculiar; the consumption being greater than the production. Hence the farmer is not strictly dependent upon the flourishing condition of other avocations for the sale of his produce; all he raises can be sold, even when business is dull. There may be a stagnation in commerce and in all the hives of industry, and even then the demand for food will be greater than they can supply. Boston is one of the dearest markets for provisions in the country. The purchaser is reminded of high prices every time he buys his beef steak, or spreads his dear bread with his dearer butter, and he inquires wishfully if something cannot be done to lessen the cost of the necessities of life. Any project, therefore, that will throw a larger amount of food into the market and make it of better quality, concerns every man, woman and child in the Commonwealth. None have a deeper interest in this than manufacturers themselves. By their situation in a corner of the union, they are compelled to make long transportations of their materials, and afterwards of their merchandise for markets. And they will find in the rising establishments in different parts of the country nearer the raw material, fuel, and cheaper provisions, a sharper competition than they have hitherto met from foreign manufacturers. How can they contend with their rivals unless they have the advantage of cheap labor? Cheap labor depends mainly upon cheap food. Where shall that cheap food be obtained? Shall it be sought from our own soil, or from remote localities? Shall no effort be made to improve the thousands of acres of land lying in waste, or only imperfectly cultivated, in sight of our populous cities and towns? Shall expensive lines of railroads be built over high hills, through mountains, and across deep and wide rivers, that provisions in greater abundance may be brought from the valley of the Mississippi? Shall the State continue to pledge her credit in furtherance of such enterprises? She is now expending more from the public treasury for tunnelling one mountain than would build and endow several agricultural colleges.

Notwithstanding the increased number of routes of transit, the rates of transportation have increased, and staple products are dearer now than fifteen years ago. Transportation will always be a formidable obstacle in the way of drawing supplies from a distance. Since these measures do not bring food down to the desired standard, why not try the plan of bringing the whole State under a high cultivation? Our farmers can put into market many kinds of produce of a superior quality, and in better condition and at cheaper rates than they can be procured from the west. Rough, rugged and sterile as our soil may appear, it can yet be made to yield sustenance, comfort and pleasure to a far greater degree than at present.

Manufacturers may well regard farmers as working for them in furnishing food and supplies for themselves and their employees, and therefore they have a direct interest in every improvement in the farm. The money expended for home productions is kept within

the State. The agricultural college is a home enterprise, and the interests of manufacturers, mechanics and of every consumer should prompt them to favor every public measure for the better development of our own resources, and instead of wishing that the State should do less, they may regret it has not done more to develop our agricultural resources. If but a tithe of the money loaned from the public treasury to railroads to gain access to the West, had been devoted to the cause of agriculture, the State, in my opinion, would have been richer and more independent to-day than it now is. N. S. T.

Lawrence, Mass., Feb. 27, 1868.

For the New England Farmer.

BOARDS vs. HAY.

If I "free my mind" now, I suppose three-fourths of your readers will think I am a fit subject for an insane asylum, so contrary to general usage will appear my notions; but the fact is, I am getting waked up on the subject of *boards!* Ever since I had the correspondence with Mr. Scott, of Craftsbury, Vt., in regard to his remarkable cow, manner of keeping, &c. (the substance of which went the rounds of the papers,) I have had a constantly growing conviction that thousands of dollars and "cords of mercy" have been annually lost in New England for want of a proper appreciation of boards and nails. Farmers have had a kind of vague idea that they were useful for fencing,—for enclosing barns so as to keep the snow and rain off the fodder,—and some, within a few years, have got to thinking that is was well to use a few to protect their farm stock from the severest part of our winds and storms! But the idea that *comfort* is appreciable by dumb beasts; or that *boards and nails* can afford it, or that the *loss* of it amounts to the same as the loss of *dollars*,—is one yet to enter the minds of at least not a few of our farmers! I assume it as an incontrovertible thesis that whatever detracts from, or lessens, the comfort of farm stock is a pecuniary loss to their owners, and a net loss by so much as the value of it exceeds the cost of affording it. For example: if, at an expense of two dollars, for boards nails and labor, I can so enclose a cow stable that no manure dropped after shutting it up at night, shall be frozen before opening it in the morning, in the coldest nights; that there shall be no frost on any creature; that the five cows shall each yield one quart more milk, worth five cents, and each require five cents less expense for feed each day for one hundred days, I have saved fifty cents for each day, or fifty dollars for the hundred days. Now deduct the two dollars expenses and there is left forty-eight dollars, which would have been *lost* had I not used these boards and nails!

The above is not a mere fancy picture. The like of it I did myself two years ago, the first warmish day after receiving a description of Mr. Scott's stable, and the like ought to be done in nineteen-twentieths of the stables in New England.

It is a very common observation, when mild weather comes after a cold snap, "that the cows give more milk." Although the effect may be thus traced to the cause, reasoning stops there instead of going on and considering why we may not have such mild weather for our stock *all the time.*

It is surely attainable, and at a much less cost than the value of the result. Stables for all kinds of stock may very *easily* be made so tight that the animal heat from the stock will entirely keep out the frost. If a stable is tolerably well enclosed on *all* sides and so situated that the severe winds are broken before striking it, each animal will warm a space of four or five times the size of its own body. Many stables are sufficiently enclosed except the *front*, where a few boards can easily be hung on hinges, for a dollar or two, so that in severe weather the stable can be entirely enclosed, and in milder weather easily ventilated to any desired extent.

The same that causes the cow to give more milk in warm winter days, would cause the ox or horse to take on more flesh if the same food is consumed, or not *lose* flesh although allowed a *less* amount of food. Dollars and cents are what we are apt chiefly to consider in regard to our farm stock, but if we looked more to their *comfort*, the dollars would be more likely to take care of themselves. With a light expense for boards, nails and labor, I believe an average loss of two to ten cents a day, on every horse, cow and ox in New England can be saved! besides the very comforting consciousness of doing to others as we would be done by. After two years' experience myself with warm and yet ventilated stables, I will say to all who will immediately put my recommendations into practice, that, after one year's trial, if they do not think it was a paying investment, and will send me the bills incurred, I will forthwith remit them the amount from my own hard-earned and scanty resources.

Jack Frost is surely a robber, but still he is so polite that he would not enter your cow's bedroom without your leave. Use boards and nails enough and he won't be all the time carrying off your feed on the road through your animal's stomachs! If your stable has an open basement underneath, just nail on refuse boards under the sleepers and fill between them with spent tan, straw or chaff, and see that the floor over them is covered at least a foot deep with hay, straw stalks or something to keep in the animal heat. B. N.

Randolph, Vt., 1868.

—It is proposed in the Massachusetts Legislature that all land devoted to growing forest trees shall be free from taxation.

EXTRACTS AND REPLIES.

EXPOSURE OF ORCHARDS.—COB MEAL.

I am a reader of both the NEW ENGLAND FARMER and the *Maine Farmer*. In a recent number of the *Maine Farmer* there was an article in regard to orchards in sheltered places. It was stated that in a choice of two situations, a sheltered one and one open to the west winds, that the choice would be the open unsheltered spot. This was contrary to the opinion I had formed. I have a young orchard of New York trees that is sheltered by a belt of woodland from all but the south and south-west winds. Would it be best to cut away the wood so as to open to the west winds? Will some one who can speak from experience, please give me the benefit of that experience?

I do not agree with Rusticus in regard to corn cobs. I have never considered clear cobs worth grinding, but have had some experience in feeding corn on the cob ground, and clear corn meal. I give a decided preference to corn cob meal. I think it is less likely to become solid in the stomach. M.

Paris, Maine, March 4, 1868.

REMARKS.—What is a sheltered, and what an exposed situation? Half of the controversies and half of the misunderstandings between men arise from not understanding what each other mean by the words they use. There can be no question, we think, that an apple orchard may be too little or too much exposed to winds, and that neither the most bleak nor the most sheltered situation is to be preferred. The late S. W. Cole, a most careful and thoughtful writer on pomology, who cultivated fruit trees both in Maine and in Massachusetts, and who was editor of the NEW ENGLAND FARMER at the time of his death, has this paragraph in his *Fruit Book*, page 83:

Moderate elevations, or undulating lands, or hills are the most suitable locations. In very low, sheltered situations, there is more exposure to the extremes of heat and cold, and late spring frosts, and early fall freezes; yet the apple is hardy and will generally succeed in such situations. On very high locations, especially on the tops of mountains and high hills, and some other bleak places, there is too great exposure to winds and pelting storms, which may injure the blossoms, fruit and foliage.

Mr. Chauncey Goodrich, late of Burlington, Vt., who published a little work entitled *The Northern Fruit Culturist*, in speaking of favorable locations for an orchard excepts natural meadow or bottom land, and says, "in the northern part of New England, in situations one thousand feet or more above tide water, places sheltered from cold by hills or natural forests, and having a fair exposure to the sun should be selected when practicable. Among the hills of New England there are many rocky glens of little value for agricultural purposes which are best places for fruit trees." He also alludes to the fact that on the banks of some of the small rivers emptying into Lake Champlain young trees grow vigorously for a few years, but invariably die before producing fruit, while apples are easily raised on the hills a few miles distant. But he ascribes this to the unfavorable soil of the valleys rather than to the benefit of hill exposure. The benefit of straining the ocean wind through a very high lattice garden fence, as practiced by Mr. Tudor, at Nahant, is often cited in favor of protection for fruit trees.

Without a better understanding of the situation of our correspondent's orchard; without any knowledge of the elevation of his farm above the level of the sea, or above the general level of the land in his vicinity, or how bleak would be the situation of his orchard after the removal of his belt of woodland, we should certainly hesitate about advising him to cut it down; and so we think would the writer of the article in the *Maine Farmer*.

RED OR BLOODY WATER.

Though conscious of my inability to write, I cannot forbear an attempt to give my reasons against the advice of Mr. Taplin in a late number of the FARMER, to knock an animal in the head, and save its hide, that has been troubled with this disorder ten or twelve days. I will confine myself to facts that have come under my own personal observation. When I was a boy, my father had an ox taken with the above disease. Some simple remedy being administered without much effect, the ox was fattened and killed; thus more than the hide was saved. A few years later he had a cow taken in the same way, but as she was a very extra milker, he wished to keep her as long as he could, and therefore tried all the remedies he heard of; among which was resin, which appeared to do the most good, but none entirely cured her. She was, however, a good cow for two or three years, and was finally turned into beef. Since that time he has had a number of others, similarly troubled, including all, I think, of that cow's calves that were kept to maturity, and with the same result as to remedies and cure, except the last. That one showed the first symptoms in the early part of the winter, when she was with calf. When she calved she was so weak that she could not get up alone for a long time; but disliking to kill her and having heard that some strong acid, sulphuric, I think, had been used with benefit, it occurred to him that vinegar might be good, and he therefore commenced using it, and the result was that in a short time she regained her strength, did well through the summer, was fattened in the fall, and slaughtered and brought $35.

The bladders of all were examined, and each one found to be lined with what appeared to be seed warts. In the last one, the warts had the appearance of being healed over; while in the others, blood was oozing from them.

No one would advise a neighbor to kill an animal that had a wart on its neck or leg that would bleed when chafed, yet friend Taplin's advice is just as unreasonable in my opinion, and I hope it will not be rashly followed by those unacquainted with the nature of this disease. B. B. S.

Dover, Me., March 4, 1868.

FATAL DISEASE AMONG THE CALVES.

Charles C. Kimball, of Webster, has lost five calves this winter, say from eight to twelve months old. The first symptoms of disease noticed was their heads being drawn towards one side; then a staggering gait, sometimes falling, and rising only to stagger and fall again. There was no loss of appetite, as they would eat as long as there was strength to masticate. Soon they were prostrate, when copious drenching resulted, and death ensued in a few hours—perhaps six or seven—from the first indications of disease. They

were the last and strongest of his cattle of that age. Nothing was discovered when the skins were removed; the carcases showing a healthy condition next to the skin. What was the disease? F.

Mast Yard, N. H., March 4, 1868.

REMARKS.—Who can answer that question? Were they poisoned by bad water, or by any improper food, such as rusty straw, &c.

CUTTING OATS GREEN.

At a recent meeting of the Waitsfield, (Vt.) Farmers' and Mechanics' Club, O. E. Wilder stated that last summer he cut an acre of oats soon after they were headed out, and this winter he fed them to 10 cows, lasting them for their entire feed, three weeks and four days—nearly equal to thirty-six weeks for one cow. The cows meanwhile increased in their milk, when naturally they would have decreased on ordinary fodder. The land was seeded to grass, and he intends to put what grows on the same piece next year by itself, and feed it to the same number of cows, and note the result. He thinks that he cut the oats a little too early, and that if they had been left till full in the milk they might have been better. He also believes that the fertility of the soil was not exhausted nearly as much as if the oats had ripened. More of us, I think, will try cutting oats for fodder next summer. NED.

Westfield, Vt., 1868.

REMARKS.—We have cut oats for fodder several times, and when we have seen how much of the straw was left among the orts by the cows, we have almost every year concluded that we did not cut them early enough.

WASTE FROM WOOLEN MILLS.

I should like to know how to make a good manure of the dye-stuff or picker-waste that comes from woolen mills. W.

Blackstone, Mass., Jan. 18, 1868.

REMARKS.—The waste of woolen mills is considered a very valuable material in the compost heap. Mr. T. S. Lang of Vassalboro', Me., uses the ashes and waste from an extensive mill in his neighborhood. From notes of a visit to his farm, published some time since in the *Maine Farmer*, we learn that after being mixed with muck it is in this case saturated with the contents of the privies connected with the mills. Where this cannot be done it is formed into composts of thin alternate layers with loam, turf, &c., or left in heaps to heat and decompose. The "dye-stuff or picker-waste" may be less valuable than that usually known as "wool waste."

LAMPBLACK.

I have a lot of lampblack not suitable for the purposes intended. Can I use it to any advantage in my garden? If so, how shall I apply it?

Medford, Mass., Feb. 10, 1868. A READER.

REMARKS.—It is not often that the farmer has an opportunity to experiment with lampblack as a fertilizer. In Europe, where everything of a vegetable or animal origin is more carefully saved than here, soot which is probably something like lampblack, is regarded of much value as a fertilizer, and it is also used to protect plants from insects. It is said that as high as $45 per load has been paid in England for soot for the purpose of killing insects. Three or four quarts of soot dissolved in a barrel of water is said to be about equal to guano as a liquid manure, especially for flowers. About eighteen bushels is said to make a valuable dressing for an acre. Whether lampblack would prove equally valuable for these purposes, we can not say. But as lampblack "consists of finely divided carbon, more or less mixed with the various compounds into which the elements of vegetable substances resolve themselves when submitted to the process of destructive distillation," we think it must be valuable in the compost or manure heap, in which form, perhaps, it may be most conveniently applied.

THE GREATEST AMOUNT OF COW FEED.

I am a "Mechanic" having ¼ acre of good land, which has been planted to potatoes five or six years. Having a good cow I want to lay this land down to grass this spring. I want to get the greatest amount of good feed for next winter. Now, Mr. Editor, how should you manage it if it were yours. Do you bind the Monthly FARMER? What is the cost of binding? Please name the handsomest evergreen bush, and you will oblige

A READER OF THE MONTHLY.

East Abington, Mass., Feb. 22, 1868.

REMARKS.—The greatest amount of feed can undoubtedly be obtained by the "soiling" plan—that is, by raising "cow corn," rye, oats, roots, &c. It is estimated that one acre thus managed will do as much as from three to seven in pasture. Being a mechanic you and your boys need the out door work. Suppose you buy the little work on Soiling, by Mr. Quincy, of A. Williams & Co., and see what you think of it. The Monthly is neatly bound for 75 cents. Tastes differ as to evergreens; but, if it were dear-bought and far-fetched, what would be more beautiful than a white pine?

SPRUNG KNEES.

For sprung knees in a horse, we use equal parts of common soft soap and water applied warm and well rubbed in, and rub the legs dry. One should spend half an hour three times a day in this way for ten days, letting the horse stand in the stable or pasture without using. In this way we have known a badly sprung knee to be nearly straightened to its original place, after which it was washed for two or three weeks, three times a day in a decoction made by steeping the inner bark of white oak (taken from a young growing tree) until the water was of a reddish hue, and mixing the oak juice with the best of brandy, at the rate of two parts of oak juice to one of brandy; and rubbed freely. Z.

Reading, Mass., March 10, 1868.

ITCH IN PIGS.

Having a lot of young store pigs troubled with the itch and scurvy, which kept them miserably poor, I gave them two or three doses of stone brimstone, grated fine—the powdered being too weak,—in some skim or sour milk to ensure their eating it. A day or two before giving them the brimstone I grease them well along the back, all over the head and ears, and behind the fore legs.

I also had the chamber-lye emptied into their swill tub. I let the pigs run out into the brush, and in a few days their amendment was quite visible. Just for the experiment, I washed one of the pigs after the household washing was done, and it was so clean and free from scurf that the other pigs did not know it, and beat it away from the trough. I have long used and known that the chamber-lye is an excellent preventive and cure of the itch and other diseases to which the pig is subject.

JOHN WHATMORE.

Bridgenorth Farm, Dunleith, Ill., Jan. 15, 1868.

REMARKS.—We should have much confidence in the efficacy of the sulphur, the ointment and the wash, without the latter part of our correspondent's prescription.

RED WATER IN COWS.

Some ten years ago I had a cow attacked with the red water, about eight days after calving, and not knowing of any remedy I lost the cow in about two weeks. Since that time I have had several cases, and found the following to be a sure cure, if administered in the first stages of the disease. Two ounces sweet spirits of nitre, one ounce balsam copaiva, diluted in one pint of water, administered morning and evening until the water assumes to its natural color. If the animal is costive, give Epsom salts until the desired effect is produced. If the disease has had ten or twelve days standing without any remedy the better way is to knock the animal in head and save the hide.

LEANDER TAPLIN.

Chelsea, Vt., Jan. 27, 1868.

BRONZE TURKEYS.

In the Monthly FARMER of March, 1868, there is an inquiry from friend Charles W. Griest, York Sulphur Springs, Pa., to this effect:—"Where did the bronze turkeys originate, and where can they be obtained, weighing forty pounds?"

To his first inquiry I will answer:—They originated, with a race of turkeys of large frame, on a good sized farm, with its "three barns," with plenty of grasshoppers, for dessert, and three regular feedings per day of shelled corn for one or two years. This is the whole secret of "bronzing." And to the next inquiry, where he can get these forty-pounders? If he will allow a "fowl-fancier" to *guess* at the weight, he can obtain them in the vicinity of Boston, for twenty guineas, the gold to precede the delivery of the turkeys.

Taunton, Mass., March, 1868. A. BAYLIES.

WORMS IN HORSES.

For this trouble, I have found the best cure to be a plenty of grain. If the horses are young, a good quantity of fine feed and but little meal, or, if fine feed cannot be had, plenty of oats, feeding at proper times is sufficient. Oats seem to be the natural food for horses. A good Condition Powder for horses can be prepared by any one, from the following articles: four ounces, each, or equal quantities of Black Antimony, Common Sulphur, Cream of Tartar, Epsom Salts and Saltpetre. Mix them well together. Dose a common table-spoonful once a day, given in the grain. The above is a good alterative for a horse a little off his feed; is also good for worms. Z.

Reading, Mass., Feb. 8, 1868.

A GOOD HEIFER.

Enclosed, I send you a statement of the amount of milk given by my heifer during the year 1867. The heifer I raised. She was two years old the first day of May, 1866; dropped her first calf on the 26th day of Dec., 1866, and is to calve again July 4, 1868. I weighed her milk for ten days, (from the 10th to the 20th) of each month in the year 1867, with the following result:—The whole amount given in the 120 days, on which I weighed her milk, was 2405 pounds, making an aggregate of 7315 pounds in 365 days, or an average of a fraction over 20 pounds per day for the entire year.

FRANCIS W. HAYDEN.

Southborough, Mass., Feb. 7, 1868.

SPRUNG KNEES OR CONTRACTED CORDS.

I have a very valuable horse that has got his knees sprung. Can you, or any of your numerous readers of the FARMER, tell me of anything that I can do to straighten them up in their place again. I have read almost everything under the head "Extracts and Replies," but have not seen anything touching this point. J. M. CANNEY.

Ossipee Centre, N. H., Feb., 1868.

REMARKS.—We do not think there is any remedy for sprung knees in a horse; we have never known a cure attempted.

SICK OX.

Having had an ox with similar symptoms as those described by "A Subscriber," of Ripton, Vt., in a late number of the FARMER, I doctored him for horn ail, by putting a table spoonful of spirits of turpentine on the top of his head between his horns, repeating it two or three times, at intervals of two days, which cured him. If it is not horn ail, the application will not prove injurious.

PRACTICAL FARMER.

East Corinth, Vt., Jan. 28, 1868.

SORE NOSES IN SHEEP.

I have seen an inquiry in your paper several times as to the cause of sore noses on sheep. Most of the common cases are caused by eating the droppings of poultry. I have known several cases to be cured by removing hens and turkeys from the sheep shed. L. W. B.

Brookfield, Vt., Feb., 1868.

HOLDFAST ON A COW'S JAW.

T. C. Pearson, of Newburyport, Mass., is informed that the advice of his neighbor to fatten and kill a cow afflicted with a "set" or "holdfast" on the jaw, is probably the best that can be given. A surgical operation, which consists in sawing into the jaw above and below the "bunch," and removing the portion of jaw to which it is attached, is the only remedy. If the jaw bone is not diseased, this will be effectual. By means of chloroform, such operations may be readily done.

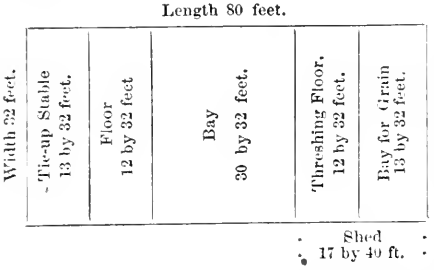
UNGUENTUM FOR LICE.

I have used unguentum on my cattle with good effect, for three years, and have been in the habit of putting it on almost every part of them. I have known them to lick the parts to which it was applied, but none have been injured by it. My rule has been to take a piece as large as a small pea, and rub it thoroughly into the hair. That quantity applied in three or four places will destroy them. Be careful not to use too much. W. M.

Clinton, Me., Feb. 16, 1868.

PROPOSED PLAN OF BARN.

I am about to build a barn for one of my neighbors, 32 by 80 feet, posts 16 feet, with cellar under the whole, for sheep; and shed 17 by 40 feet. The 80 feet in length of the barn is to be divided as follows:—



The shed connects with the floor, making it very convenient to slip the straw into it when threshing, rain or shine. In this barn from 50 to 75 tons of hay will be stored, and from two to three hundred sheep kept. Our farmers generally have one or two slides, through which the hay is thrown into the cellar; then they go down and put it in the racks. I wish to save this labor, and propose to have the racks so arranged in the cellar, as to slide the hay from the floor directly into them, and save once handling fifty tons of hay, and over a hundred trips up and down stairs, that are usually made during winter months, as well as to save unavoidable scattering of hay by the tramping and crowding of the sheep. Now to ventilate the sheep cellar, which all sheep growers know is very important, I propose to build a ventilator at least three feet square placing it directly over the centre of the cellar, and running it through the roof. Perhaps some one will say that this will occupy too much room in the centre of the barn. But what is the loss of 225 feet of room, when compared with the benefit of pure air for 300 sheep? As this ventilator passes directly through the mow, which is 30 by 32 feet; it will also serve to ventilate the hay there as well as the cellar below. It may also be used as a conductor for hay into the cellar, if necessary, as on two sides of this ventilator are doors three feet square and 33 feet apart, which swing up from top to bottom. If any one can suggest objections to this plan, we would be glad to hear from them through the FARMER.

AN OLD CARPENTER AND A YOUNG FARMER.
Braintree, Vt., March, 1868.

A GOOSE STORY.—CHANGE OF THE SEASONS.

On the tenth of March, 1814, my father, then living in West Boylston, Mass., had a goose "come off" with nine goslings, all of which lived until Christmas time. When this brood was two weeks old, the old goose commenced laying in the hog-pen, near the house. As soon as she commenced sitting, the old gander took charge of the young goslings, and most faithfully did he discharge the duties of step-mother and guardian. Once in two or three days the old goose would leave her eggs for an airing and a wash. As soon as she left the nest for these purposes, she made a call or noise, that only a goose can make. On hearing this call, the old gander would give his young ones a wink, and instantly they would huddle together and remain almost motionless for further orders. The old goose would stand near her nest until joined by her mate, when with the most excessive bowings and gobblings they would start in company for the water, which was about one hundred rods from the house. After bathing, they would return in the same social and boisterous manner; she to her eggs, and he to his patient and waiting little family. Children obeyed their parents in those days! In due time the old goose led forth another brood of seven goslings, all of which grew up to goosehood.

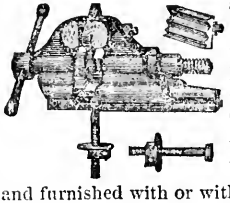
At this time Robert B. Thomas, the author of the old Farmer's Almanac, who, though dead these some thirty years, yet speaketh, was one of our nearest neighbors. He had kept two flocks of geese for forty years, entirely separate, and I remember that he advised my mother to cook the litter of eggs laid so soon after hatching the first brood, as he thought they were not impregnated and would not hatch; but believing the old goose understood her own business best, she was allowed to have her own way, and the result was as I have stated.

But have not our seasons changed? Were there many goslings about this year on the tenth of March? In those days young folks went a-Maying and got flowers; latterly they get little else than wet feet and colds, in their rambles the first day of May. OLD FOLKS.

Winchester, Mass., March 8, 1868.

A VALUABLE TOOL.

Every farmer is, or should be, enough of a mechanic to do such odd jobs of carpentry or blacksmithing as are constantly needing to be done about his house and outbuildings, or in repairing farm implements. For such work, a good vise is indispensable. The one represented in the accompanying cut, known as a pipe vise, and furnished with or without extra jaw, is made in different sizes suited to the lightest or heaviest work. It has a covered screw, parallel movement of jaws, and is very simple in construction. It is one of the many kinds manufactured by the Union Vise Company, of this city.



DRESSING FOR WHEAT.

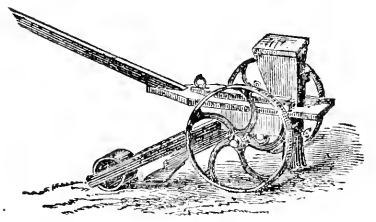
I have a piece of land taken out of the pasture, good soil, hard land; I have planted three years to corn; have not dressed it very high; now wish to sow it to wheat in the spring. How and what shall I dress the same with to ensure a good crop. I have not manure to spare to dress for wheat. Some say, dress with lime. What do you say?

Epping, N. H., Feb., 1868. T.

REMARKS.—If we had the knowledge by which we could tell farmers how to enrich land for a good crop of wheat on our New England farms, without manure, how soon we might retire on an "ample fortune." Some time since, we published statements of several large crops of wheat raised on the tobacco fields of the Connecticut River, by farmers who had experienced successive failure to raise wheat under other circumstances. Without a knowledge of the condition of your land further than what may be inferred from the fact that it was an old pasture and that you have taken three crops of corn and "not dressed it very high," we have not much to say about lime.

Not long since, however, we published an account of an old Pennsylvania farm, run out and

abandoned some seventy-five years ago, being reclaimed by a system of improvement in which salt and lime were largely used. In that case, one and a half sacks of salt and twenty-five bushels of lime were estimated equal to "a moderate dressing of manure." How it might operate on your land we cannot say, but from our own experiments we should not anticipate a paying result.



HERRICK'S IMPROVED DANVERS SEED SOWER.

The sowing of onion seed is suggested by the very name Danvers, where this little machine has been long used and is recommended by Mr. Gregory, in his book on Onion Culture. It has been recently improved in nearly every part and now weighs less than twenty-five pounds, and claims to combine all the requisites of a hand-seedsower, and is adapted to the different kinds of seed. It is advertised in another column.

FILLING VACANCIES IN AN ORCHARD.

About fifteen years ago I set out an orchard of apple trees of various kinds, and a number of them were destroyed by the borers, and by accidents. I wish to know if I can set apple trees in the same places where the others died, and expect them to do well. If not what is the best course for me to take to fill up the vacant places in the orchard. The other trees are good bearers. A part of the soil of the orchard is gravelly, the other part a rich sandy loam.

AUGUSTUS GOODWIN.

South Berwick, Me., March 13, 1868.

REMARKS.—We should have no hesitation in filling up with apple trees, though as a general rule, trees as well as other crops do best under some system of rotation. Give each new tree a load of muck, sods or fresh soil, mingled with ashes, if to be had, and well composted if you have time to do so.

COBS AND CORN.—WIRE WORMS.

It is a custom among us to feed grain to milch cows to make more and better butter. The farmers here raise corn and oats for feed, and have them mixed and ground with the cob. The law in Vermont allows a quart for cracking and two quarts for grinding, or some six to ten pounds toll. Some of the farmers have the cob sifted out, when the bushel of meal will weigh only forty pounds after taking the toll and cob out. Where a farmer feeds from 400 to 800 bushels in a year, this will amount, as corn is now selling, to $60; a sum that would pay for a corn sheller, and leave $50 to pay a hired hand for two and a half months. This amount of corn could be shelled with two hands in four days, leaving forty-seven days for other work on the farm. As cobs are a dry substance, they may be thrown into the hog-yard to absorb the urine, and then put on the land to raise more corn. From three to five pieces of cobs put in a hill of corn at planting will keep the wire worm busy at the pith until the corn has so far advanced that it is out of his way. And finally your cobs are worth twenty per cent. for kindling fires. So you will see that if corn is shelled and then mixed with oats and ground, you have nothing but the pure meal. This will make animals thrive, and their hair will lay sleek, instead of standing like the quills of a porcupine, as it does when you feed with the cob ground in with your corn.

LYMAN J. SEELEY.

Jeffersonville, Vt., Feb. 20, 1868.

IMPROVING STOCK.—SOUTH DOWN CROSS.

I see that "V. M. H.," of Rochester, Vt., asks, are we improving our stock? I answer, yes, no doubt of it. Stock is *kept* better than formerly, and I claim this is one way to improve it. Our flocks and herds are being crossed advantageously, and this must improve them. But if I wished an animal to cross with my stock, I should pay more attention to the good points of the animal than to its *pedigree*. In a late discussion of the question, "Will it pay to change our grades for thoroughbreds?" by the Springfield Farmers' Club, Mr. J. B. Whipple remarked, that he "did not care a straw where an animal came from, if he was only a *good* one. We don't want *second class* thoroughbreds, and the best cost too much for us small farmers." We all know that those who breed fancy stock for market or for show, give it better care and keeping than most of us do our grade stock. Now if we raise good animals and take good care of them, does it matter whether they are grades or thoroughbreds? I should answer this question as Mr. Whipple did. But I have had very little experience in breeding stock, and my opinion would have but little value. As an experiment, I raised four grade lambs, last year, crossing a South Down ram with Merino ewes. These four are the best formed and hardiest lambs I have, and keep in the best condition. This year my lambs will all be of the same grade. I intend to sell for mutton. Can you inform me whether the wool of the South Downs will sell as well as the heavy wool of the Vermont Merino. J. D.

Weathersfield, Vt., Feb., 1868.

TRANSPLANTING MANGEL WURZEL.

Why it is that the planting and raising of mangel wurzel are carried on so entirely different here from what is customary in Europe generally, and in Germany especially?

I do not think you can find an Ockonom (large farmer) in all that country who will plant a single acre of wurzels without transplanting them, and yet a great many are raised there for stock and other purposes. I have never seen elsewhere such large wurzels as are raised in Germany, on a poorer soil, and with less cultivation and dressing than is usually given to them here. In this country I have observed very closely, and have come to the conclusion that the want of transplanting is the great cause of failure.

Every farmer in Germany has a patch of land in a sheltered place near the house, of rich soil, on which he raises all his plants and seeds for the coming season, as well as for the year following; such as beets, turnips, carrots, onions, cabbages, &c., in fact, all the seeds he requires, as he cannot afford to buy old or mixed seeds and spoil his coming crop. At the end of March or beginning of April he sows the seed in beds which are covered with straw cold nights. About the first of May, when the plants are large

enough and the ground is warm, he commences transplanting on each end of the acre. He takes a load of these plants to the field, and while the plough goes along, two boys or women will follow, dropping the plants at regular distances, and at the same time pressing them on the ground with the hand. This is done as fast as the team will work, and in a fortnight they will be hoed. I am sure less labor is required by this plan than by the way practiced here, besides effecting a saving of one-third of the seed. From a fortnight to a month is gained in time, no thinning out being needed, and by fall a larger crop will be obtained.

I have urged my neighbors, who, by the way, are excellent farmers, for several years, to adopt this plan, but they still stick to the old way. I also feel quite sure that beets, cabbages, lettuce, &c., may be raised to greater perfection by transplanting, than by any other course of cultivation.

I presume, Mr. Editor, that some of your readers may laugh about this communication, but let them think it over and try it on a small scale, and I think they will, by and by, agree with me. W.

Dorchester, Mass., March 15, 1868.

APPLYING MANURE—GRASS SEED.

I broke up green sward last fall for planting corn, on which I intend this spring to spread manure. I wish to ask through your columns whether to plough or harrow it in.

I will also ask how much hay seed, and what kinds for seeding down with oats, and how much seed and what kind on natural mowing, where compost has been spread? A SUBSCRIBER.

Fiskdale, Mass., March 14, 1868.

REMARKS.—In relation to the mode of applying manure we refer you to the practical article in another column by Mr. Harvey, of Epping, N. H., and to other articles on the subject.

Our old rule for seeding an acre to grass is one bushel of redtop, eight quarts herdsgrass, and six pounds of clover, the latter sowed on the snow the last of March or first of April. If the land is poor, more seed is needed; if rich, less. Thos. J. Field, President of the Franklin County, Mass., Agricultural Society, stated last year at a club meeting that he used 1 bushel redtop, 12 pound clover, and 6 quarts herdsgrass. As oats are often mowed closer than other grain, there is danger of letting in the sun on the young grass after harvesting the oats.

SICK SHEEP.

I am in trouble about my sheep. Until last fall I never lost but one sheep and two lambs. Now many are diseased. They appear stupid, eyes about half shut and run badly, cough, hold their heads down, refuse to eat, pine away and die. The ewes drop their lambs from one to four weeks before they should, some of which are dead and others die soon. My flock appeared to do well the fore part of winter. They are kept in a shed that opens to the south, and fed on clover till three weeks ago, when I changed to white top hay. N. L.

Phillipston, Mass., March 16, 1868.

REMARKS.—What comfort can any sheep-raiser afford to our correspondent? Dr. Randall gives an account in his Sheep Husbandry of a disease which prevailed in New York in the winter of 1846-7, that he calls Malignant Epizootic Catarrh, which did not yield to any medicine used. The diseased sheep, especially those which abort, with everything connected with the lamb, should at once be removed from the healthy sheep, which should have generous feed, with grain and roots.

WOOL GROWING—FOOT ROT—SORE MOUTHS.

I have been in the sheep business thirty-five years, and the present is the hardest time I have seen for wool growing. I have two clips on hand, but as I hope for better times shall not "let it slide" as yet.

Seven years ago last fall, I bought 100 sheep that came from Vermont, some of which were lame before I got them home. On examination, I found some had the foot rot. I took sharp vinegar, dissolved blue vitriol in it, and rubbed on the parts affected. The disease soon disappeared and I have not seen any of it since.

The first of January my sheep were attacked with sore mouths or lips, and did not eat readily nor drink much. I took lard and tar, equal parts, melted together, and after partly cooled, stirred in a little sulphur. This was applied twice and they are all well now. Of the 146 in my flock nearly all had it. J. H. PHILBRICK.

Sanbornton Bridge, N. H., Feb., 1868.

PARALYZED HORSE.

I have a horse that has been sick a week, and no one that has seen him yet can tell what to do for him. He eats and drinks well, but seems to be very weak across his back, and has lost the use of his hind legs. If he lies down he cannot help himself any about getting up. I am not aware that he has been strained any way. Any information as to his disease or cure will be thankfully received. JAMES F. ATHERTON.

Colebrook, N. H., March 15, 1868.

REMARKS.—Evidently your horse is suffering from paralysis of the loins. Dr. Dadd cautions against the use of violent medicines, and recommends what he calls "anti-spasmodics," which consist of camphor, Indian hemp, assafœtida, musk or garlic, with patience and care. We have heard of beneficial effects in such cases from rubbing the loins thoroughly with a mixture of salt and the yolk of eggs in brandy or other spirits, and then applying a bag of heated oats, and covering with blankets, for a sweat.

PORTABLE FENCE.

I wish to inquire through the columns of your valuable paper for the best and cheapest kind of fence around the house and garden, and cost of same with lumber at $20 per thousand, which may be taken away for the convenience of ploughing the garden, &c. A READER OF THE FARMER.

Warwick, Mass., March 14, 1868.

REMARKS.—We have seen several kinds of patent movable fence, and have published accounts of them, with illustrations. We do not know where any can be obtained just now. Any ingenious carpenter, we should think, could build you a garden fence in panels that might readily be moved.

LABORERS WANTED IN THE COUNTRY.

I see by the NEW ENGLAND FARMER and other papers that in the large cities and manufacturing towns many people are out of employment, and consequently are suffering in many instances for the necessaries of life. I would say to all such,

arise, take up thy bed and walk back into the country where laborers are scarce and wages high.

Down here in Maine, in Somerset and Franklin counties, poverty and want is not known. There never was a time when the laboring man or woman could do any better than now. We pay here twenty to twenty-six dollars per month, and board, for labor, and men are very scarce at that. In the haying season we pay $50 to $75 per month.

We have young men amongst us that clothe themselves in good style, and lay up two hundred dollars a year, by working on a farm for wages.

Female labor is equally scarce. It is with difficulty that we can get a woman or girl to do housework at any wages. O. H.

New Vineyard, Franklin Co., Me., Feb. 16, 1868.

SPRUNG KNEES—CUT WORMS—SCRATCHES—WORMS IN HORSES—FATTING HOGS.

Tell J. M. Canney to put angle-worms into a flannel bag and bind on to his horse's knees. A sure cure; and good also for all cases of contracted cords.

To stop cut worms from eating corn, I put a table spoonful of lime in the hill, when planting, and the same on the hill after covering. It will keep the worms at a distance. Try it.

Common molasses for scratches on horses, well rubbed in with a cob, will generally effect a cure in three applications.

For worms in horses I give poplar bark, cut fine, and mixed with feed, and find it a perfect cure.

A little chalk and alum given to hogs will cause the female to fat as fast as the male.

Brimfield, Mass., March, 1868. ELI POWERS.

A QUESTION FOR STOCK GROWERS.

I know of a colt four years old this spring, which is supposed to be smaller than it would have been if it had been kept well. The question is, Can the colt be made to grow more from this time than it could have been made to grow if it had been kept as well as would have been for its health and growth previous to this time? F.

Mast Yard, N. H., March 10, 1868?

TO PROTECT ONIONS FROM THE MAGGOT.

Put one ounce of onion seed in half a pint of water, and add one ounce of fine salt and half an ounce of saltpetre, pulverized. Set it in a warm place, and stir it three or four times a day for 48 hours. Before sowing, pour off the water and mix dry ashes to separate the seed, and sow in rows from 16 to 20 inches apart.

SAMUEL PALMER.

Cornish Flat, N. H., March, 1868.

ICE-HOUSE UNDER A MILK ROOM.

I wish to inquire of you or any of your correspondents, if it would be a benefit to raising of cream to build an ice-house under my milk house, which is about four feet from the ground, so that a place for ice might very easily be made, if any benefit can be derived from it. G. W. BLAKE.

Georgia Plain, Vt., Feb. 24, 1868.

PLOUGHING AND HARROWING IN MANURE.

Much has been said about the application of manure; whether it shall be ploughed under or dragged in with the harrow. I think both ways are right. On moist, heavy soil no doubt it is best applied to the surface. Still I think I can show neighbor Hubbard as good potatoes as he ever saw raised where the manure was spread on the turf and turned under; the land harrowed and planted on top. My land is a dry loam. Last spring spread a light coat of manure on my wheat ground and dragged in a part and ploughed in the rest. I could see no difference in the wheat or stocking. I intend to do the same next spring, and watch the hay crop on the same. L. K.

Randolph, Vt., 1868.

AGRICULTURAL ITEMS.

—The proposed Exposition of Wool and Woolens has been postponed until 1869.

—Some careful men save hog's bristles to be put on the edge of iron wedges to prevent them from being forced out by frosty logs.

—In Paris it was recently shown that duck rearing is nearly three times more profitable than hen rearing.

—The apple, though the most important fruit of the North, meets with very indifferent success in Ohio, especially in the southern part of the State, owing to destructive insects and heavy spring rains.

—Dr. Dadd, now of Baltimore, says that he believes that the *pleuro pneumonia*, which made its appearance in Massachusetts in 1859, is now prevalent in the State of Maryland.

—"W. F. B." writes to the *Rural New Yorker* that he tried wintering bees in the cellar which was dry, but their breath seemed to dampen the comb and it became mouldy.

—An English paper advertises a vacancy on a farm for an agricultural pupil, and great pains will be taken to give the young man an insight into farming. Terms $1000 a year, and the use of a horse, with hunting.

—Some one writes that the grass known in New England as herdsgrass or timothy, derived its names from Timothy Hurd who introduced it into Rhode Island. The Quaker's called it Timothy, and the world's people Hurd's grass.

—Dr. Jas. R. Nichols, of Haverhill, Mass., harvested 31 bushels spring wheat from one acre, last year. He was offered $4 a bushel for it, but preferred to keep it as a family luxury. He sowed 500 lbs. bone dust and harrowed it in with the wheat.

—By the following operation, says the *Rural World*, a fowl will be dead at once and the flesh white. Open the bill and insert a sharp, narrow blade into the back part of the roof, severing the vertebræ. Then hang up by the legs and let it bleed clean.

—The extent to which the country has been covered with snow the past winter, and the uniformity of its depth, are noted as peculiarities of the season. A more perfect protection from freezing and thawing all over the Middle States was never before experienced.

—We are gratified to learn, says the Illinois *Prairie Farmer*, that some twenty-five counties have already reported examination of students for the honorary and prize scholarships in the In-

dustrial University. The number of competitors in each has ranged from one to twenty.

—The Minnesota State Agricultural Society resolved that "this association is entirely opposed to any encouragement or permission on the part of the executive committee of any gambling or jockeying whatever, in connection with trials of speed at our State Fairs."

—There is, with many persons, a prejudice against white on the legs or faces of horses. Some one has called attention to the fact that Lexington, the most famous thoroughbred stallion, and Dexter, the fastest trotter in America, have four white feet and a white nose each.

—A correspondent of the *Iowa Homestead* advises fruit growers to be very cautious how they apply tar, coal oil, turpentine, salt, &c., to their trees; he has seen trees killed by these so-called remedies for the canker-worm, borer, &c. He uses molasses with the most successful results.

—It is important that every one should know that if hot ashes, containing some fire, are put in a wooden box or barrel containing cold ashes, although they may not come in contact with the cask, they may first set the cold ashes on fire, and then whatever combustible materials are near it.

—Norton Clark, of Turin, N. Y., raised from one acre, ninety-five bushels and forty pounds of yellow, eight-rowed corn. Twenty loads of stable manure were spread and ploughed under, upon a piece of land that had been in grass ten years, well harrowed, furrowed and planted in rows three feet apart each way. Manured in hill with hog manure, and hoed well three times.

—Peanuts are raised in North and South Carolina and Florida, generally on new land, where the trees are girdled preparatory to clearing, and before the ground is ready for anything else. The cost of planting and cultivating is about $30 per acre, and the produce from 100 to 200 bushels. The great labor has been in digging, but this is now much lessened by improved implements.

—A strong extract of blood root, made by cutting up the roots and putting them into spirit, and kept in a bottle, is said to be a cure for laurel and other vegetable poisons in sheep, cattle and calves. Give in doses of a table spoonful to calves and sheep, and repeated as necessary at intervals of a few hours.

—Henry Atwood, Lancaster, Erie County, New York, gives the following as his method of raising wheat on his poorest clay soils. Plough the land in June. Drag well, and cultivate with wheel cultivator several times. After the turf begins to ferment or rot, about August 20, plough again, then drag, draw out your manure and lay it in heaps 12 feet apart along the center of each land, and be careful not to make your heaps too small; then spread evenly over the ground; sow your wheat as soon after spreading the manure as possible, then put the cultivator on again, drag or harrow, and have it all done by the 1st of Sept. I have never yet failed of getting good wheat. A dairy of 20 or 30 cows is very convenient for treating this kind of land.

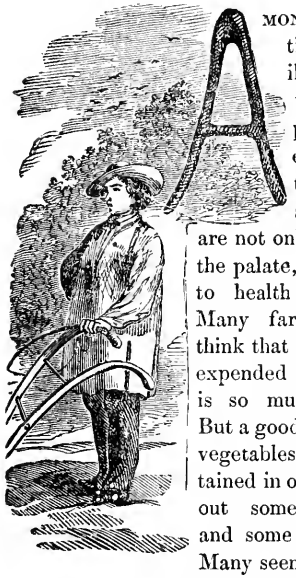
—In Illinois, one student is admitted free to the Industrial University from each county. The Board of supervisors of Cook county offered, in addition a prize of $30 each to five students who would enter the college at the opening, March 2. On Saturday, Feb. 8th, the examination of applicants for prize and honorary scholars from Cook county was held at Chicago. The *Prairie Farmer* regrets that only two young men presented themselves for examination.

—At a recent meeting of woolen manufacturers at Chicago, it was voted that "Merchantable wool should be the standard for price, and must be well washed, free from tags and all filth, and tied with only what twine is sufficient to hold the fleece compactly together," and that on unwashed bucks' fleeces a deduction of one-half should be made; on all unwashed lots a deduction of one-third. As well fix a standard for "merchantable" butter, and then vote to "shrink" all other lots "one-third." That convention was a "big thing" on prices! Wonder when they meet again!

—After giving the figures of an estimate of the amount of cheese consumed in Europe and in this country, and also of the amount produced, X. A. Willard says, "we must either get in the habit of eating more cheese in this country, or, if we go on producing at the rate indicated by the above figures, both the home and foreign market will be glutted and cheese will not command 12½c a pound. While the price of cheese has been declining, that of butter has been rising; hence if the factory system is continued and more largely developed, the lesson of these figures is rather *to stand by the churn.*"

—The February Report of the Department of Agriculture contains a summary of the answers received from the Southern States to certain inquiries of the Commissioner in relation to farm resources and products. Reports from two-thirds of the counties of Virginia show a decrease of from ten to sixty per cent. in the value of land since 1860, while an advance is noticed in several counties. In North Carolina the general average of depreciation for the same time is put at fifty per cent.; South Carolina, sixty per cent.; Georgia, from fifty to sixty; Florida prices are merely nominal; Alabama, about sixty per cent.; Louisiana, from thirty-three to ninety; Arkansas is averaged at fifty-five per cent.—two counties, Newton and Benton, an increase; Jefferson reports lands "almost for nothing;" Drew, "what creditors please bid;" Clark, eighty to ninety per cent. decrease; Sebastian reports decrease at "ten-tenths," but looking up; Maryland, reports an advance in price from 1860 of ten to fifty per cent., with a few exceptions.

EARLY GARDENING.



AMONG the necessities of every family in the country, a good supply of early vegetables for the table is very desirable. These are not only agreeable to the palate, but contribute to health and comfort. Many farmers seem to think that any extra labor expended on the garden is so much labor lost. But a good supply of early vegetables cannot be obtained in our climate without some extra labor, and some extra manure. Many seem to believe that there is some mystery about green houses and hot beds, which is understood only by professed gardeners, and that they are attended with much expense, and so they neglect them entirely. It is true that green houses and hot beds under glass are somewhat expensive, and that without constant care they will fail to produce the expected results. But a bed may be prepared in which plants may be started to be transplanted at very little expense.

Select a warm spot, sheltered by a building or a tight board fence; throw off three or four inches of the top soil from a space of ten or twelve feet by five or six, and lay it by itself. Then take out the soil to the depth of an additional foot and lay it in a separate heap. Now fill up the hole to the depth of a foot with horse manure, and tread it down well. Then sprinkle over this the soil first thrown out, about three inches deep. Now drive down at each corner a joist. Let the two at the back side stand out of the ground two and a half feet, and the two at the front, one foot or fifteen inches. Then nail on some boards tightly, so that the enclosure on the back side shall be two and a half feet high and twelve or fifteen inches on the front. Prepare some boards long enough to reach from back to front, and extend over one inch at each end. On the back ends which project over, nail on some cleats which will prevent them from sliding down, and you have a cover which may be put on at night, or in stormy weather, and removed in the day time, when the weather is suitable. Bank up the outside with the subsoil thrown out and the work is done. Let it remain a few days, until the manure begins to grow warm; then sow such seeds as you wish, exposing the bed to the sun in pleasant weather, and covering it at night, and you may have lettuce, radishes, cucumbers, cabbages and tomatoes ready to transplant as soon as they can bear the open air.

When they are transplanted, take pieces of board, from nine to twelve inches wide and sixteen inches long. Upon one end of these, fasten with a single nail a piece of lathe ten or twelve inches long. Then place a board on the north side of the plant, inclining over it, and resting upon the lath. These may be removed in the day time in warm days. They afford very good protection against the night air and cold winds. Or frames may be made of thin boards, twelve or fifteen inches square and eight or ten deep, and one end covered with gauze, tacked on.

Any handy boy can prepare all these plant protectors, with a square, a saw, a hammer and nails, in a few hours. The gauze frames may be used later in the season, to cover squash plants and protect them from the bugs. With this simple and inexpensive apparatus, almost any farmer may supply his table with delicious vegetables some weeks ealier than by open field culture.

Early peas, planted in a warm soil, with a good supply of compost containing hen manure, may be brought on to the table by the 20th of June. We have had them on the 15th. The Early York or the Oxheart cabbage will, in this way, give well formed heads a month earlier than in field culture.

Bury some early potatoes in a corner of the hot bed, and when the sprouts are two or three inches long plant them in hills, and you may get good sized potatoes by the first of July.

Now is the time to prepare your lumber, and as soon as the frost is out, dig out the bed and put in the manure. After the plants are removed you may throw out the horse manure and use it for other purposes. It has served to give your plants bottom heat and will still nourish your potatoes or corn.

Early beets should be sowed in the first part

of April, in a warm place, with the ground well filled with fine compost.

Parsnips and onions should be planted early, in a deep, fine soil, slightly covered and well rolled.

Last season, after we had prepared the ground for our onions, we sprinkled on a good dressing of fine soot and raked it in, and then sowed the seeds and had a good crop,—the maggot giving us no trouble.

Last fall we prepared the ground and planted some tomato seeds in hills and covered them with last year's tomato vines. We expect they will start early, and that by means of our plant protectors, they will thrive without being disturbed by transplanting.

Whoever will prepare and sow a bed in this way will soon find a few scores or hundreds of plants pricking through the soil and putting on their green robes, and will watch their growth, and open them to the sunshine, and protect them from the cold air, and give them water and find more pleasure in taking care of them than in any other part of his garden or field.

In watering tender plants it is well to add enough warm water to take off the chill, and to add to each pailful a teaspoonful of sulphate of ammonia or a quart of urine from the house.

WEIGHT OF MANURE.

Over-loading of horses and oxen is one of the principal causes of the thousand ills with which they are afflicted. Especially is this the case with horses, as they move quicker and are more nervous. This over-loading does not always arise from a desire to get along faster with the work, but from an ignorance of the weight of the materials that are being handled.

We have often seen a horse struggling through ploughed ground with a cart full of wet manure behind him, which did not, probably, weigh less than one ton! The same error is often committed in hauling bricks, stones, gravel and sand. Every person who is not acquainted with the weight of such substances, should fill a bushel basket with some one of them, and weigh it, and then ascertain how many baskets his cart will hold. In this way he can usually tell how much weight he is requiring his horse or oxen to draw, and will not be likely to overload them. The following will give him some idea of the weight of manure. A solid foot of half rotted stable manure will weigh, upon an average, 56 pounds. If it is coarse or dry, it will average 48 pound to the foot. A load of manure, or 36 cubic feet, of first quality, will weigh 2016 pounds; second quality, 1728 pounds. Weight to the acre—eight loads of first kind, weighing 16,128 pounds, will give 108 pounds to each square rod, and less than 2½ pounds to each square foot. Five loads will give 63 pounds to the rod. An acre containing 43,560 square feet, the calculation of pounds per foot, of any quantity per acre, is easily made.

The Distribution of Seed. — "Behold how great a matter a little fire kindleth." A single spark is the cause of destruction to the city. A single seed becomes the source of food for hungry millions. One fact is the counterpart of others.

A quart package of Tappahannock wheat, sent to a county in Pennsylvania, produced a bushel the first year, and five hundred bushels in three years, which was sold for $2000 for seed. Other wheat was destroyed by the fly. This was two weeks earlier and escaped. There are now probably millions of bushels of this variety, producing annually more than one million dollars more money than the deteriorated varieties which it displaced.

For the New England Farmer.

FARMING IN BARTON, VT.

DUTCH CATTLE AND FARM BUILDINGS OF THOMAS BAKER, ESQ.

The pleasant and thriving village of Barton, Orleans County, Vt., was for a few years the terminus of the Passumpsic River railroad, and received great benefit from the business transacted here with the surrounding country, and some thought it would hardly survive the withdrawal of business consequent on the extension of the road to Canada line. But a very superior water power had so attracted capitalists that the village still continues to grow rapidly in wealth and population. Another desirable feature is the co-operation of the village residents with the farmers in carrying out plans and enterprises for the public good. It was this regard for each other's welfare that enabled them so easily to raise three thousand dollars to fit up a fair ground and present its use to the county agricultural society for five years. This society has one executive committee in each town. Barton is represented by Thomas Baker, whose stock and farming operations are worthy of extended notice. During a recent visit there I made a few notes, the substance of which may interest my fellow farmers.

His farm consists of seven hundred acres. He has now four hundred sheep, well bred Merinos, that yield a washed fleece of about

five pounds each. They are divided into four principal flocks and occupy the lower story of his barns. They are fed from racks around the sides of the sheds, after the pattern described in the "Practical Shepherd." Light is let in through windows and not through cracks, and when the doors are closed the air is warmed by the breath of the sheep so as to be very comfortable. At the time of my visit he was fattening about 100 wethers that were to go to market about the first of March. They are fine wooled, yet valuable as mutton sheep. He has no intention of abandoning wool-growing, but is still improving his flock.

Mr. Baker's dairy consists of twenty-seven cows of good size and thrifty appearance. Many of them were raised on the farm, and appeared to be Devon grades. There is here also the commencement of a herd of Dutch or Holstein cattle, and as there are but few of the kind in this section I will more particularly describe them.

They are in degree connected with the stock of W. W. Chenery of Belmont, Mass., but were bought of Carlos Pierce, Stanstead, P. Q. The color is a clear black, with spots of pure white. The horns black and short. As no scales were convenient, I will give the measurement of the animals—the length being from the base of the horn to the back end of the body.

The bull "Hollandie," 2 years 6 months; girt, 6 ft. 4 in.; length, 6 ft. 8 in.; height, 4 ft. 4 in.

Heifer, "Beauty," 1 year 3 months; girt, 5 ft. 1 in.; length, 5 ft. 6 in.; height, 3 ft. 8 in.

Calf, 2 months old; girt, 3 ft. 7 in.; length, 4 ft.

Cow, 9 years old; length 7 ft., but thin in flesh on account of allowing the calf to run with her the first month. It is now allowed to suck at regular hours.

This cow is a good satisfactory milker, but is now kept solely for a stock cow. These four are all the full bloods of this stock, but nearly all the cows in the dairy will have half blood calves this season.

Mr. Baker has been breeding the White Chester hogs and is well satisfied with their early maturity and great weight. He has four sows that are likely to breed this year.

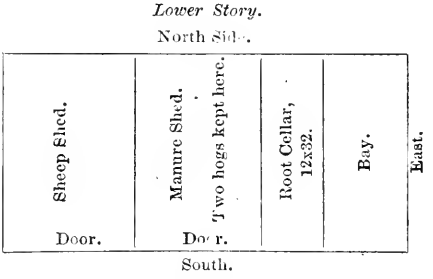
This stock with the addition of six oxen and several horses requires the constant attendance and all the time of one man.

The large quantity of hay for the cattle was of excellent quality, which accounts, in some degree, for the fine appearance of the stock, yet a root cellar twelve by thirty-two feet, well lathed and plastered, under the barn floor, now partly filled with turnips, might be considered a valuable auxiliary to the usual winter feed.

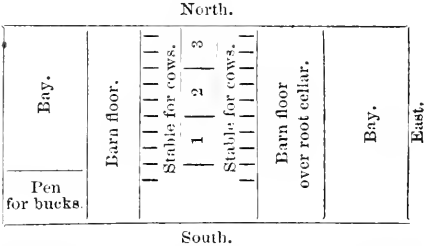
Our winter has been very steadily cold, the thermometer constantly going below zero and sometimes as low as 35°; yet, Feb. 19th, these turnips were not frozen enough to interfere with cutting and feeding; indeed but slightly touched with frost. This I regard as a valuable experiment for New England farmers, for in the minds of many there is a greater difficulty in preserving turnips than in raising them. I think if plenty of turnips were raised the expression, "spring poor" would soon be obsolete, and the condition of cattle indicated thereby would be unknown.

The buildings to accommodate this stock consist of one barn 32×100, and several smaller ones that in the aggregate more than equal the main one. The large barn is on level land and two stories high, the second story being entered by embankments to each barn floor. It is double boarded outside with one-inch boards, and the stables are lathed and plastered on the north side, and single boarded inside. The following diagram will show the arrangement of both stories of this barn which is 32×100 feet.

Lower Story.



Second Floor, or Story.



Figs. 1, 2 and 3 are box stalls; the first was occupied by the Dutch cow; 2 by three calves, and 3 by the Dutch bull and heifer, at the time of Mr. Jameson's visit.

Every stable and sheep shed was so well finished that the breath of the animals or animal heat would make the temperature above freezing, and the animals looked better than those belonging to farmers who advocate open sheds and free ventilation.

Mr. Baker now employs four men preparing to build a house that in size and convenience will correspond with the farm. In choosing a site he has avoided a common error, which is to place the house very near the highway, allowing no room for drive, lawn or landscape embellishments. The place chosen is a slight elevation near the barns and perhaps twenty rods from the road. In front is a depression

that can be easily transformed into a beautiful pond and fed by a large spring near by. Such a mansion approached by a drive that curves around a pond, with other additions that readily suggest themselves, must complete a perfect picture of a rural home. At the season of mid-winter it is best perhaps to leave the crops and farm management for another communication. Z. E. JAMESON.

Barton, Vt., Feb., 1868.

For the New England Farmer.

THE SAVING AND APPLICATION OF MANURE.

Some of the correspondents in late numbers of the NEW ENGLAND FARMER appear to be divided in opinion whether it is best to cover manure with the harrow or the plough. This depends upon the nature of the soil, whether high or low, wet or dry, according to my observation and experience,—and "experience is a stern old school master."

In 1863, a dry summer through the first part, I hauled 100 cart loads of barn yard manure, partly compost and partly green dressing, on to two and a half or three acres of high land, ploughed ten inches deep the previous fall. It was spread and harrowed in according to the best of my ability, and planted with 13,000 hills of corn about the 20th of May. The corn came up and flourished finely until the first of July when its progress ceased; the corn roots having penetrated through the coat of manure into the barren subsoil beneath, brought up on the surface of the furrows by the deep ploughing the previous fall, and fare-well corn! It did not pay for harvesting.

On the other hand, some twenty years since, I saw stable manure drawn from the stables of Exeter, and ploughed in on the low wet fields of a neighbor's farm, sufficient to make mine into a garden, had it been fortunate enough to have received such good treatment, yet with little or no benefit to him, because he did not use the harrow instead of the plough. In case of my worthless crop of corn, I should have used the plough instead of the harrow, as I have never failed to do since, ploughing in the manure to about the depth of six inches.

As manure is the foundation of all farming with us, the best farmer in the country can do nothing without it, and but little with it unless he knows how to apply it. But it can be applied neither right nor wrong till it is saved or accumulated; for I ignore the word *make* as applied to manure; believing it is a philosophical axiom, that it is not in the power of man to create or annihilate a single particle of matter. So the only thing that can or need be done, is to furnish absorbents to save all the liquids and volatile gases that furnish food to field crops that come with the domain of the farm.

I have acted upon this principle for many years with manure from the cattle in winter; but, within two years, I have learned that my duty has been only half done. During the latter time I have housed five cows and a yoke of oxen every night through summer, and furnished wash from the roadside for their bedding. Thus a large amount is saturated with urine every night, when the stock return from the pasture with full bellies of green juicy feed. The result of which is twenty-five or thirty loads of manure nearly twice as strong as it would have been if exposed to the sun and rain in the barnyard. This manure is drawn from the barn cellar in the fall, and ploughed in on old ground, or harrowed in on newly broken up land. Exposed to the frost and rains of winter, it gives the best crops the following year. M. J. HARVEY.

Epping, N. H., 1868.

REMARKS.—Had not "the barren subsoil, brought up on the surface of the furrows" as much to do with the failure of your corn in 1863, as the manner in which the manure was applied?

For the New England Farmer.

THE BRAHMA FOWLS.

WHY I KEEP AND HOW I MANAGE THEM.

I prefer the Brahmas for the following reasons:—They are hardy, and easily raised early in the season, and such chickens sell well. They are large and bring more per head than the smaller kinds. They are very quiet, peaceable and domestic, and will *handle* better than any breed I am acquainted with. If brought out early in the spring the pullets will come to maturity and commence laying in the fall, and if well managed they will lay all winter, while eggs bring good prices, and be ready to sit and bring out a new crop just when eggs are lowest in the market. Their bodies are so large that they do not seem to chill through in cold weather like the smaller Leghorn and Spanish fowls. They are excellent sitters, and will cover more of their own eggs than any of the small kind.

The first of last December I had about forty pullets, one-fourth of which had commenced laying. Since that time I have reduced the number to thirty. In December I had seventeen dozen eggs, in January forty-three dozen, and in February forty dozen. Have set five broods, of which one has hatched.

I have a room in my barn cellar 24x58 feet, with cellar wall on three sides. On the south, I have board siding, well lighted by glass windows the whole length. This siding is made of thin boards in two pannels between each pair of posts. The upper one is hinged to the sill and opens inward, and can be fastened up in summer out of the way. The lower pannel is keyed in between the posts and can be taken down in summer and used for hen coops and pig pens, or it may be packed away for

winter. In this room the hens eat, wallow, sing, cackle, and lay during the day, and at night they go to a smaller underground room where they roost.

Every morning they have a pail of dough, made of one-third each in bulk of Indian meal, wheat bran and ship stuff or fine feed. This is generally eaten by noon, when they are fed with a few fresh-boiled potatoes and a small quantity of beef scraps. They have a feeding of corn two or three times a week, and oats and pounded oyster shells are constantly before them. They have plenty of water carried to them, warm, once or twice a day. I have had no sick fowls and have fed no pepper or drugs of any kind during the winter. If any of the hens want to sit earlier than is thought advisable I put them in a room by themselves with a rooster. After a few days they commence laying again.

For their nests I use soap boxes partly filled with sand and covered with fine straw or hay. When I am ready to have them sit, I move them, in the evening, in their boxes, to a room used solely for a sitting room. If they continue to sit for a day or two on false eggs, I put good ones under them in the evening. Hens just beginning to sit can be handled much better in the evening than in other parts of the day. But after they have been sitting a few days, if the weather is very cold, they may be taken off and fed with warm dough, and after a few minutes exercise, put on the nest again. I keep oats in the sitting room all the time.

After the eggs have been under the hen nine or ten days, they may be examined in the evening by holding each egg before a bright light, when the unfertile ones may be taken away. They will look light and semi-transparent, and never will hatch, but are as good for other uses as fresh ones. Those having germs in them will be quite opaque, and ought nearly all to hatch, although the embryo chicks will sometimes die in the egg.

When the young chickens begin to hatch, the box is taken to another room where they will not disturb the other sitters. As fast as the chicks are strong enough, they are carefully taken away from the hen and kept in a basket, in a warm room. In a day or two they commence to pick, when fine cracked corn is given them, in small quantities. By the time they fairly learn to eat they are fed and watered several times a day. I feed very little fine meal dough, as I think it is apt to cause gapes. I feed coarse meal, mixed with sour milk, and give them cheese curd as often as they like it.

Chickens thus kept from the hens and well cared for, will have fewer crooked-backs and breast bones and crushed hips, and probably fewer lice.

When the weather is suitable and the ground is warm, they are allowed to be out of doors in the middle of the day; but early chickens should be kept indoors most of the time, where they will be dry and warm and away from danger by hawks and rats. A sunny room in the south side of the barn, where it is comfortable without a fire, is a good place. They should have a variety of feed and plenty of fresh water. A good way to give water is in a plate with a bowl inverted in the plate. The bowl prevents them from wetting themselves in the water, as they can only get at it with their bills.

A sod of tender grass or a bone with a little fresh meat on it, will give them very pleasant employment, as often as it is convenient to furnish either. During the growing and fattening season I find cracked corn, with the fine sifted out, an excellent feed before they are old enough to eat whole corn. If fed dry, they must have plenty of water at all times. Fine meal, if mixed with coarse wheat shorts, is good for a change, especially if wet up with thick milk.

They ought to have a comfortable place where they will learn to go every night, after they are old enough to take care of themselves, and as soon as old enough, should be put on roosts a few evenings in succession, after which all they will want will be plenty of good feed till large enough for market.

Children and women can do much of the work of taking care of poultry, as well or better than men. I am well satisfied that corn and milk fed to poultry last season, paid much better than that fed to swine. And I think large, handsome white Brahmas are quite as desirable stock to show your friends as Suffolks or White Chesters. A. W. CHEEVER.

Sheldonville, Mass., March, 1868.

CHEAP LAND IN MASSACHUSETTS.

The following letter was written by J. A. Barclay, of North Spencer, Worcester Co., Mass., to the New York Farmers' Club. The facts stated we believe are substantially true of other sections of New England:

I often read in your reports descriptions of places, accounts of farms and farming lands, the great advantage to be had in some far-off place, where, away from home, from friends, from all the pleasures and satisfaction to be had in a civilized and enlightened society, in some nook or corner, or in some desolate God-and-man-forsaken place, the great desideratum can be had—cheap land. Did it ever occur to you that land and farms could be had at a very low price in our own happy New England. We often hear of land in the South and West that can be bought for from 12½ cents to $5 an acre, and express our wonder and astonishment at so small a price.

Having recently seen farms sold in this vicinity, I could not help asking myself the question, what would be the price per acre for the farm after deducting a fair value for the buildings and the cost of the other improvements. I know a farm that has been sold for

$2800; contains something more than 200 acres, a large two-story house with two ells, all finished in the best manner, a good horse barn, with sheds, carriage-house, hoggery, &c.; a barn of sufficient size to hold 50 tons of hay; has cut the past season between 40 and 50 tons of good hay, wood sufficient for use, a good supply of choice fruit; well fenced, said to be 900 rods of well-built stone wall on the farm; a good soil, buildings good, neat, nice, and almost as good as new.

Now, then, does the land of this farm cost more or less than land at the West, or at Vineland or Hammonton, or any of those other places we hear of so much. We have heard a great deal about cheap lands in other places, where that is all they can claim. Why not let it be known that we have cheap land, with many other advantages—good buildings, good roads, good schools, good markets, and all those other advantages that might be expected in connection with these? The sale of this farm is not an isolated one. I know of other farms that can be bought for less money than the building would cost, within 10 miles of the best market in the State. I know of no better place for a man of small means who wants to go to farming than Worcester county.

For the New England Farmer.

SELECTION AND MANAGEMENT OF WORKING OXEN.

A good ox should have a long, lean face, and bright hazel eye, which show capability to receive instruction and disposition to obey it. Large nostrils denote the capacity of an ox to work in a hot day. Very large horns at the base denote laziness. Full breast, straight back, wide ribs,—by which is meant ribs that round out nearly as wide as the hip bones,—and wide gambrels, denote strength. Straight knees, broad toes, pointing straight forward, show an ox can travel on hard roads or pavements. They should be well matched, especially in disposition and speed.

The farmer who has a pair of oxen, answering this description, has a good team.

The next thing is a good teamster. The better the ox, the easier he is spoiled by a man who knows not how to drive. The teamster should have judgment in loading. Some teamsters know no better than to think an ox can draw anything until he tries him. An ox should never be overloaded to begin with. He never should know how much he *can* draw, but always have such confidence in his driver, as to think he can draw anything he may ask him to.

A good teamster will have a name for every ox, and no two in the same team, should be called by the same name; nor should he ever speak one word that has no meaning; but be sure when he calls an ox by name, to make him understand, and also to make him mind what he says.

When breaking a new team, the best way I ever found to make them know their names, is, when I call "Star," or "Broad," or "Bright," or "Buck," to just touch the one I speak to, with a spur. By that means the ox will soon know that he is meant, whenever he hears his name distinctly pronounced.

The driver should also have one particular word to start his team with. "Come boys," I ever found the best word to start a heavy load with. Some seem to think, when they are driving a team, that they must work the whole time either with their tongue or whip. It would be a most desirable thing for such to learn, that when his team are doing *just right*, to keep both tongue and whip *perfectly still*. What would you think of an officer who when his men were marching as handsomely as possible, should keep swinging his sword and jabbering incessantly, without meaning.

All the words needed in driving, are very few. I think the following are sufficient: "Come," "Haw," "Gee," "Whoa," "Back." These, properly used, are all that are needed. Much talk makes confusion.

I have known some men halloo and bawl all day long, and make themselves hoarse, who could not at night give any meaning to one word in ten they had said. Such would do well to first learn *themselves*, before they *try* to teach their *oxen*.

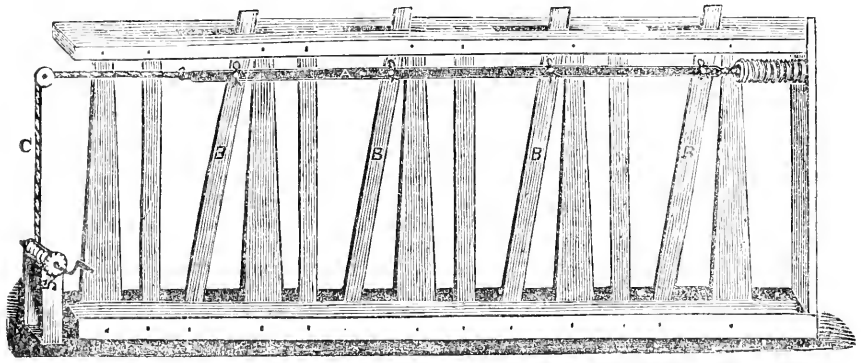
A good teamster will make his cattle love him. This can be done only by constant kind treatment; such as carding, stroking their faces, and occasionally breathing in their nostrils. This last, is the best method to find out the disposition of an ox. When you have breathed a few times in his nostrils, if he is kind he will hold up his nose, otherwise he will catch it away and perhaps toss a horn at you. In short, make yourself sociable with them and they will amply repay you for your attention and kindness. Never strike an ox, unless compelled by obstinacy; and by proper management that necessity will occur very, *very* seldom.

ASA G. SHELDON.

Wilmington, Mass., Jan. 27, 1868.

REMARKS.—The writer of the foregoing article is familiarly known in Massachusetts as "The Wilmington Farmer," whose autobiography has been recently advertised in our columns. To a natural "eye," or intuitive judgment or instinct, which seems essential to a breeder or manager of stock, Mr. Sheldon adds the experience of a long life in the practical use of oxen, both on the farm and by way of railroad and other large jobs of excavations.

—Mr. Charles M. Hale, of Montpelier, Vt., has a sheep, which in the last twenty-two months has given birth to nine lambs, and all, with one exception, alive and flourishing.



COMBINATION STANCHIONS.

The above cut was engraved for the FARMER some years since as an illustration of an improvement in tying up cattle, devised by Wm. D. Brown, of Concord, Mass. A is a strip of iron one inch and a half wide, attached to the movable stanchions B B B B, by half-inch bolts of round iron with spring keyes; C a rope passing over a fixed pulley and attached to a shaft with crank and follower or catch. Mr. Brown said that if any one or more of his thirty cattle fail to have their heads in the proper place at the time of fastening the others he could slip out a key and bolt and put in the stragglers at pleasure, or any one may be loosened in the same way at any time.

We have recently received from Mr. O. H. Phillips, West Glover, Vt., a description with drawings of a similar, but perhaps more simple plan which he had adopted. Instead of the iron strip, he uses a bar of wood to which the movable stanchions are fastened by wooden pins. Instead of the rope, pulley and crank, he attaches a stick or lever to one end of the long bar, with one end of the lever fast in a staple or socket in front of the stanchions at such distance that by moving the long end of the lever, which projects into the stable, the stanchions are all opened and shut at one motion. When closed, the long end of the lever is held firmly in place by a hasp, slot, staple or other fastening, which also, of course, fastens and holds in place all the stanchions.

DISSOLVING BONES.—The cheapest and easiest way I found was to take a deep box, barrel, or hogshead, the latter I like the best, cover the bottom about two inches deep with ashes and lime mixed, about one part lime to two of ashes; the lime should be newly slaked and mixed with the ashes, both dry, then put in a layer of bones, then two or three inches of the lime and ashes again; fill up in this way to about eight inches of the top, then fill out with clear ashes, or the compound, and then wet it gradually until it is thoroughly saturated, but not so as to drain; let it stand at least six months, the longer the better; when wanted for use take it out, fork it over and pick out all the bones that are not soft and save them for the next batch, and then pulverize and mix the ingredients well together, and you will find it one of the strongest and best fertilizers in use.—*Cor. Am. Institute Farmer's Club.*

FEEDING STEERS IN KENTUCKY.

At a recent meeting of the Lexington, Ky., Farmers' Club, one of the members made the following interesting statement of his manner of feeding stock for the market. He estimated the cost of his steers at $95 per head when three years of age, and at 1550 pounds each live weight, and that at present prices, 7½c per pound, they are worth $116.25 per head. To this may be added the profit on hogs which follow cattle when fed on corn. Among the advantages of his system of farming, he mentioned the improvement of the farm over the ordinary mode of culture, and the small amount of labor required. He said he employed only one man and a boy, with one pair good horses, and one yoke of oxen, and found himself more troubled to find work for the man and boy than to keep up his work.

I have eight hundred and twenty acres of land on which I operate. I always keep on hand one hundred and eighty cattle at a time, winter and summer, in three different lots and

ages—sixty in each lot, one of calves or yearlings, one of yearlings or two-year-olds, and one of two or three-year-olds; or in other words, I buy sixty calves every summer, and sell sixty fat cattle. Of the 820 acres of land, there are 700 of it in grass, so you will see I have no difficulty in grazing them. I know that many of you are ready to say I cannot winter that number well; we will see. Seven hundred acres being in grass, I have one hundred and twenty in cultivation. I usually cultivate about thirty acres myself in corn, and rent out thirty acres more to some of my neighbors for corn; for rent of which I get half of the corn in the shock, which gives me 45 acres of corn. The other sixty acres of cultivating ground I rent and get half of the proceeds; and in addition I cut twenty-five or thirty acres of grass, timothy and clover mixed, cut when the clover is ripe, timothy green. I do not like ripe timothy hay for cattle—would rather have straw. You will now perceive I have 40 acres of corn, about twenty acres of wheat straw, from five to ten acres of oats, and twenty or thirty acres of hay all told, to winter the 180 cattle. Now please bear in mind that I graze eleven months in the year; my calves or yearlings as you may call them, (for they commence as calves but get to be yearlings before the year is out;) they run on good grass with what hay they will eat until the 15th day of March. They are then put in a lot and are still fed on hay with addition of shelled corn or oats once a day. The yearlings, or next older lot, run on grass with wheat straw when there is snow on the ground or very cold weather; and the 20 acres of straw is as much as they will eat up to the 15th of March; they then go to lot and are fed hay and about two bushels and a half of corn apiece. The next lot, intended for market in July, run on good grass and feed on hay in cold weather until the first week in February.

Then I commence feeding them corn, five shocks per day, with a barrel to the shock, but still running them on grass until the 15th of March when they go to the lot, still feeding the same amount of corn. You will perceive now that all my stock go to lots on the 15th of March and remain twenty-five or thirty days. I always turn to grass from the 10th to the 15th of April. But it must be distinctly understood, to winter 180 cattle on that amount of provender, they must have a full supply of blue grass.

MASSACHUSETTS STEERS.—Mr. Joseph Bean of Putnamville, Danvers, Mass., has a pair of Grade Durham and Native Steers three years old next April, raised by himself, that weigh 3200 lbs. One of them girts seven feet, the other seven feet and one inch. They are well mated and well trained. Mr. Bean hauled his hay in with them last season.

TUMOR FROM A COW'S THROAT.

A few weeks since a gentleman from Essex, Mass., left at this office a tumor which had been removed from the throat of one of his cows. The memorandum which accompanied it has unfortunately been lost and the name of its owner is not remembered. According to our recollection of his statement, the tumor was attached to the upper part of the throat, and rested upon the tongue. As it enlarged it prevented the animal from swallowing, to such an extent that she pined away, lost strength, and must soon have died. The tumor was removed by extending the jaws of the cow with an iron ring, through which the operator succeeded in cutting off the tumor, which weighed one pound. After its removal the cow was able to eat, gained strength and flesh rapidly, and is now in good condition.

By most who saw the tumor at our office it was thought to be fibrous; a class known as "non-malignant," and harmful mainly in a mechanical way, as by impeding the functions of some important organ. But anxious to ascertain its true character, and not being posted ourselves in relation to the nature of tumors, we submitted this interesting specimen to Dr. Ephraim Cutter, 13 Pemberton Square, who makes a specialty of throat diseases in human subjects, and who has successfully removed tumors, in some cases where they had deprived the patient of the use of the voice. One of these he exhibited to us, which though much smaller than that from the cow, looked ugly enough.

The Dr. states that the physical characteristics of this tumor, under the microscope, are those of a cancerous nature, and that it is by no means improbable that it may grow again.

CHEAP FERTILIZER.

For several years past, Mr. L. E. Metcalf of Franklin, Mass., has used, as he recently informed us, a compost of salt, ashes and plaster on all his farm crops with results so entirely satisfactory that he feels safe in recommending it to others. Without being very exact in weighing or measuring the ingredients, he intends to mix one part of salt with two parts of gray rock plaster, and then adds about an equal bulk of wood ashes. The mass is then thoroughly mixed, and allowed to stand a few days before using. If applied alone, about 300 pound are spread upon the land,

whether cultivated or in grass; and, in case the land is planted, a little more is put in the hill. If other manure is to be used upon the same land, the compost is worked into the manure and both used together. On land on which plaster has no perceptible effect when applied alone, this compost proves as beneficial as on land where plaster works favorably, in consequence, as he believes, of its combination with the ashes. Mr. M. prefers this home-made compost, to any of the commercial manures. He is particular about the kind of plaster, and says the white has little if any agricultural value.

For the New England Farmer.

TIME FOR PRUNING.

I have lately made some investigations on the question of "The proper time for Pruning;" have consulted many volumes of the NEW ENGLAND FARMER. (Monthly,) as well as a large number of authors on fruit culture, and were it not for the substantial reasons given in your editorials on the subject, I confess I should be at a loss to know what is fact or truth in the case. As I have the works alluded to open before me I will make some extracts, remarking, however, that the first seems to me to be the correct view, and to accord with the teachings of your paper.

Cole's American Fruit Book, at page 57 says:—

"Slight pruning, in which very small limbs, or dead limbs of any size, are removed, may be performed when most convenient, at any season. Moderate pruning should be done in June, July or August, though it will answer very well till December. If trees are pruned in July, August, or September, the wood will become hard, sound and well seasoned, and commence healing over; and it is not material, otherwise than for appearance, whether it heals over the first, second or third year, as it will remain in a healthy state. We should prefer October, November, or even December, to the spring, which is the worst season."

Next comes remarks on page 80th of the "American Fruit Culturist," by Thomas, published in 1867. He says:—

"Many cultivators have been misled into the opinion that early summer is the best time to prune, from the fact that the wounds heal more readily. Pruning after the tree has commenced growth has a tendency in nearly every instance to check its vigor. . . . . As fresh wounds always render trees more liable to be affected by intense cold, quite hardy trees only may be pruned any time during the winter. On those inclining to be tender, the operation should be deferred till towards spring."

So much for the latest information. I next quote the one most remote, "Thatcher's American Orchardist," published in 1825. At page 67 it is said:—

"The most proper season for pruning fruit trees, unquestionably is when the sap-juice is in active motion toward the extreme branches. In our New England climate, we have the clearest indications that the sap commences its circulation about the 10th of April. From this period to about the last of May, whether the buds are just opening, or the blossoms are fully expanded, the pruning should be accomplished. It would, for certain reasons, however, seem advisable not to delay the operation after the middle of May, as the branches are then so charged with a full flow of sap that the bark would be apt to peel, whereby unseemly wounds might be left, and canker induced."

"Kenrick's New American Orchardist," published in 1835, page 48, says:—

"For moderate pruning, which alone is generally needful, June and July and during the longest days of the summer, is the very best time, for wounds of all kinds heal admirably at this period; the wood remaining sound and bright, and even a tree debarked at this season recovers a new bark immediately."

The last quotation I make is from a small, but valuable work, entitled "The Garden, &c.," by D. H. Jaques, published in 1866. At page 71 the author says:—

"When the object of pruning is to promote growth or improve the form of the tree, the operation is generally performed in the winter or early in the spring. Some, however, recommend pruning in May and June." T. W. S.

Boston, Mass., 1868.

For the New England Farmer.

STRETCHES IN SHEEP.

Much has been said and written from time to time about *stretchers* or *stretches* in sheep. That it is a bad disorder and occasions a great loss to sheep owners, none will deny; but the cause and the remedy are not so well understood. Some writers attribute it to costiveness, the result of improper food, lack of roots and other laxative diet, while others contend that it is caused by worms in the intestines, producing a stoppage in the excretory passages. I have no doubt both are correct, as the symptoms of disease are the same in either case; so much so that I very much doubt if the most experienced in such matters can ascertain to any degree of certainty the real state of the case, without an actual examination after the death of the diseased sheep.

As to the remedy, which is really the main thing, no two writers agree, and in practice all prescribed remedies more or less fail; so much so that a large number of sheep die annually from this disease, while, as a rule, the

best conditioned and apparently the most healthy sheep are most liable to its attacks.

Having had the care of sheep somewhat extensively from my boyhood, if my experience is worth anything to the public, I most freely give it.

As to the cause I am somewhat uncertain; but should give it as my opinion, that a plenty of green fodder, such as bright, early cut clover hay, ruta bagas, or potatoes, with a free supply of salt and wood ashes, will prove an almost infallible preventive; and as the old proverb says, "an ounce of preventive is better than a pound of cure," I would recommend first in all cases the preventive. I once knew a minister who had a sick cow, and he applied to an old farmer for a remedy. The old farmer with a sober face told him that a certain weed grew on a neighbor's intervale, that given freely to the cow, would cure her in a few weeks. When asked to name the weed, he replied "clover hay." The minister followed the prescription and his cow got well, and he ever after praised clover hay as a curative agent.

But if a sheep does have the stretches, what is to be done? Some tell you to give castor oil—very good; some say oil and spirits of turpentine—sure death; others use a strong decoction of thoroughwort (boneset) which is an excellent medicine, and easily procured, as it grows on all low wet ground. But my remedy, and one that never yet failed me, when tried in the first stages of the disease, is tobacco: Take a piece of plug tobacco, as large as the thumb to the first joint, put it in the mouth of the sheep and hold up its head until it is eaten. Sometimes the sheep will eat it with avidity, but not often. If one does not eat it readily, don't give it up, but stand by and hold up the head gently, and there will be no trouble.

The first practical knowledge I ever had of this remedy was in 1843. I sold some sheep to J. H. Lovejoy, of Albany, N. Y., and was to deliver them in a few days. Soon after I sold them, one of them was taken sick and I was afraid it would die; so I thought I must try and doctor it. I was but a boy; my father was gone, and I hardly knew what to do; but I happened to think that I once heard an uncle tell of giving a sick sheep some tobacco, and it cured it. So I concluded to try it, and in an hour's time my sheep was eating as well as any of the rest, and from that time to this I have had sheep taken with that disease, and used no other medicine, but have never yet lost one. In 1864, this disease was very prevalent all through this section. The previous season had been unfavorable for hay, and much of it was hurt or badly ripened before it was cut. One of my neighbors told me that three of his sheep were sick—the best he had—and wanted to know what to do for them. I asked him how long they had been sick; he told me one of them had been sick one week, and the other two were taken the day before he came to me. I told him to give them all some tobacco, and how much to give them; but remarked that the one first taken will die, while the others will come out all right. The next day he told me the one you said would die, is dead; and the other two are well, and went to eating hay in an hour from the time of giving the medicine.

Yesterday morning I found a nice sheep stretched out, and kicking. Its nose was dry, ears drooping, neck extended, and every appearance was indicative of great pain. I made her take a quid of tobacco, and in two hours she was chewing the natural cud, and apparently well. I do not advise folks to go to chewing tobacco because it is good for sick sheep. Tobacco is a rank and deadly poison to the hog. GEO. H. BROWN.

Mason, Me., March 11, 1868.

For the New England Farmer.

WORKING A POTATO FIELD.

In the fall of the year I turn over a piece of grass land, with a swivel plow, laying the furrows all one way. If on a hill side, the furrows are turned up hill, so that the after cultivation will bring it about where it was before. After the furrows have dried a few days the ground is worked over with a cultivator, which pulverizes the soil about four inches deep, or one-half the depth of the furrows.

The ground is then smooth enough to cart over, and is ready to receive the manure, which is drawn on and evenly spread any time during the winter or spring, as convenient. If hauled on while the ground is frozen, it will be easier for the teams and much packing of the soil is prevented.

After the ground is well settled in the spring, it is again worked over with the cultivator, and the manure is well mingled with the soil. A horse plow is then used to make furrows about four inches deep and three feet or a little more apart. In these furrows, pieces of potatoes are dropped about fourteen inches apart, rather carelessly and quite rapidly, not minding whether they fall one side up or the other. The cultivator is then run between the rows, and the potatoes are well covered; much better than if done by a plow, and a great deal quicker than if by a hoe.

As soon as the weeds begin to show themselves, the cultivator, which is also called a horse hoe, having the outside teeth reversible, is run between the rows, with the teeth set to turn the dirt from them. After two or three days it is run through again, to finish any weeds that escaped the first operation. Just as the potatoes begin to break ground, a garden rake is worked rapidly back and forwards over the drills, nearly as fast as a man would walk. This kills what weeds are in the drills between where the horse hoe went. After potatoes

begin to break ground, if the weather is warm, they show themselves pretty fast, and within a week from the time of raking over the drills, the field will need the horse hoe to be run through again, to keep the ground light and warm, and to prevent any weeds from getting a foothold.

With an old fashioned cultivator that will tear up and cover up so many hills, it was quite necessary to follow immediately with the hoe, and patch or mend the hills or drills. But with a good horse hoe, like F. F. Holbrook's, with reversible outside teeth and expanding arms, a field may, and ought to be worked out every few days, going but once in a row at time. The hand hoe need not be used much, except to cut out weeds from the drills where the horse hoe does not reach.

As the roots of the potatoes extend, the horse hoe is contracted, till the last time, when it is run through with the arms and outside teeth taken off, using the middle tooth only. At this time the hand hoe is used to finish up the dressing for the season; after which the vines ought to mostly cover the whole ground.

If the potatoes are not dug till the vines are quite dead, much time and some backache can be saved by raking them off with a fine garden rake. If the ground has become somewhat hard or weedy, the horse hoe may be used once more with great advantage, by turning the teeth inward and running them close up to the drills. This will leave but little soil to be moved by the hand hoe or hook, while hauling out the potatoes.

After the potatoes are off, the ground is then worked over both ways with the cultivator to the depth of five or six inches, when it is in the best condition to receive grass seed, which may be sown either in the fall, if not too late, or in the following spring.

Brother farmers, this is my method of working a potato field. If you see anything new or good in it, do not let *habit* keep you in the old ruts. A. W. C.

Sheldonville, Mass., Jan. 18, 1868.

For the New England Farmer.

SUGGESTIONS FROM EXPERIENCE.

A Monkey Wrench.—I was working with a good, adjustable (monkey) wrench, once, with a young man, who seemed quite struck with the ease and dispatch with which we took off nuts from bolts, and got a wagon to pieces.

"Have you not a wrench like this at your house?" I asked.

"No—o!" he replied, with a shamed laugh.

"What do you do when you want to turn a nut on a bolt?"

"We take a *harmer*," was his answer.

Repairing a Carriage.—I was at Mr. B.'s shop in a hurry for some forging which he could not attend to at once, as a carriage belonging to a good farmer needed some repairs; and he had promised to have it ready for him at such an hour.

We soon arranged to have my work taken hold of, and the few screws needed in his were put in, and nuts tightened at the same time. I thought then if my good friend should sell one of his railroad shares and fit him up a tool shop, he would be a great gainer.

As soon as the carriage was finished the owner happened in. "Is my job done," he asked, drawing out his wallet.

As Mr. B. named the price, we exchanged glances, and were only able to keep our faces straight till the customer was gone.

Plastic Slate.—I have told you of my having great esteem for the new compound—*coal tar and ground slate*. I have some mixed, on hand, all the time, ready for immediate application. It is a handy thing in a neighborhood! A neighbor had a long eave gutter. The rain came down sadly where it was butted together. The joint was originally covered with sheet lead tacked down, which had become raised up, and was worse than nothing. This was removed and the leak smeared with the plastic slate, and then a strip of double felt tacked over and that, likewise, covered with the slate and now the water passes along.

Another neighbor had a leak through a long strip of sheet lead, which covered the joining of two roofs. My ladle and brush and strip of paper went there, and gave great satisfaction. I think lead in such places should be put on in moderate lengths. Too long a piece varies with the heat and cold, and cracks.

Another case where I lent the ladle pleased me still more. A laboring man, who lived in a hired house, wanted to buy a piece of inch and a quarter lead pipe for a sink spout. I happened to have it; but asked him to tell me the whole story about the old one. He said, it had frozen up and burst the winter before, and they had tied rags about it, and had water running across the floor, and no end to the bother with it. I told him not to buy a new pipe, but take a light hammer and try to close up the crack in the pipe, and then put some warm plastic on a bandage and tie it firmly around it. He was glad to be relieved of the expense of a new pipe, and easily repaired the old one. Wm. D. Brown.

Concord, Mass., Jan. 1, 1868.

Remarks.—The above article has been on hand several weeks; but, like good wine, it loses nothing by age.

—The students at the Agricultural College at Hohenheim, at Wurtemburg, which was established in 1818, occupy rooms provided for them, and board at a restaurant connected with the institution, calling for what they want, and paying for what they order.

EXTRACTS AND REPLIES.

THE WOOD PILE AS AN INDICATION.

We observed not long since in an almanac printed in our own beloved State the following: "You may always know a good farmer by his wood pile." We were led to inquire why, and in what respect, the wood pile is an index of the good farmer? Why not say, you may always know a good carpenter by his woodpile? Why not the saying hold true of the blacksmith, the merchant or the clergyman? Go through our State, for instance, and see what ratio the wood pile bears to the "good farmer." Do you think, dear reader, that you will invariably find the good farmer where you find the woodpile of several cords? If you do, we shall beg leave to disagree with you.

We will imagine a large farm with a wood pile of at least fifteen cords. Here, you will say, we shall find a good farmer. But let us take a look around the farm. It is winter. Go into his cellar and see if he has the beets, turnips, cabbages, squashes, pumpkins, and in fact all kinds of vegetables that a good farmer ought to have; but, to our surprise, we may find none of either sort. Corn, beans, potatoes and barley constitute the whole that is raised by this "good farmer."

Go to the barn, (but don't let him know you are going, for appearance sake he may get there first,) and take a look there. Now, this "good farmer" will, of course, have all things in trim order. But what is that? Why, the sills are covered six inches deep with manure. Look! that partition that got broken down, instead of being replaced is thrown into one corner. Ah! what a current of wind rushes through! I think it must be on account of that window being left open. What is that we see in the top of yonder snow bank? Well, it looks like the top of his ox cart. But, never mind all this, take another look at his woodpile, which contains at least fifteen cords, and set him down as a "good farmer." DOWN EASTER.

Wiscasset, Me., 1868.

REMARKS.—The merciful man is merciful to his beast; out of the abundance of the heart the mouth speaketh, and many similar aphorisms are predicated of the general fact that character, if we may so call the governing principle, is indicated by single acts. Napoleon Bonaparte was as great in making roads as in leading armies; Washington was a good surveyor, and a good farmer, as well as a good general. There may be exceptions—and it is even said that exceptions prove the rule—but we still believe that a good farmer, if not *known*, is at least indicated by a good wood pile; and we should certainly be disappointed to find a large and neat wood pile in connection with such cellars, stables and snowbanks as our correspondent describes. Straws show which way the wind blows; and notwithstanding Down Easter's protest, we must caution the young in particular,—as a little shows what a good deal means,—to look out for single acts! Nine people out of ten will judge by the "wood pile," or by any other single indication of the inner man.

BRAHMA HENS.

In September, 1866, I got of Dr. Charles Clark, of Montpelier, Vt., a Brahma rooster and pullet. For the year ending November 14, 1867, the pullet laid 128 eggs, hatched and reared at three sittings thirty-seven chickens, leaving seventy-nine eggs. I have sold $20 worth of chickens, dressed eight for my table and have now twelve which I value worth $12. Within the same year the first brood hatched in March by the pullet, laid ten dozen of eggs, commencing early in August. Since November 14, 1867, my remaining twelve have laid 21½ dozen of eggs, that have been sold, and we have used at home what we needed up to this date.

Moretown, Vt., Jan. 28, 1868. M. B. TAPLIN.

REMARKS.—Another correspondent, "R. B. H.," of Amherst, Mass., has been more unfortunate with the Brahmas. He writes:—"In the fall I had 40 as fine looking chickens as I ever saw, twelve crowers, twenty-eight hens, nearly pure blooded Brahmas. The roosters were very large and all of last year's growth. I have taken more pains with my hens than ever before, giving them warm feed, with meat and scraps mixed, and corn at noon, and a warm place to roost. Well, I have had but two eggs since the 15th of November. Some of the roosters have died and several of the hens. The why I would like to know. If that is the way with Brahma fowls, I want no more of them."

DISEASE IN HORSES.

A number of colts and horses are sick in this vicinity, and no one has yet been able to tell what the disease is. The first symptoms of disease are manifested by restlessness and a gaunt look. It seems hard work for them to stand on their hind legs, and they want to lie down most of the time. In two or three days, a swelling commences between their hind legs which sometimes extends out on to the belly nearly to their fore legs. The swellings, when perforated, discharge a colorless liquid, like water. Those that are sick do not seem to lose their appetite, and none have died as yet. D. F. J.

Newark, Vt., March 23, 1868.

REMARKS.—We are informed by Mr. D. P. Matthews, of Winthrop, Mass., whose advertisement of Cattle Feed appears in another column, that after having lost six horses by a similar disease, worth from $250 to $300 each, he applied to Dr. William Saunders, of Salem, who prescribed for and cured the seventh one, then sick. The swollen parts were bathed with ground mustard, steeped in water and cider vinegar, and then bound up by a cloth fastened over the back of the horse, and some medicine administered, which he supposed to be of a laxative nature.

APPLICATION OF MANURE.

As this subject is under discussion in the FARMER, allow me to express my views. Surface manuring I consider good practice, under certain conditions, or, rather, that it may be well to apply certain kinds of manure to the surface. Green manure should be composted with muck or something to fix the ammonia before it is applied as a top dressing. My own experience will not allow me to believe that it is an economical way to take manure green from the cellar and spread it on the surface, there to remain and evaporate as it most certainly will; for we are all aware of the disagreeable odor that arises from such an application. And is not the portion thus evaporated the most valuable part, the very essence of manure?

Neither can I agree with Mr. Cheever in regard

to spreading manure on the snow in winter. Several years ago, I spread a quantity on the snow in February, on about one-half of a piece, to be sown with barley and seeded to grass. The other half of the piece was manured in the spring. And now for the result, which I cannot give in bushels and pounds, but merely by observation of myself and neighbors, whose attention was called to this field. Where the manure was spread in the winter, there was not more than two-thirds as much barley as where it was manured in the spring, and the grass showed about the same proportion. The land was flat, so that the manure did not wash off more than it usually does from such land. Does it not wash from all land when there comes a heavy rain, and the ground is covered with solid ice, as it often is when we have heavy rains in winter and early spring? I believe it a better way to haul the manure out, put it in large heaps to be spread in the spring. I think there is a great waste in spreading manure in winter. The brooks and streams carry off too large a part of it. Still some of my neighbors spread their manure as Mr. Cheever recommends. A. L. W.

Hope, Me., March 13, 1868.

RED WATER IN COWS.

I think the cases of "red or bloody water," referred to by "B. B. S.," in FARMER of March 21, is a disease of a different character entirely from that I alluded to in a former article. I never knew an ox, or any other animal, but the cow attacked with the disease, and she always within ten days after calving. I think a man would be very foolish to knock an animal in the head as long as it would eat sufficient to fatten, as in the case of his father's ox, or in any other case where there is any prospect of a cure being effected. I admit I did not give a description of the disease which I will now do as well as I can:—

The urine in the above disease does not have the appearance at all of blood mixed with water, but the color is very much that of a strong decoction of hemlock bark. The cow appears in much pain and refuses food of all kinds, eyes glassy, and she grows weak very fast; and in my experience, has always died in from two to three weeks, if the disease was not checked in its first stages. A year ago this spring a townsman came to me and said he had been told that I had doctored cows for the red water, with success. Upon inquiry, I learned the cow had a calf two weeks old, had been sick eight days, and was very weak. I gave him the prescription, but told him I thought it was too late to save the cow. He procured the medicine and administered it according to directions, but with no effect, and the cow died a week after. I think if I could see friend "B. B. S.," I could convince him that there are times where it is best to knock an animal in the head. Some people can write better than they can talk, but I can talk better than I can write. LEANDER TAPLIN.

Chelsea, Vt., March 20, 1868.

PAID UP THE MORTGAGE.

In reply to "C. B. R.," I will say, I have paid for my farm in the way to which he alluded. I was a poor boy; my father let me work for a farmer till I was twenty-one years of age; but I had none of the pay, my father taking that, and clothing me very cheaply. At one and twenty, I left to learn a trade. At twenty-seven years old I was married, bought a house and shop in the village for $1000, running in debt for it. I paid $200 with annual interest yearly, until all was paid in five years. I lived there eighteen years, when for the good of my seven children, I sold out in 1850, for $1200, and bought my farm for $2050. I paid $800 down, and had time on the rest. Every cent of it was paid long ago. When I commenced farming, I bought stock, tools, seed and fruit trees. I always kept in mind the improvement of the farm. I have been offered $4000 for it twice, and refused it. I never was sued in my life for a debt of my own contracting. I have been careful to see that my children were educated, and have contributed something for the support of the gospel, and have paid for newspapers, especially agricultural journals. I am now sixty-three years old, with poor sight and little education. C.

Norwich, Vt., March 18, 1868.

REMARKS.—Something over thirty years ago, we had some personal acquaintance with our correspondent, with his shop, and with the farm on which he now lives, and we are pleased to learn of his success and prosperity. The reminiscence, however, is saddened by the reflection that of four of his sons who were in the Union army, only two returned to their pleasant home—of the others, one rests in Louisiana and one in Virginia.

BEANS FOR SHEEP.—WATER FOR GEESE.

In reply to an inquiry in the FARMER of the 7th inst., in regard to beans being injurious to sheep with lamb, I will say, though it is the first time in my life that I have ever written anything for publication, that I have fed beans to sheep more or less for twenty years, and always with good effect; never having lost a lamb, to my knowledge, in consequence, but have saved many by the judicious feeding of beans, when the sheep were thin in flesh. I have fed them ground and unground; but, as I believe all grain should be ground when fed to stock, I think the best way that I have ever fed them is by mixing and grinding together one bushel of beans with two of corn in the ear.

To "Anser," of Taunton, Mass., I will say that I have kept geese with good success, in a pasture along side of a stream of running water, into which they were never known to go for the season, being supplied with water to drink from a trough where the cattle drank, and do not believe they need more than enough to drink, any more than other fowls. FARMER.

Dover, Maine, March 14, 1868.

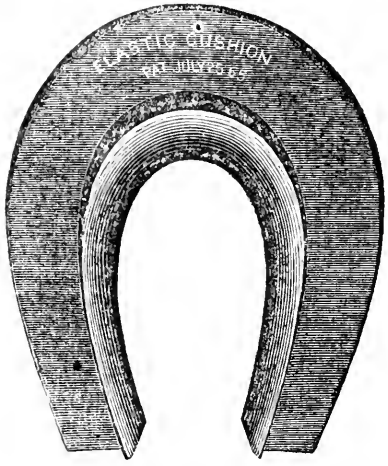
UNDERDRAINING FOR ORCHARDS ON WET LAND.

In reply to the inquiry of Henry Bell, of South Halifax, Vt., in the NEW ENGLAND FARMER of February 22, 1868, as to managing an orchard on cold land, too rough for cultivation, I would recommend under-draining as the best thing that can be done for such land. As different individuals have different notions about under-draining, I will give my way of doing it. If the land is very wet, the drains should not be more than four rods apart. I go in for a good drain, say three feet wide and from three to four feet deep, throwing the first twelve or eighteen inches on one side, and the bottom, or last that is dug out, on the other side. Where small stones are plenty, I fill the ditch to within one foot of the surface with stones, then cover the stones with hemlock or pine boughs, then fill in with the earth last taken from the ditch or drain. Sometimes it is necessary to have cross drains. After draining, I should take a grub hoe or a pick and dig up the grass around the trees, say some four feet each way from the tree, then mulch or manure. Pasturing sheep is a very good thing for an orchard, but it is death for the sheep, and I think it would be for the calves. R.

New Gloucester, Me., March 23, 1868.

ELASTIC HORSE SHOE CUSHION.

This invention, concerning which we have had some inquiry, is shown in the accompanying engraving. We have seen some very favorable evi-



dence of its value in cases of corns or tender feet, and one gentleman who had tested it for lameness caused by excessive paring of the foot, stated to us that it proved immediately effective in removing all traces of lameness. It is also said to be a sure preventive of "balling up" in winter, or picking up stones, and in summer breaks the concussion when driven over pavements or hard roads.

MILKING COWS BEFORE CALVING.

I have practiced taking it away for four years, in every case but one, which was a heifer that calved unexpectedly in the pasture. Her bag became considerably inflamed, but none of the others were so. A heifer coming four years old, dropped her second calf last night, March 20. Four days before the 16th, I took three quarts; on the 17th, three quarts; the 18th, 6 quarts; 19th, twelve quarts, and 20th, ten quarts, and the milk all right for use now. She had been milked thirteen months, and had been dry thirty-five days, previously. She has a very fine and large half Ayrshire calf. In my observation, milk rarely comes into the udder, much more than thirty-six hours before calving; but when it does I think it is better to be taken out, and by so doing have not known any injurious effects ever to follow. What say others?

Randolph, Vt., March 20, 1868. LACTIS.

AYRSHIRES—PROPORTION OF SEXES.

In your quotation from the *Country Gentleman* in relation to the proportion of "75 to 80 per cent. males," I think you mistook Alderney for Ayrshire; but the statement is probably as true of one breed as of the other, and in fact of all breeds. I allude to this subject now because I am a believer in a theory of producing sex to order; and I wish to have it tested as thoroughly as may be the coming season. It originated in Germany, and was explained in part by Prof. Agassiz at the New England Fair at Springfield. My experiments with cows and sows for the last three years, lead me to think the theory is correct, but there is some difficulty in rendering it practicable for lack of certain physiological knowledge, which I think will yet be attained. My experiments have resulted in securing at least three-fourths of the births of calves, females. Without repeating the theory here, I wish to say to all stock raisers, if you desire to raise females, cause impregnation at the *first possible* moment; if males, at the *latest* possible moment. There is one circumstantial evidence supporting the theory, in the observation of nearly all neat stock breeders; that is, as it is generally considered that impregnation at the *latest* moment is more *sure* of causing conception, it is generally deferred till then; consequently the theory of 75 to 80 per cent. *males.* TRY IT.

Vermont, March, 1868.

HOW TO MAKE A SMALL MANURE HEAP.

Some twelve years ago I bought twenty acres of land, for which I paid $500. Being a mechanic, my neighbors said, "Baker, you're sold." The land had been neglected, and yielded but little. Having no manure except what I needed for my garden, I asked my neighbors what I should do. Some said, "send below, and buy fertilizers." Believing that what had been done by one man might be done by another, I thought if they can make fertilizers "below," I can make them here. So I hired a man, a good farmer, and put him at work on the land in fair weather, and in foul, I took him into the shop. Upon about one-fourth of a cord of backhouse accumulations, I threw one peck of lime. This destroyed all unpleasant effluvia. Portions of this were then put into water in a half hogshead and stirred up. Having about a cord of muck under my shed, I spread a layer of this upon the ground and saturated it with the water from the cask; then more muck and more liquid, until I had worked into one heap the manure, muck, one bushel of lime, four bushels of ashes, four pounds of copperas, and half a bushel of salt. This laid until by thrusting in a stick I found it was heating, when it was shoveled over. In this way it was overhauled three times.

I then ploughed up about three-fourths of an acre of land which had not paid for planting, sowing or mowing for fifteen years, to my certain knowledge. After harrowing it, and furrowing very shallow, a little of my manure was scattered where I wanted a hill of corn. I made it last like the widow's oil, and until the whole field was manured. It was hoed twice, and I harvested forty bushels of corn which was as good a crop as I have generally raised from the same quantity of land by putting on fifteen or twenty loads of green manure, and ploughing it in and then manuring in the hill.

CR.

40 bushels of corn, worth 75c per bushel at that time	$30.00

DR.

1 bushel lime	$1.00	
4 bushels ashes	1.00	
4 pounds copperas	33	
½ bushel salt	1 50	
1 cord muck	1.00	
Ploughing ¾ day	1.50	
Hoeing twice	4.00	
Hilling	2.00	
		$12.33
Profit,—fodder paying for harvesting		$17.67

Not so badly sold that time. One year ago next March, with what there was left of me, I turned farmer. I tried the experiment with hen dung and loam, putting in the lime, &c., as before. I put it on the corn after hoeing, on about three-fourths of a two-acre piece. During its growth I did not discover a marked effect. In harvesting I was assisted by my neighbor, Mr. Alvord; and we concluded there was one-third more in weight of

ears on that part of the land to which the compost was applied. Does not this show that we have the ingredients for making our own fertilizers?

How did it happen that the old man in your paper of January 15th, hailed from Brookfield, Mass.? Perhaps I was thinking of my younger days, when I was manufacturing scythe snathes, in Sterling, Worcester County, and wrote, "Mass." I will try to do better this time. V. B.

Brookfield, Vt., Feb., 1868.

LAUREL POISONING.

About two years ago we published several remedies for sheep and lambs poisoned by eating laurel on being turned in the spring, when hungry for browse, into pastures in which this shrub grows. Among the medicines recommended were a strong decoction of bruised white ash twigs, a gag to prevent the animal from swallowing the greenish fluid which it is constantly gulping, lard, castor oil, sweet oil, &c.

Mr. H. C. Merriam, of Lowell, Mass., informs us that he invariably provides a quantity of castor oil every spring for this purpose, and that he finds it entirely satisfactory, if administered in season.

Mr. William Morse, of Canton, Mass., administers four or five teaspoonfuls of a mixture of two parts chamberlye, and one part yellow loam, by measure, with success, in case of lambs; and something like a pint for horned cattle, of which he has had some badly poisoned. In case of cattle, it must be given from a bottle. Yellow sand will not answer. It must be that yellow loam, which, when rubbed in the hand leaves a distinct coloring on the palm.

FEED FOR SUCKLING SHEEP.

Will some of your numerous readers inform me which is the best feed to start the milk in sheep that are having lambs now, but do not have milk enough. The sheep are in good condition. Turnips, I have none. G. W. Davis.

Wait's River, Vt., March 26, 1868.

Remarks.— The suggestions of experienced sheep raisers on this point will undoubtedly prove useful to many young and less experienced farmers. Pasture feed is probably the one thing needful. But when this is not to be had, the nearest possible approximation to that is naturally suggested. Roots, browse, early cut hay, &c., have undoubtedly been thought of by our correspondent. Other things being equal, some cow keepers say that water, slightly warmed, will, in cold weather, considerably increase the flow of milk May it not be so with sheep?

THE SICK OX.

I have cured several oxen with symptoms like those described by "A Subscriber" in Farmer of January 25, by filling an emptied egg shell with soot from a stone chimney, powdered and mixed in equal quantities with fine salt, and putting it down the ox's throat. Administer one such dose each morning for three days, then omit for three days, and repeat until you have given it nine mornings. Amos Kidder.

Alstead, N. H., Feb. 1, 1868.

Ladies' Department.

SCHOOL CHILDREN.

Past my window, cloud or shine,
Daily patter little feet,
Through the rain, or wind, or sleet,
On the cold and icy street,
Patter daily little feet.

First I heard them in the spring,
When the golden-vestured hours
Brought the first young straying flowers
From the Southland's fadeless bowers
To this wintry realm of ours.

Some were rough, and brown, and bare
Some were dressed with nicest care;
Some were merry, chubby, fair;
Some were slow, and scarred, and spare—
Taught too soon life's toil to share.

But these varied little feet
Patter up the self-same street,
Running oft along the edge,
On the green turf by the hedge,
So to feel the soft caress
Of the violets they press;
But the violets I weet
Tenderest are to scarred feet—
Unlike thoughtless human love,
Soothing least what needs its love.

Every morn I listen now
For the sound of little feet,
'Neath my window in the street;
And I wish to be a child,
With heart free as tresses wild
From the world's restraint and rule,
Hurrying to the village school. S. C. W.

DOMESTIC ECONOMY;

OR,

HOW TO MAKE HOME PLEASANT.

BY ANNE G. HALE.

CHAPTER X.

WOMAN'S OUT-DOOR WORK—GARDENING—VINES.

"'Woman's out-door work,'" says a fastidious reader,—"woman's out-door work?" We are not savage Hottentots, to build the hut, and hunt and fish, while our lords and masters smoke, or sleep, or quarrel; nor half-civilized Chinese, to delve and dig while John tends the babies, and cooks the rice, and does the weekly mending; nor yet, stupid, ignorant European peasants, whose uncouth figures and hard features and bronzed complexions tell of the degrading toil to which they and their ancestors have been doomed for centuries.

Do not be too hasty, friend. Surely the good housewife even here, in free America, in this age of culture and refinement, has out-door as well as in-door duties to perform. Duties, too, which she may not delegate to others without depriving herself of large means of intellectual and physical

vigor, which she cannot neglect without stinting her rightful portion of happiness and doing violence to the dictates of her better nature. I would not be understood as advocating any course of conduct contrary to the directions of St. Paul that women should be "keepers at home;" but there is nothing incompatible with the good name of *housekeeper* in spending a portion of every day outside the walls of the house. Not in needless shopping excursions, nor yet in merely listless walking—"spinning street yarn"—as the old adage says; nor in running about among neighbors, wasting time and strength in useless chatter.

It is a sad truth that until quite recently American women have suffered both in mind and body from too great confinement to the house. False notions of refinement and delicacy forbade their engaging in any employment, and kept them from participating in amusements that might take them beyond the atmosphere of close rooms. In cities and towns this was particularly the case; while even farmers' wives and daughters had begun to entertain the same foolish ideas, a demure walk or ride to church or to the city, once a week, being usually the only exercise which they took in the open air, besides the few minutes daily spent in arranging the milk-pans in the yard, or in feeding the poultry. And these trifling matters could not be accomplished without the protection of poke-bonnets and parasols, because everybody had such a horror of tanned and freckled faces and stout and vigorous forms. Said a lady in reply to an inquiry as to the health of her daughter (ironically, for she had no sympathy with such silly notions) "A—— has the misfortune to be well—*vulgarly* well—*unfashionably* well."

Certain it is that so cadaverous-looking creatures as our New England girls were getting to be had never been seen outside of nunneries, nor a more nervous and melancholy set. Peevish, discontented, and sickly, they were fast losing all claims to loveliness, when a few clear-sighted and deep-thoughted individuals promulgated new doctrines of health and beauty, and set the fashion of greater freedom in woman's dress and manners. Yet, as we usually oscillate from one extreme to the other, there is danger that the reformers of woman's laws and habits may carry their work so far as to rob her of that modesty and discretion which are her brightest jewels. Loss of bodily health from the most rigid seclusion would be far preferable to this deprivation of qualities so essential to the well-being of her moral nature. While we avail ourselves of all opportunities for a reasonable indulgence in out-door pursuits, let us be careful never to overstep the bounds of a lady-like propriety in any of our doings, and never commit an offence against the principles of Christian manners which form the basis of all womanly conduct.

We sometimes hear complaint made of the drudgery to which women are subjected, either in overseeing, or in accomplishing, the needed housework of the family. The condition of farmers' wives is said to be little better in that respect than that which used to be endured by the Southern slave-woman. If this be so, false pride, or ambition, or penuriousness, or all three of these daughters of the horse-leech are at the bottom of it. But I doubt if it is actually the case. Housework never degenerates into drudgery when performed judiciously and with a cheerful spirit. In the words of good George Herbert, so often quoted

> "Who sweeps a room as for God's laws
> Makes that and the action fine."

This drudgery, this housework, it is said, is wearing out and breaking down the constitutions of the best women in our land. Now, the trouble lies with the worker, not with the work, for it is one of the most healthful of occupations. The fact is, the larger part of all housekeeping operations are carried on in small ill-ventilated rooms, apartments that are either excessively hot from the use of stoves or ranges, or kept cool and comfortable—not to say *damp* and *dark*—by excluding as much of the sun as possible, This, more than hard labor, is the cause of the feebleness, and weariness of soul and body, for which the overworked farmers' wives receive so much commiseration. There is a remedy, close at hand, if they will only use it—out-door work, as a sort of recess from the requirements of the house, which should be taken every day, regularly. Moderate, yet active employment in the open air, where we can inhale the free breezes and bask in the unobstructed light of the sun, is all that is needed to renew and invigorate debilitated frames and exhausted energies; the sun-bath, latterly so highly extolled as a panacea for all ailments, is never required by those who take a daily portion of its life-giving rays.

But many will say they are well enough, and that they have no time to spare for anything not actually bringing them or their families some advantage,—this word *advantage* being but a synonym for *gain* with them. Having always an eye to utility, they do not understand how it is that matters whose value cannot come within the scope of dollars and cents may yet be more precious than gold. Good housewives, I trust, will make no such answer. They ought eagerly to undertake any employment, suited to their capacities, which will give them an hour's recreation each day from the monotonous cares and duties of indoor life. The occasion must not be neglected, even if it brings them only the one benefit of diverting their thoughts into other channels and thereby resting and refreshing the brain. Too many forget, or are unaware, how important it is for the mind to have rest and refreshment. They often realize the exhilarating effect which a change in the subject of their thoughts for a few minutes lends to their whole being; but they do not deem it necessary to provide for such a change; so they go on—day after day—month

after month—in the same dull round of housekeeping within doors. Regardless of the close union existing between mind and body, and how each must suffer from the misuse or overuse of the other, they consider themselves well so long as bodily health and strength are not impaired,—though they find that they are getting morose and moody, restless and discontented, and complain of a failing memory and of a want of interest in everything that should concern them deeply. Besides these troubles, it will not be strange, if, in consequence of such infirmities,—for infirmities they are, and of no slight danger, either—they are sorely tried by unfaithful and impertinent servants; while the children become disorderly and unmanageable, and even the husband and father gets unreasonable, and is quick to chide and find fault.

When a woman sees that herself and her family are falling into this deplorable state, she must break away immediately from her self-imposed fetters of seclusion and absorption in household cares and toils; and seek relief and relaxation for her perplexed and wearied brain in noting the beauty and the order which the Creator has spread around us in such variety. Setting aside, and trying to forget, her own imperfect and unsatisfactory labors, in the contemplation of God's perfect handiwork, her life will become ennobled, and her days be crowned with such peace and harmony as shall cast a bright reflection upon her household, and they, walking in that light, will more readily entertain and cherish holy and beautiful thoughts, and be stimulated to higher and better deeds.

Do you ask where is the field for this out-door work of woman? It is here, around her own dwelling, upon her own premises. It is actual manual labor—something which shall give exercise to all the muscles and all the thoughts, and that will require regular daily attention—that we want. And this we have in cultivating the soil and caring for its productions; in one word—*gardening*. Every woman ought to find it, as did Eve in the first garden, "a pleasant task to tend plant, herb and flower;" and even digging, hoeing, raking and weeding, neither difficult, nor tedious,—which she will after a little experience, if she use proper implements and wear a suitable dress.

No matter how barren the ground, or how humble the cottage, she may make it a scene of beauty and grace; providing happiness for all who behold the result of her labors, as well as garnering up for herself rich stores of strength and wisdom. Astonished and delighted by the wonders and glories which she discovers and develops, all the members of her family will vie with her in prosecuting the work; till the loveliness of the world around them will be but a counterpart to that beauty of holiness that so fills their hearts, that God himself, as in the Eden of old, will draw near, and talk to them in that celestial speech of which the lily and the rose are the best interpreters.

Do not wait till you own the house and land before you begin the work,—you will derive more benefit than the owner from your labors. Nor, if it is homely and old, till its appearance can be improved: vines and trees and shrubs can be so tastefully arranged around an ugly building as to lend it comeliness,—perhaps give to the view a more picturesque effect than if it were newer and grander. And don't refuse to spend your time and thoughts on even the smallest spot; a yard of ground may be the source of health and pleasure to you and your family.

Suppose you live in the city, where only a narrow strip—a few inches—of soil borders your dwelling. Even this may hold a vine, which you can train and trim, and which, climbing along the walls and drooping over the windows can curtain them with beauty and afford you many a recess from household toil, in watching and assisting its growth and the formation and perfection of its fruit. If, besides this, you have a small enclosed piece of ground—a "yard," you call it—where the children play, or rubbish accumulates, you can keep it neat, and dig and break up the soil—which is perhaps nearly as hard as the pavement—and plant there pretty shrubs and flowers; and teach the children to help you in ridding it of weeds, and in watering and stirring the soil. But if you are fortunate enough to have the control of a rod or more land you may consider yourself rich in material for health and happiness. This you may dignify by the name of *garden*.

The word Garden is derived from the Hebrew, and means an enclosed or protected spot for pleasure or delight. Hence places of amusement are sometimes called gardens, although they include no plants and show no traces of cultivation. But this primitive meaning of the word proves how naturally man turns to the simple grandeur and beauty of the vegetable kingdom for that real enjoyment which springs only from the gratification of his purest tastes.

Everybody knows there is great diversity of soil, and that soils may be altered to suit the vegetation desired. Earth is not soil. It is merely mineral matter—the broken and pulverized crust of the globe—only powdered rocks, we may say; and it needs the decomposed remains of animal and vegetable matter before it can become soil. Their decay imparts to the mineral particles certain substances which are necessary to the support of vegetable life, and sets free certain gases on which the germination of seed depends. Now, as soon as the smallest layer of dust is wrought out of the rock by the restlessness of air and water, little particles of vegetation—too minute often to be seen—being wafted to the spot, mingle themselves with this dust; and insects, seeking food and lodging for themselves and their progeny, burrow and build among the particles, then die and

add their portion of animal matter to the earth, and we have soil. Then the birds or insects or the wind drop upon this layer of dust, just made fertile, the seeds of the lowest forms of vegetation—lichens or mosses; and these spring into being, and absorb nourishment from the dews and rains, as also from the air, and then die and add more largely to the deposit among the rock-dust, and make it yet better soil—more suitable for supporting and promoting the growth of plants. And so the process goes on: each successive life and decay, whether animal or vegetable, or both, deepening the soil, till we have it ready for our luxuriant fields of grain and our elegant gardens and magnificent forests. From time to time, as the ground passes from one proprietor to another, its component parts are modified; and its crops vary according to the wisdom and discretion exercised in its cultivation.

All plants should have their proper soil—that in which they can attain their most perfect growth. For garden plants the hazel-colored loam obtained beneath the surface of the ground when excavations are made, is said to be best: it often has a good effect upon old fields and gardens when thoroughly mixed with their surface-soil. Black, or very dark-colored, is warmer than the light soil; and if not too heavy, brings its plants more quickly to maturity. But all soil must be loose in texture. This it is apt to lose in cultivation, and it can only be kept by constant hoeing and stirring—sometimes by the addition of sand and gravel. The gases generated in its bosom, which are essential to the health of its vegetation, cannot escape unless due attention is paid to this matter.

Besides good soil, plants need light, and sunshine, and air, and water; there must be care in the arrangement of a garden so that all may get their proper share of these good gifts. Nothing is gained by crowding or stinting. One plant with ample room for air and sun will attain a better growth, and put forth more blossoms, and perfect more fruit, than twenty dwarfed and starved by trying to live in too limited space.

A woman's first thoughts in making a garden are what flowers she shall have and how she shall place them. But it will be well for her to try her hand also at vegetables—a few for family use. And then, if she has land enough, fruits—the smaller ones, especially. But, above all, she will want trees: because, after all her delight in the frail beauty of the flowers, she feels a deeper, a loftier joy in the grandeur and glory of their leafy arches, which year by year point higher and higher towards heaven; while in the rustling of their verdant boughs she seems to hear sweet whisperings of peace, which they have thence brought down to quiet her restless soul and over-anxious heart. If it be possible, plant at least one tree. Not only for the joy and peace that it can impart, but to keep your memory green in the days when your feet may no longer walk along the household ways, and your voice is no more heard within the walls of home.

But a tree requires much room to spread its branches, so many must content themselves with the next best thing—a vine. This is the most graceful of plants, and always desirable—because it so readily hides ugliness and deformity. No house should be without one, for a hand's breadth of soil in which to place its root can certainly be found by every dwelling.

The Vine, *par excellence*, the common grape, *Vitis Vinifera*, gives its name to the whole great family of climbers and runners; and commends itself first to our notice, with its refreshing shadows from the sulfry noons of summer and rich burden of luscious fruit for the autumn—if we care nothing for the delicate fragrance of its modest blossom in the spring time. Long before gardens were designed, or mankind dwelt in houses, the wandering tribes of the East had discovered the healthful properties of the grape, and so when they settled into communities each man had his own vine. As civilization advanced, attention was paid to its culture, till large tracts of land were set apart for this particular purpose. Almost from time immemorial these vineyards have been a source of wealth to the southern part of Europe; and when the Spaniards took possession of Central America the Romish priests carried thither this vine. It flourished luxuriantly, spreading throughout Mexico and Texas, and, finally, reaching California; some parts of which at the present time are prolific in a wine-bearing grape—descendant of this stock. For many years attempts were made in the United States to naturalize the wine-grape of Europe, but the climate proved unfavorable. Our wild vines then began to attract the notice of horticulturists; and by careful cultivation, crossing and re-crossing with other species—both native and foreign—we have now many delicious varieties.

The first seedling from a native grape, that was satisfactory, received the name Isabella, in honor of Mrs. Isabella Gibbs, who raised it, about the year 1818. It thrives well throughout the country, except in the northern part of New England, where the autumn is too short for the perfection of its fruit. It varies greatly, both in flavor and appearance, according to the locality in which it grows; but when well-ripened it is always a favorite. It can be kept through the winter, by packing with cotton or saw-dust, in a dry, cool place. Soon after this variety was introduced came the Catawba, from the banks of the river so-called, in North Carolina. For many years these two were the only or nearly the only kinds deemed worthy of cultivation.

Then came the Delaware, a native of Ohio. Its beautiful, compact bunches of small berries, rich in nectareous juice, suit the palates of the Yankees so well that they are willing to give it the protection and shelter that it needs to get through their long, cold winters. After this, the Concord, originating

in Concord, Mass. This is one of the hardiest and most prolific of grapes, and ripens earliest. Then there are the hybrids, obtained through the care and patient skill of Mr. Rogers of Salem, Mass., yielding handsome and delicious fruit. But individual tastes vary so much in deciding upon the qualities of different species and varieties of the grape that, if you are about making your first attempt at its culture, the wisest course to pursue is to procure an offset of one that has been most satisfactory in soil and location similar to your own.

The care of a vine any woman can attempt—with the exception of taking down and putting up its higher branches. With a spade and fork, of suitable size, she can dig the soil, set or plant the roots, and keep the ground upon them in good order. She can also do much of the pruning; and train its branches more naturally and gracefully than a man would be likely to do. As a general thing, common garden soil, if it is light and warm, is sufficient for the grape. Wood-ashes are an excellent fertilizer for it, also soapsuds and all the slops of the house. Broken bones, or bone-dust, and gypsum, may be used if the soil is sandy.

For planting, take strong, well-rooted vines of two years, and be careful to spread out the roots so that they do not cross or overlay each other,—if they get tangled and knotted the flow of the sap is interrupted and they will not flourish. Set them about six inches below the surface of the ground. A successful cultivator says that the best time for pruning grape vines is the early part of November; and that leaf-mould or chip-dirt, an inch or two deep should cover the earth upon their roots through the winter. The branches should be taken down every autumn at this time, and covered in the same way, until the vines are very large. If vines put forth a great abundance of foliage, some of the leaves may be taken from branches where no fruit has set, or the end of the shoots on which the grapes are growing may be cut off; but full-grown leaves near the fruit must on no account be removed, unless they are diseased,—early leaves must never be taken, because an early and good crop of fruit depends much upon the leaf's protection in its first stages.

A housekeeper who has once realized the advantages of a grape vine will never be without one. Aside from the attractive appearance it gives to home—as it hangs upon the blank, bare side of the house or barn, and covers the clumsy porch and shed—and the pretty arbor of leafy coolness it makes for an hour of quiet reading or musing in the wearisome midsummer days, the convenience of its fruit for family use should not be lightly esteemed. But in our enthusiasm for the grape let us not overlook other vines, which, if yielding us no bodily nourishment, yet serve a high intellectual purpose as ornaments for our grounds. The eye delights in variety of scenery, and the different climbing plants add each their peculiar charms to the view.

Next in order, by reason of beauty and strength, stands the *Ampelopsis quinquefolia*, the American woodbine, or Virginia creeper. It grows wild in our woods, climbing over the gnarled oaks and maples, and creeping and hanging around the rocks. The leaves are very glossy, of a deep green till autumn; then they change to scarlet and crimson, shading off to a rich purple, and have a fine effect falling upon gray walls, or drooping over the white porches or porticos of houses. The flowers are small, of a dull, greenish red, and produce clusters of dark blue berries, said by some to be poisonous. It should be set in rich, damp soil, and it flourishes best away from the full heat of the sun. Bring it from the woods late in the fall. It can be increased by slips or cuttings. It is so hardy,—needing no protection from the frost—and so cleanly, and so beautiful in its autumnal glory, that it ought to be more widely cultivated.

The *Celastrus scandens* or Climbing Bitter-sweet, sometimes called Staff-tree and Waxwork, is another native vine of great beauty. It is a strong and rapidly growing vine, easily trained over arbors or upon a trellis. The foliage is a handsome green; the flowers, also green, are insignificant, but the fruit is highly ornamental. Long after the winds of autumn have denuded the vine of its leaves its clusters of five or six berries—or rather, capsules, which open their bright orange doors and disclose the coral-like berry—give an exceedingly cheerful appearance wherever they hang. Long strips of the leafless vine, adorned with these brilliant clusters, if gathered before the frost comes, will keep their beauty a great while; and, braided with the Christmas evergreens for parlor decorations, lend an air of cheerfulness to the dullest home. The Celastrus should be raised from seed, or from the young shoots. It delights in a moist, shady situation.

The *Tecoma*, an abbreviation of its Mexican name, *Tecomaxochitl*,—or Trumpet-flower, is our most showy native vine. It was formerly classed among the Bignonias It is said that it will grow wherever the Isabella grape flourishes. In some situations it needs to be covered with mats or straw through the winter. Its foliage is of a light green; its blossoms, which are tubular, are sometimes three inches in length, and over an inch in diameter at the mouth. They are of a scarlet-orange hue and grow in bunches. During two or three weeks in July they are a gorgeous adornment for the verandah or doorway. The Tecoma or Bignonia is raised from cuttings or layers, or from seeds, which follow the blossom in long coarse pods. It thrives well in a soil of sandy loam, and likes a plenty of sun.

The *Clematis*, Traveller's Joy, or Virgin's Bower, is deservedly a favorite among wild creepers. It grows rapidly, and bears an abundance of white flowers. These are succeeded by winged seeds, growing in tufts—looking like elegant plumes. Strips of this plumy vine are also beautiful for indoor decorations. The plant is easily raised from

seed or cuttings. It does best in a damp, secluded place. Much of it perishes every autumn, but still the vine grows steadily. There are several foreign species under cultivation bearing purple, white, or blue flowers, which are fragrant.

Of all flowering vines, the *Wistaria sinensis* is considered the most beautiful. It was brought from China in 1818 by Dr. Wistar of Penn. It is rather tender and thrives best on the south side of a house. It needs light, rich soil. The blossoms, which hang in long clusters, are of a delicate purple and yield an exquisite fragrance. They make their appearance in May—before the leaves put forth; and again, in August, they cover the vine. The foliage is of a cool, bright green. The vine should be taken from its supports in the autumn and covered with stable litter. It is increased by layers or cuttings.

The *Lonicera*—bearing the name of Adam Lonicer, a German botanist, is the Honeysuckle, called in England, Woodbine. We have two or three native species. The Scarlet is the most widely known. It is quite hardy and easily raised from cuttings. The blossoms resemble those of the Tecoma, but are much smaller. Being a steady bloomer it is a fine ornament for a porch or door. The Dutch Honeysuckle, the monthly sweet-scented, is a fine variety, with more showy and deeply shaded flowers. The buds are purplish—the open blossom is of cream-color and white. The seeds, in a scarlet berry, look very pretty long after the flowers have gone. There is nothing sweeter than the fragrance of this blossom after the evening dew has fallen upon it. Plant it at a western window or door. Sow the seeds in the autumn, or take cuttings in the spring.

Of climbing Roses, the *Boursault* and the *Prairie* are the most hardy. The common Boursault produces dark crimson flowers, of a velvety texture, in great profusion. The blush Boursault bears larger, fuller flowers of a bright pink. These are very elegant for a trellis. The *Michigan*, or *Queen of the Prairies*, is yet handsomer; its blossoms, of a bright, glowing hue hang in large, heavy clusters. None are fragrant. But there is an old-fashioned white rose, bearing a semi-double flower which yields a delicate perfume. With careful trimming this grows to the height of twelve or fifteen feet. All of these roses are very easily raised from cuttings.

Besides these vines of a perennial growth there are many annuals that may be trained against the house, or over trellises, or upon pillars. The Canary-bird Flower—*Tropæolum peregrinum*, the blossoms of which when partly open bear some resemblance to a bird, is quite pretty. It needs a light soil to produce many flowers. They are of a delicate yellow. Belonging to the same genus is the Nasturtium, some varieties of which yield very elegant blossoms, crimson, scarlet, claret, purple, orange, or light yellow, — plain, blotched or streaked. It needs a light, sandy soil. Plant the seeds about an inch deep and train the plants upon a trellis.

The *Convolvulus*—called by some *Ipomæa purpurea*—the Morning Glory, is our most common annual climber, and it will always be a favorite though its flowers close so soon. The most beautiful species are natives of Central America. The Convolvulus has been much improved latterly, and we get sometimes plants upon which may be found blossoms of all the shades of blue, red and purple—either separate or mingled with white, making a beautiful show. It grows best in a damp soil. Plant the seeds an inch deep, train it on slender lattices, or poles. The *Dolichos*, or Hyacinth Bean, bearing purple or white flowers, is quite pretty. Cultivate it like the Morning Glory.

The *Phaseolus multiflorus*, the Scarlet Bean—Scarlet Runner of South America—blooms profusely, and is highly ornamental. The blossoms, in long racemes, are bright scarlet; the foliage of a deep green. One variety has pearl-white flowers. Plant the seed an inch deep, in light soil a little deeper. Train it like the Morning Glory. It has a very lively appearance about a doorway or over a window. The *Cypress* Vine—*Quamoclit vulgaris*—is a very handsome plant. The blossoms are crimson, contrasting finely with its beautiful green foliage, but they close quickly. *Scald* the seeds, let them lie in the water till cold and plant them immediately in pots. Keep the pots in a warm room, till the plants are two inches high, then sink the pots into the earth, on a southern exposure, and train the vines by strings to a high window; or set the pots around a pillar, or high pole, and arrange twines for them in a similar way. The Cypress Vine is very pretty for a parlor plant through the winter.

Lathyrus odoratus, the Sweet Pea, may be made to climb five or six feet against the house, or upon a trellis, or around a pillar—like the Cypress Vine. Soak the peas over night in cold water, then plant them in rich soil, about an inch deep, five inches apart. Leave the first flowers for seed; after that cut them off as soon as they begin to fade, and you will have their purple, and pink and white wings, heavy with fragrance, fluttering, one after the other, far up the vines till late in autumn. *L. latifolius*, Everlasting Pea, is a perennial plant similar in appearance to *L. odoratus*; it is raised by division of the root as well as seed.

The Climbing Fumitory must not be forgotten. The French call it *Fumeterre*—(of which our name is a corruption) smoke of the earth. Sow the seed very early, in a warm situation. Have a light frame to support it. You can train its delicate foliage into any design that you please. It is a biennial: the second year it will be covered with beautiful pink and white flowers all summer. There is also the *Maurandia*, a delicate creeper for a frame;—this is a perennial, and needs taking within doors for the winter. It has elegant purple, pink, or white bell-flowers. Then there is the *Scypanthus*, a native of South America, with its

curious yellow flowers, which is easily raised from seed every year, and is quite pretty for a frame.

And now, after all these brilliant and graceful objects, let me say a few words in favor of more modest and neglected vines. Take first the Hop: when well-cared-for it grows luxuriantly, and with its large, deep-green leaves makes fine drapery for a lattice. Its ripening clusters of blossoms are a pretty contrast for other flowers in garlands or boquets, and are useful in medicine and cookery. When the scales of these,—the hops,—are filled with their bright yellow dust they should be cut from the vine, and carefully spread upon clean papers, in a close room, till dry to the touch; and then packed tightly and kept in a dark closet till needed. All housekeepers know the value of the fruit of this old-fashioned vine, but seldom pay attention to the beauty of its foliage. Take an offset from a thrifty vine, and set in rich, moist soil: train it over an arbor, or a lattice, or around a pole,—it is handsome in any situation.

The Tomato may be trained upon a fence or the side of a building. Fasten its branches with small bands of leather or canvass. The plant makes a fine show, and growing thus bears an abundance of fruit. Then there is the family of Gourds and Cucumbers. Their foliage is good, and the fruit often singular in its form and of a bright color. The Mock Orange is especially beautiful, resembling that fruit so closely both in shape and color as to deceive the most scrutinizing. Like the tomato these need good soil. They can be made a very effective ornament for dilapidated fences and clumsy out-buildings.

It seems strange that any home should be without vines when there are so many handsome and hardy varieties all ready for use. But as soon as women become convinced of the need of out-door work to improve and perpetuate their health and loveliness, they will see that the cultivation of these graceful plants, being the easiest and simplest of out-door work, is just the employment for their first efforts in horticulture; and will get so accustomed to their presence that no dwelling will appear complete unless its sharp angles and ungainly proportions are softened and shaded by their luxuriant beauty.

[The subject of the next chapter will be "Woman's Work among Garden Plants."]

For the New England Farmer.

TREATS FOR THE LITTLE FOLKS.

MR. EDITOR:—I often find in your articles of Household Economy receipts for making cake and other aricles of food for grown-up people, but I have never seen anything of the kind that was expressly designed for children. Now, I have not forgotten the pleasant surprises which my brothers and myself used to find sometimes on coming home from school, in the shape of turnovers, fancy cakes or candy which our mother had prepared on purpose to please us. I do not believe in coaxing children to be good—especially by rewards administering to the indulgence of their appetites,— but a little harmless entertainment that is just fanciful enough to suit their childish tastes may often brighten up a rainy holiday, or a tedious confinement within doors from ill health, or may add to the enjoyment of a birthday festival Having a few receipts that have done good service in this way, and supposing there may be others of my way of thinking, I take the liberty to send them to you for publication, if you think them worthy your notice.

Trifles.

Beat one egg and a teaspoonful of sugar together, and then stir in as much flour as will make a stiff dough. Roll it very thin, and cut it into round cakes about the size of an old-fashioned silver dollar. Fry them in hot lard. When they turn over they are done. Take them up; and put jelly in the centre when they are cool.

Wonders.

Beat a quarter of a pound of sugar and the same quantity of butter together, then add three eggs whisked to a froth. Mix them well, and season with nutmeg, then stir in flour till the mixture is stiff enough to roll. Roll it as thin as for cookies. Cut it into pieces two inches square. Make four gashes across it, leaving an edge all round half an inch wide; then cut another gash across the middle to divide the three strips made by the first gashes, and twist and roll and curl them as fancifully as you please. Then fry them in boiling lard.

Marvels.

Dissolve one teaspoonful of soda or saleratus in a cup of milk; season with nutmeg or cinnamon. Make it stiff with flour. Roll it very thin, cut them round, as large as a cookey, and fry them. Sift sugar over them while hot.

Whims.

Rub flour and butter or lard together as for pastry; then beat one egg with as much sugar as it will moisten, for fifteen minutes. Dissolve as much soda as will lie on a dime in a tablespoonful of milk, and mix it with the egg and sugar. When it is well mixed add half a teaspoonful of essence of peppermint or checkerberry. Stir in the shortened flour till it is thick enough to roll. Then roll it upon a buttered tin as thin as for cookies and cut it into strips four inches long and one half an inch wide, and bake eight or ten minutes in a moderate oven.

Snow-balls.

Beat one and one-half cup of sugar with three-fourths of a cup of lard and two eggs. Add two cups of milk and three-quarters of a cup of yeast and a little cinnamon and flour to mould. Let it rise. When it has risen to be very light, roll it thin and cut it into cakes about the size of trifles; lay three raisins on each and roll them into a ball. Fry them in hot lard, and when done roll them in

powdered white sugar till they are well coated with it.

Nut Cake.

Beat two cups of sugar and two-thirds of a cup of butter and two eggs together for fifteen minutes. Mix two teaspoonfuls of cream tartar in three cups of flour and add it to the sugar, butter and eggs. Then dissolve a small teaspoonful of saleratus or soda in a cup of milk and stir it all well together. Pour it into a broad pan that has been well buttered. Sift sugar over it, and then cover it with the meats of walnuts. Bake it twenty minutes.

Cocoa-nut Cakes.

Beat the whites of three eggs very light and dry; stir into them very gradually ten ounces of powdered sugar, then stir in as much grated nut as will make a stiff paste. Take a tablespoonful in your hands and roll and form it like a pyramid for each cake. Place them on paper upon tins and bake them in rather a cool oven till just a little brown.

Dimples.

Beat the whites of three eggs very dry; add gradually three-quarters of a pound of sugar, and beat it till it is well mixed. Blanch almonds and cut them into pieces as small as peas, and stir them into the egg and sugar—you will want three-quarters of a pound of almonds for three eggs. Drop the mixture in spots as large as an old-fashioned cent on white paper, upon a tin, and bake it in a cool oven.

Kisses.

Beat the whites of three eggs to a froth, then stir in powdered white sugar, a little at a time, till you have formed a very thick batter. Add two or three drops of the essence of lemon. Wet a sheet of white paper and lay it on a tin, and drop this mixture upon it in lumps about the size and shape of a walnut. Set them in a cool oven, and as soon as their surface is hardened take them out, and remove them from the paper with a broad-bladed knife. Let the oven cool still more, then place these little cakes—laying the flat part of two together—on a sieve, and return them to the oven; where they must remain for fifteen minutes before they are done.

Sugar Candy.

Three cups of sugar, one cup of vinegar and one cup of water. Flavor with anything you please, or drop in nutmeats cut in small pieces, and boil gently till it will harden when dropped in cold water.

Molasses Candy.

One cup of sugar, one cup of molasses, and a piece of butter an inch square. Boil it till it will rope; then stir in half a teaspoonful of soda, and pour it immediately into a buttered dish. When it is cool pull it and cut it into strips.

Chocolate Candy.

One cup of sugar, one cup of molasses. Boil it till it will rope, then grate into it two ounces of chocolate, (one quarter of a cake,) and after it is well stirred in, pour it into a flat dish; and before it is cold cut it into pieces about an inch square.

NENA.

For the New England Farmer.

WORMS IN FLOWER POTS.

MR. EDITOR:—Will you or some of your correspondents tell me through the columns of NEW ENGLAND FARMER the trouble with my house plants. The dirt is full of white worms, from one-fourth to half an inch in length. I have used woods dirt, and that became wormy in the same way. My Monthly Rose seems to suffer worst of any. One of my neighbors has one that troubles her the same way. M. C.

Northfield, Vt., March, 1868.

REMARKS.—We should advise our correspondent to adopt the following plan. Take the plant from the pot, carefully removing the dirt from the roots. Wash the roots, taking care not to break them. Then repot, in dirt that has been heated in an oven sufficiently to kill any eggs of insects, or other animal life that may be in the soil. A little air slaked lime mixed with the dirt will have a tendency to keep out the worms, besides being beneficial to the plant. Mix in a little powdered charcoal with the dirt, which will keep it sweet, and add to the thrift of the plant. Roses need soil and drainage, and, in the words of Breck's *Book of Flowers*, "are not injured by heavy manuring. I have found that the more manure, if not an extravagant quantity, the better the bloom."

THE NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

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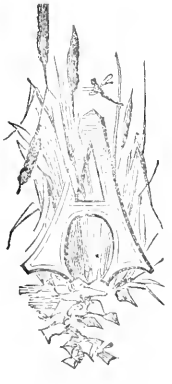
HAYING IN JUNE



A LARGE part of the haying in southern and eastern Massachusetts will be completed before the close of this month, and the farmers all over New England will be busily engaged in it, and we wish to call the attention of our brother farmers to the importance of cutting grass before the seed is ripe. Farmers differ in their opinion and practice upon this subject. The opinion is becoming very general among milk raisers, that grass cut while it is green and succulent, and before the stalk has been changed into woody fibre, will yield much more of that nourishment upon which the flow of milk depends, than the same grass after the seed has ripened. All admit that ripe hay is not itself so nutritious, but many claim that the ripened seed makes up for the depreciation in the hay, and say that for working horses and oxen ripe hay is the best.

This is a question of great importance, and should be well examined. Not only is the value of the present crop involved, but the effect upon the roots of the grass, and the future crops also. When grass is cut while green, and properly cured, it retains the essential character of grass. The water is evaporated, but the dried and condensed juices remain in the tender fibre, and when received into the stomach of the animal, are easily softened and digested. But it is questionable, whatever may be said to the contrary, if woody fibre is ever digested; and in our method of cutting and making and feeding hay, most of the seed is shaken out and lost before it reaches the cattle. If hay were all cut and moistened before feeding, the cattle would get more of the seed than they do now.

Large, over-ripe herdsgrass is very unpalatable to cattle, and really contains very little nutriment. A few years since we had occasion to purchase a load of hay for horse feed. The farmer of whom we purchased it sent us a load of pure, clean, bright herdsgrass, of large growth, which he called number one hay. But the horse, which was the party most interested in the matter, differed with him in opinion. He was very reluctant to eat it, and in spite of his usual amount of grain, grew poor upon it, and we were glad when it was gone. This is a very common experience among horse-keepers. It is frequently remarked that redtop and herdsgrass make better hay than clear herdsgrass; and this is true, because the redtop, even when ripe, does not become so completely changed into woody fibre.

Now if herdsgrass is cut before the heads form, it makes good hay, and is worth nearly double for any stock. It is soft and succulent, and easily digested, and retains its aroma,

and cattle and horses readily eat it. But you will say, I shall not get so heavy a crop; the grass is not so large, and early cut hay, when dried, will not weigh as much as ripe hay. Well, grant it. But the early crop, being more nutritious and much better digested, the stock will not require so much, and the second growth, whether for fall feed or a second cutting, will make up the difference.

But this is not all. When the plants of clover and herdsgrass have once ripened a crop of seed, a large portion of them die in the ground, and the next crop is diminished in proportion. Weeds and coarse grasses have an opportunity to ripen and scatter their seeds. The English lawns are preserved green and thick, by frequent mowing; they are never allowed to ripen seed, and if we would preserve our meadows in grass for a series of years, instead of being obliged to plough up and reseed every three or four years, we must cut the grass early, and never allow the seed to ripen. Then, with top dressing, they may be kept in good condition many years.

It requires, perhaps, more labor to dry early cut grass than that which is ripe. But this difficulty is met by the hay tedder, which is coming into general use. Now with the mower, the tedder and the horse-rake, hay may be cut at the proper time and rapidly secured. Two weeks will do the work that formerly required six, and the hay will be housed in vastly better condition; and last, though not least, the land will be left in much better condition for future crops.

There is one other subject that should be mentioned in this connection, for all our farming operations have a relation to each other. Does the abortion in cows and ewes, which is becoming so formidable an evil in many parts of the country, arise from ergotted hay seed? It is a well known fact that the seeds of some grasses, as well as those of rye, will take on the change to ergot. This has been suggested as the cause of abortion. The question is well worth an examination. If it proves to have any foundation, the remedy is obvious,—never let the grass form seed.

Brother farmers, this is a subject of great importance; will you look at it, not under the influence of old habits and prejudices, but examine the question anew, carefully observing the facts?

WHEAT CULTURE.

The February number of the Report of the Department of Agriculture has some interesting remarks upon wheat raising. It is believed that our old method of sowing wheat broadcast is both a waste of seed and loss of crop, and that drilling at sufficient distance to allow culture by the horse hoe, will "increase the crop, improve the quality, destroy weeds, mitigate drought, promote growth, hasten maturity, and resist or anticipate, insect attacks." This is surely a sufficiently long list of advantages; all of which, except earlier maturity, we have no doubt may be realized. A half a bushel of seed, saved per acre, when wheat is $2 per bushel, with a proper implement, will go far to pay the cost of cultivating.

The writer says "scarcely less than twenty millions of acres will suffice for the wheat area of the United States, requiring nearly thirty million bushel bushels of seed, and little more than ten bushels per acre are produced. Ten millions bushels of this seed, worth perhaps sixteen millions of dollars might be saved to the country, sold for bread, and the proceeds applied to the cultivation of growing wheat, with a fair probability of obtaining, by such means, more than twenty additional millions of bushels for the bread of the nation. So large a portion of this seed is now wasted by sowing at irregular intervals, and at irregular depths, and so much is choked by weeds that farmers say they cannot use a less quantity. But with universal drilling, at a width to allow the tillering and growth that would result from hoeing or cultivating, two-thirds of the present supply would be more than ample. About one bushel in every seven produced in the United States is saved for seed, while one in twenty ought to be sufficient. Thus millions of bushels are wasted, buried in the earth with no prospect of resurrection, and sacrificed to ignorance and thriftlessness. It is taking the children's bread without the poor satisfaction of having fed a dog with it."

The cultivation by the hoe or cultivator between the drills is now very common in England, and has begun to be practiced in this country. One pound and nine ounces of Tappahannock wheat, sown in drills, eighteen inches apart, and cultivated between the drills, yielded 186 pounds, in North Carolina, last

year,—about one hundred and twenty to one, instead of seven to one, our average crop of late years.

In 1866, Ohio gathered but three bushels of seed for every one sown. What is the use of such culture? The English farmers have a saying that the worst weed for corn is corn. By corn they mean wheat, and the meaning of the saying is that it is worse to have the wheat too thick, than to have other weeds among it.

If there is not in use at present, a suitable cultivator for working between the drills, Yankee invention cannot be long at fault in producing one, if the wheat raisers call for one.

In the business of farming, as in many other things, men know better than they do. They will not forsake the easy going practices of their fathers till necessity compels them. They will even hold on till necessity presses hard upon them.

We think that necessity is now upon us, and we must give up our careless and wasteful methods of wheat culture and commence a reformation at once.

MANURES AND HOW TO APPLY THEM.

At a discussion before the Farmers' Club in Bedford, N. H., the chairman said that after trying several ways, he prefers breaking the sod early in the fall, not less than seven inches deep. In the spring drawing out the manure from the barn cellar, after it had been forked over, placing it in heaps, making five heaps from a cart body full, five paces apart each way, spreading it and harrowing it under to the depth of three inches. If to be planted in corn or potatoes, chain it both ways, and drop the seeds on the squares. If to be sown for fodder, harrow in four bushels of oats to the acre, and cut in the milk, which makes superior feed for milch cows, nearly equal to herdsgrass. After the oat crop is harvested, plough the stubble under across the furrows. The next spring, harrow; haul from the barn cellar the same quantity of manure as was applied to the oat crop, about twenty-five loads to the acre, spread as before, and cultivate or harrow in to the depth of three inches; sow on three bushels of barley, eight pounds of clover and twelve quarts of grass seed; harrow with a light harrow and roll. You will then get a good crop of barley, a good catch of grass, and a mowing field that will give you good crops. But do not fall feed unless you wish to spoil your mowing fields, and be obliged to take them up in three years.

Mr. C. suggested the addition of two bushels of salt, and three bushels of plaster per acre, immediately after the manure is spread, to be harrowed in with it, to keep the ammonia from the manure escaping.

Mr. R. had doubled his crop of grass by the use of one hundred bushels of leached ashes per acre.

At the close of the discussion the club voted, twenty to one, that manure should be applied to the sod after it had been turned over, and as near the surface as it is possible to cover it, not over three inches in depth.

SALES OF SHORT-HORN CATTLE.

The *Country Gentleman* furnishes the following notice of recent sales of Short-Horn cattle:—

H. G. White, South Framingham, Mass., has sold to B. Fellows, Monroe county, N. Y., the Short-Horn bull *Marmaduke* 5935. To the Franklin Co. (N. Y.) Breeding Association, the bull *Trumps* 6263. And to the Massachusetts State Lunatic Asylum at Worcester, the bull *Protector* 7156, by Autocrat 5334, dam Yarico 27th.

Mr. G. T. Plunkett, Hinsdale, Mass., has sold to A. G. Clark, Factory Point, Vt., the bull *Emperor* by 6th Duke of Thorndale 4752, out of Fleur de Lis, and the cow *Red Lady* by Rosy Duke 6142, dam Rose Standish. Also, to C. E. Coffin, Muirkirk, Md., the heifer *Ringlet* by Mosstrooper 5025, dam Rose Standish. Mr. P. has sold a South-Down yearling ram to Albert Newhall, Greenfield, Mass.

Mr. Jas. O. Sheldon, White Spring Farm, Geneva, N. Y., has sold to S. W. Robbins, Wethersfield, Conn., *4th Duke of Geneva*, from 7th Dutchess of Thorndale, by Baron of Oxford (23371,) for $3000. Also, to Wm. S. King, Esq., of Minneapolis, Minnesota, *5th Duke of Geneva* from 3d Duchess of Geneva, by 3d Duke of Geneva (23753,) for $3000. Also, to Mr. Josiah Fogg, Deerfield, Mass., a fine roan bull calf from Brightness by 10th Duke of Thorndale. To Messrs. F. M. Van Sicklen and J. A. Shedd, Burlington, Vt., *2d Earl of Oxford*, a promising red bull calf from 3d Maid of Oxford, by 2d Duke of Geneva (23752); the cows *Penitence* by Royal Oxford, dam Peerless by Grand Duke (10284); *Magenta* and heifer calf by 2d Duke of Geneva—Magenta by Grand Turk out of Minnewawa; the heifers *Moselle 2d* by Royal Oxford, from Mazurka 9th; *Laura* by Imperial Oxford, dam Lady Laura,

and *Brilliant* by 6th Duke of Thorndale, dam Bright Eyes 5th.

Mr. H. G. White has also sold to E. Shaw, Rockingham County, N. H., the Jersey bull *Lexington*, a grandson of the cow May-day, winner of sweepstakes (silver medal) at the New England Show at Providence, R. I., in 1867.

BEAN CULTURE.

The New York *Rural* is writing up bean culture, and we think with very good reason. At the prices of the past few years they must be a paying crop. They require less labor than corn, and will yield a good crop with less manure. We know no good reason why their culture should not be largely increased in New England. They require clean culture, and on land that will give but a moderate crop of corn, will yield from twenty to thirty bushels to the acre. We think the quantity raised in this State is much less than formerly. The early and late pea beans and the marrows are the kinds most in use. The pea beans require from twelve to sixteen quarts of seed to the acre, and the marrows one bushel. The early pea beans will ripen in sixty or seventy days. Beans require frequent cultivating and hoeing until they cover the ground. This should always be done in dry weather, after the dew is off. Handling when the leaves are damp will cause rust.

They feed largely on the atmosphere, hence as we have said, they do better on a light soil than corn and some other crops. But the better the soil, the better the crop. The first week in June is about the right time for planting.

AGE OF TREES FOR PLANTING.—Six years ago I concluded to plant me an apple orchard. I went to the nursery, intending to get three or four years old trees, but was too late. They were most all sold. So I bought 450 two years old, and a few three years. I planted them with the help of the nurseryman, and only lost one tree. Pleased with my success, the next spring I planted 275 more; this time I got those three years old, that looked more like trees, from the same lot as the first. Of these I lost about 20—gave them the same care and cultivation—and to-day any one seeing them would suppose the first planting one or two year's the oldest; and the three years old planted the first year are not equal to the others. Not being quite satisfied, the next season I planted 1000, four years old. I saved the most of them; that is, they just lived and that's all, and are now large awkward looking, stunted trees with no shape or symmetry. I shall have to wait till they make a growth and then cut it half away, and then they wont suit me. My first planting are fine in form, and thrifty, and this year I expect a good lot of apples, while the others have no appearance of fruit.—*Western Rural.*

For the New England Farmer.

WHAT MAKES MY POTATOES ROT?

I will tell you, sir, without stamps, patent-rights, or tin-box humbugs for green heads. And I will tell you how to prevent the rot, for I have tried it for sixteen years with complete success, and I know of many others who have tried it with like success.

The first cause of rotting is planting them in ground that has been stripped of the material that is needful for their proper composition. The second cause is wrong management in cultivation.

The remedy is to apply the right material and the right cultivation.

I will mention two instances among many, for example. Two farmers, whose lands joined, planted the Mercer potato for New York market. Both ploughed in yard manures. One ploughed deep, planted on mellow bottom and covered a good depth, keeping the roots moist and at an even temperature. When the rain came, it carried the fertility of the earth with it to the roots, and even down below, attracting the roots downward. This man always had sound seed to plant, sound seed to dig, and large crops, year after year.

The other ploughed very shallow, dug holes to hard ground, covered very shallow,—one of the greatest errors in planting potatoes. When the rain came it flooded the potatoes, but did not readily pass off. His seed was always distempered, and he lost large quantities every year.

One thing is certain, potatoes cannot grow in mud. Forty years ago, I planted a plat by a river side. They came up finely, but when the potatoes were the size of a hen's egg, there came an extraordinary flood, and overflowed them for two hours. The next day there was not a sound tuber in the plot. Once a neighbor came to me to see if my potatoes were rotting. I told him they were not. He said his were half rotten. I said to him, I can tell you which hills are rotten, and which sound, before you open them. I went and was able to do as I said. Where the water could drain from the hills the tubers were sound; where it could not, they were rotten. News came to me from a plain a mile or two distant, that the air was poisoned with rotten potatoes. I went to see, and found all true. I passed by one field, rather low ground, with the subsoil near the surface. It was thrown into ridges and had been well planted. A beautiful crop of large Mercer potatoes were lying on the ground, with not a rotten one to

be seen. My nearest neighbor cultivates potatoes ploughing deep; planting on mellow bottom, and covering good depth, and has had no rotten potatoes for forty years. Planted the Sebec last year; had fine large yield; not a rotten one. Another man, two miles off, had the same kind rot badly, as did also the Mercer, and several other kinds of early potatoes. Planting near the surface, and light covering causes many thousand of bushels to rot. Lying too long in the sun and air when first dug, or when brought out of the cellar, has a bad effect on a future crop by increasing the liability to rot. The use of small ones for seed will cause them to decrease in quantity, size and quality.

New ground, or that which has lain long to grass is most favorable to a good crop of potatoes. In deciding what is needed to restore old ground to its former fertility, consider what has been taken from it in the wheat, corn, flax, buckwheat, potatoes, or beans. Among other substances I have used and seen used for the purpose, are bone dust, if good; forest leaves and decayed woods mould; turf; hen manure; castor pumice; wood ashes; sea manure; shell lime and saline matter. Another thing of much value, but little thought of, is to be found on the margin of the sea, rivers and ponds. There for ages the fine rich compost has floated and settled from barnyards and cultivated fields. I have seen such produce fertility equal to the best yard manure. Yard manure, the great staple, is not alone sufficient in all cases for crops. Stone lime is good, but it takes six months or a year to prepare it. Fish manure will produce monstrous crops, but without yard or other manure it spoils the land. Lime, followed by clover, and the roots ploughed in, will bring land into high fertility, produce fine crops, and the best of fruit and vegetables and kill insects. From your old friend, who this day completes his four score and fourth year, in good health. PHINEAS PRATT.

Deep River, Conn., Jan. 28, 1868.

REMARKS.—The foregoing communication of our venerable friend indicates a more active mind and firmer nerves than most men of his age enjoy. Every word of his communication is plainly written, each letter being well formed, and the hair and heavier strokes are graceful and smooth.

For the New England Farmer.

FARMERS' TALK ON FENCING.

The following abstract of the discussion of the Irasburg, Vt., Farmers' Club on the subject of Fencing is furnished by their Secretary, Z. E. Jameson, Esq:—

Wm. L. Jameson regarded the subject of fencing as important on account of its cost and its necessity. In some places the citizens try to get along without fence, as at Vineland; and here in Vermont we could do without road fences better now than in former years, as cattle and sheep are not now allowed to run in the roads. He preferred rail fence for durability. If it is well put up it will stand well on land where posts heave. Still he makes a good deal of post and board fence. He sharpens and drives the posts. He likes the fence built at the village where the post is set upon a stone and held in place by irons set in holes drilled in the stones. Where stones are plenty, wall is a good fence; or half wall, with posts at intervals to which nail a couple of boards. He does not use bars, but makes gates of light timber, with a wheel at each lower corner that runs upon planks. Such gates open easily and are better than bars to drive cattle through, and are superior in other respects.

E. P. Church had built nearly all kinds of fence and believes that made of cedar rails the best. He would make the rail fence straight, —the ends of the rails being placed between two stakes which are kept together by a wooden yoke or a wire. He has board fence on clayey soil, but the posts heave out, the nails are broken, and it needs frequent repairs. He thought we should not fence our tillage land into small lots. The time will soon come when we shall not pasture our fields. We should have some small enclosures where any animal can be kept secure. He regarded brush or tree fence through woodland as the poorest kind of fence, as it needs repair every spring. As to gates and bars, he preferred bars, and has not a gate on his farm. Gates are almost always out of order; the wind breaks them, and they cannot be opened when the snow drifts or is deep. He had one at a barn yard that was always a bother. He raised it up so as to swing over the snow and then the calves would crawl under. It would get loose in windy nights and slam back and forth, and he had to go out and chain it up. He threw it aside and made bars. He mortices the proper number of bar-holes, or cuts notches in the side of the post and nails on a cleat. His bars are sawed 1½ by 5 inches. He slips them back very quickly, and does not take them out.

[Our cattle-market reporter wishes us to say that after having watched, for several years, the operation of various styles and patterns of swinging and sliding stock-car doors, or gates,—all of which are liable to be clogged by frozen manure in winter, and to get out of order at all seasons,—he finds that the plan of neat bars which slide back, as suggested by Mr. Church, give by far the best satisfaction to the drovers, who are always in a hurry to unload their stock.—EDS. FARMER.]

Z. E. Jameson thought that the perfect fence is a tight board fence, made of inch boards with a cap board on top of the posts

and one board under it on the inside and posts only five or six feet apart. This, with posts at five cents each, and boards at $10 per thousand, cost, for material, one dollar per rod. A fence is to enclose or exclude animals; and to be perfectly satisfactory must be perfectly adapted to this purpose. For want of a perfect fence our crops are injured, some farmers cannot wean their lambs, control their bucks, or do justice to calves, colts or sick stock, and they suffer yearly losses on this account. Our late crops, such as corn and potatoes, are injured by cows grazing the fall feed in the meadows; and one great reason why turnips are not cultivated as field crop, is because they prevent fall grazing. He favored the thorough fencing on lines, by roads, and around a few small lots. A movable fence, to throw around any special crop, would often be an advantage.

J. N. Mead had built and repaired board fence, but prefers a crooked rail fence, and thinks brown ash very durable. He would not separate pastures, as it is an injury to dairy cows to be changed from one to the other. The extra flow of milk consequent on such change is injurious.

Mr. Moon spoke of the advantage of gates over bars to stop cattle. Unless pinned at each end, bars are easily let down by stock. A gate that rolls back upon wheels he regarded as far superior to bars.

Mr. Brewster said that in dairying, it is not necessary to have as much fence as in mixed farming, because cows do better in one pasture all summer. If changed often they do not feed so contentedly. Had had considerable experience in building rail fence, and when laid up true is both permanent and ornamental. In making fence set stakes to guide the workmen.

Wm. L. Jameson would not make small enclosures, but if he wished to keep an animal secure he would put it in the barn. We cannot afford to pasture good tillage land. He built rail fence quite crooked, the corners projecting each way three feet from a straight line. In making board fence he used twelvepenny nails that had been toughened by heating in the fire, and finds they will last much better than common nails, and seldom break.

For the New England Farmer.

A PLEA FOR THE ROBIN.

After perusing the article on the robin with considerable care and interest, as presented by a subscriber in the April number of the monthly FARMER, and believing your columns to be a medium for the free discussion of affairs pertaining to the interests of the tiller of the soil, allow me to offer a few words in behalf of one of our noblest birds, and that true friend of the farmer, the American robin. Your correspondent and others complain *bitterly* of the depredations inflicted upon them, and in the exercise of their hatred toward the robin, are pleased to level on him the epithets of "an incorrigible thief and an unmitigated nuisance." Now, sir, with all due charity for those who have suffered from his annual visits to our New England clime, and seen their fondest hopes blighted, I think I can safely deny this assertion. From personal observation it is my sincere conviction that for all the cherries plundered, strawberries and raspberries taken by theft, pears and other small fruits ruined, they return to the owner their value ten-fold in the destruction of grubs, worms, and insects so injurious to vegetation. Having for some time cultivated the usual variety of small fruits, for which the robin evinces a decided preference, and being visited yearly by large numbers of them, I have yet to learn of sufficient mischief being done to warrant their destruction; but on the contrary think it becomes every *generous hearted* farmer to share willingly the products of mother earth with the red-breast, his lasting benefactor. The secretary of the society whose report I refer to, also recommends asking for a repeal of the clause of the present bird law regarding the protection of this bird. I cannot agree with him on this point, but with all my heart, I hope the present law will admit of no modification, but be strictly enforced, as it seems to me the public good demands it. What is more cheering to the farmer as he awakes to the labors of a new day, than the sweet carols of birds, nature's own musicians, who in the glad spring time make the air resound with their joyous notes, ever giving praises to Him from whom all blessings flow? God in his bountiful goodness has given them a life to enjoy, and I would ask is it right to deny this privilege to a comparatively harmless creature? And in conclusion, I would say to my brother farmers, cultivate the acquaintance of, and ever protect, the subject of this sketch. I subscribe myself, A CONSTANT READER.

Sudbury, Mass., April 21, 1868.

For the New England Farmer.

A WILD CALF.

MESSRS. EDITORS:—I have a little calf story to tell you. It may interest some of your readers,—it has me, I can assure you.

The 13th of last November, I was trying to drive some young cattle into the barn, for the first time since they were brought home from Princeton pasture. One large, wild calf, seven months old, broke from us and dashed through the yard fence and away. We left out the cow that had raised him, and they were soon together; but he was shy of the barn, and soon was a mile into the woods. After a great race with my man, we "headed" them, and got them turned towards home on the railroad track. I began then to feel quite indifferent whether the calf butted against the engine or

not. If you have ever raced after animals galloping away, you know there is precious little fun in it. We met a couple of fellows who insisted upon stopping the cattle. The more I called to them to let them go on, the more did they exert themselves to hinder them. The result was that the animals were separated,—the calf first leaping into the woods. The cow came home alone. I tied her afterwards in the woods near where the calf disappeared. She would eat and lie down,—I never heard her bellow once after her calf. The nights were now becoming very cold, and I felt distressed to think of my poor calf, shivering in the woods. I went to every farm around the woods, which is several miles in extent, and advertised my loss.

Dec. 27th, I heard that the lost calf was alive in a swamp in Stow. I took a good hunter, living near, and got a sight at him. He was wilder than ever, and hearing our approach, disappeared in the woods. We thought he might be so reduced as to be cornered or overtaken; so we followed tracks, but saw no more calf that day. I had a great deal of advice,—much of it was like that of the sage mouse in the fable "to fasten a bell to the cat!" I did, however, ride to Sudbury and hire a powerful dog, (it was a fresh trial to me, as I have always been down on dogs,) and his master, to join the hunt.

This preparation for his speedy capture gave the calf great life, and he dashed miles away. At last, by hard riding and harder running, we surrounded the calf in a grove. Now for the dog! Would he be good enough to seize him by the nose? then each man could grasp a leg.—there were four of us,—panting with excitement; but no! the extraordinary dog kept a rod or two off, and *barked* at him! Away went the calf so fast and so far that we lost sight and track of him for a time.

One of the company knew of *another* dog that would "fetch him," certainly. So we organized another party, and tore coats through miles more of woods, with no success. I think less of dogs! But we had driven the calf from his feeding ground. He missed the tender sprouts and the long meadow grass that held up through the snow. In about ten days, (Jan. 22.) a company of school boys captured him. He was led a prisoner to a neighboring barn. I found him disposed to jump towards me threateningly, but soon coaxed him into a perfectly docile condition. He was very poor, his eyes were sunken, and his hair was long and shaggy. Since getting him home he has picked up rapidly,—is turned out with the other cattle daily, and seems the most completely reformed prodigal you ever saw.

W. D. Brown.

Concord, Mass., Jan. 29, 1868.

Remarks.—We once had a somewhat similar calf chase. From its first appearance, the calf we speak of was so remarkably shy and wild that, instead of turning it from the small stable or "calf-pen," in which it was kept, to put upon the cow, as usual with other calves, the cow was turned in to him. One day, on letting out the cow, the calf slipped into the yard. As soon as he found himself in the open air, he appeared to be perfectly intoxicated or crazed with his new-found liberty, and bleating and jumping as though a tin-pan were tied to his tail, he cleared dung-heaps and fences, and, bounding across the open fields for some half a mile, entered a piece of woods. The cow called and started after him, but followed no further than the yard fence. She was then driven into the woods and left alone, while one of the party, being a good mimic of sounds, hid himself, and so successfully imitated the call of a calf that the cow responded and soon met her "prodigal son," and the two were carefully driven home.

EXTRACTS AND REPLIES.

MANAGEMENT OF MANURE.

I have taken the Farmer for eighteen years, but until the past few weeks have never read another man's paper. The enclosed I hope will put me right again.

I wish you would tell us whether we shall put our manure on top or plough it under. Is there a waste of the strength of manure by dropping it in small heaps, as it is taken from the barn? Where a dozen loads are put in a heap and heats, do the gas and ammonia escape, provided it does not burn or firefang? It seems to me this is a subject that is very imperfectly understood. Please give us your ideas and oblige A Subscriber.

Hanover Centre, N. H., April 13, 1868.

Remarks.—When manure is hauled out in the winter, it should be overhauled early in the spring, before it heats, and thrown into a compact heap. Undoubtedly much valuable material is lost long before manure is burned or firefanged. Many experiments have been made within a few years with respect to the depth to which manure should be covered. The general conclusion we believe is that it should be covered from three to five inches. This is best done with a cultivator or light plough.

HOME-MADE SUPERPHOSPHATE.

I read with considerable interest, in your last issue, an article by Dr. Jas. R. Nichols, on the manufacture of home-made superphosphate. I have made what I have required for my own use for the last ten or twelve years, and have experienced the most satisfactory results, but my process has been so entirely different from that of Dr. Nichols, that I venture to offer it, as I think that I obtain nearly the same results, with vastly less labor.

I use oil barrels to dissolve my bones in, which can be bought at most any woolen mill for about a dollar each, and by selecting good ones with iron hoops, they will last five or six years. I break the

bones with a large hammer into pieces perhaps as large as a butternut, which I find sufficiently fine, as the acid, even if it does not entirely dissolve, softens them sufficiently; so that I have been unable to find any pieces in the hill the following autumn. A good man will break about an oil barrel full in a day, besides doing my chores. I usually do that part of the work during the winter or dull days in early spring. The broken bone is then put into the casks and a couple of common wooden pails full of water turned upon it; then two and one-half pails of acid, and then add enough more water to cover the bone when it boils. No stirring is necessary. Allow it to remain in the barrels a few days and then mingle a barrel of the mixture with a small cartload of good loam,—dry muck is equally as good,—and allow it to remain in the heap about a week or ten days, and then shovel it over, commencing at one side of the heap and slicing it down with the shovel. This will thoroughly mix it; after which it ought to remain at least two weeks, when it will be ready for use. Apply a half pint to the hill. Corn or potatoes may be dropped directly on the manure.

HENRY G. TAFT.

Uxbridge, Mass., May 2, 1868.

SETTING APPLE TREES—GRAFTING—SOIL FOR THEM.

I wish to inquire the best time to set apple trees, and if grafting can be done successfully the same year of setting? Is it best to transplant in spring, or wait until fall? The place where I intend to set is on land newly cleared, of a light gravelly loam. Will the trees do better than on older land?

East Burke, Vt., 1868. W. A. E.

REMARKS.—We should prefer to wait till the trees get well rooted before grafting. Our own choice is to set trees in the spring, though they often do well set in the fall. Your new land is just the right soil for trees. Set them carefully and not too near—forty feet is regarded by many as better than less.

WHY DO BOYS HATE FARMING?

Boys hate farming because it *is* hateful. Are not farmers, as a *class*, a poor, ignorant, superstitious set? Poor, because farming as a *general* thing, does not pay; ignorant, because they have not time to learn; superstitious, because ignorance and superstition are always together. The farmer boys have to work early and late in mud and mire, and in much "that isn't so sweet by half," doing the work of scavengers, and all for nothing. The young man who hires out as "farm hand" seldom gets twenty-five dollars a month, while in the shop forty is not uncommon, with cleaner work. *I* don't blame the boys for leaving.

Massachusetts, April 27, 1868. BILLY STYX.

REMARKS.—No, Billy, we won't "toss it into the waste basket, and forget it and you," but we'll print it just as you wrote it, because every word seems to come from your heart. We do admire out-spoken articles in newspapers, outspoken sermons in the pulpit, and out-spoken addresses everywhere, whether we agree with the ideas expressed or not. You say "What you'd have it, makeit." No, sir; that's not our style. Writers for the NEW ENGLAND FARMER are invited to express their own opinions. This you have done squarely, and though we may believe you will live to smile at your own earnest expressions, we cheerfully put them on record. After you have tried the "forty dollars" per month and the *tidy* work in factories and shops, and paid present prices for board; after you have ascertained how little these journeymen and operatives have to boast over farm hands, on the score of cleanliness, intelligence, morality or cash, we shall hope to hear from you again,—if not before.

SEED PER ACRE OF CARROTS, ONIONS AND BEANS—OLD APPLE TREES—DRAINAGE.

Will you inform me, through the NEW ENGLAND FARMER, how much carrot seed, and how much onion seed is required for an acre? What is the fertilizer of these two crops? How many beans are required to plant an acre? How can I improve my old apple trees? I have about eight acres of clay subsoil; it is run out and produces but little. I plonghed some ditches last fall, and I want to drain it, but I cannot lay tile drains; how is the best, aside from tile drainage? N. P.

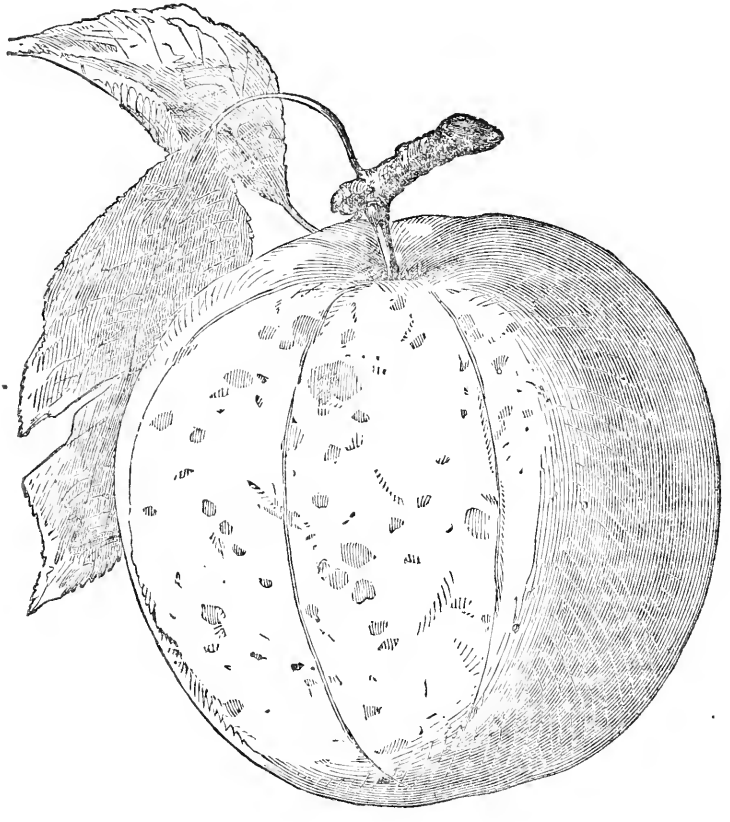
Lancaster, Mass., April, 1868.

REMARKS.—Inquirers sometimes ask questions that require long answers to be satisfactory. The questions of friend P. open subjects that might fill a small volume. Carrots require a deep loamy soil, made rich by well-rotted manure—anywhere from twenty to forty loads will not be too much—plough deep and thoroughly pulverize the soil; not far from one and a half pounds of seed to the acre; rows two feet apart. Onions require a rich black soil, made very fine; ashes, lime and well-rotted manure, well raked in; sow and roll; steep the seed in urine, then dry it with plaster. Beans, if the small pea bean, require about sixteen quarts; if marrow, a bushel to the acre. Plough and cultivate the land upon which your trees stand, manuring heavily. Plant with potatoes. Then sow oats and clover; mow the oats green; take one crop of clover and plough again. The crops will pay the labor. Cut away all dead wood, and graft freely, and be patient. For your clay subsoil, thorough draining is the only effectual remedy. If you cannot put down tiles, make open drains three feet deep, at least. The clay retains the water on its surface. You must go deep enough to take off the water below the roots of the grasses. When this is done you can plough deep and make a good seed bed, and not till then. Good covered drains may be made with stones, but they must be carefully made, and unless the stone is on the land or very near, will cost more than tiles.

STEELYARDS INCREASE THE FLOW OF MILK!

Would you know the secret? By their use, you will find the quantity of milk to vary, and this variation will excite your curiosity to discover the cause. It may be found in a variation in the quantity of food given, or it may result from a change of quality. Weighing the milk will thus lead to a habit of investigation, not only in relation to the effect of food on milk, but also as to the "wear and tear of the cow" and everything relating to the cost of running the "milk factory," until the fact will be demonstrated that the best feed and the best care will produce the cheapest milk. All this will result from weighing the milk. F.

Mast Yard, N. H., May, 1868.



THE FALL PIPPIN APPLE.

The beautiful apple from which the above engraving was made grew on one of twenty-five varieties of trees which we set near our dwelling in Concord, Mass., in the autumn of 1848. It is said to have originated in Spain, where it is known by the name of Cameusar, and may be regarded as the national apple of that country. In England it has various names, such as White Spanish Reinette, D'Espagne, Fall Pippin, Large Fall Pippin, Cobbett's Fall Pippin, &c. Mr. Downing says, notwithstanding that Thompson and other English authorities consider this apple the same as our Fall Pippin, we are yet strongly of opinion that it is different. The true Fall Pippin is only an autumn variety, while this is a winter sort, keeping till mid-winter here, and in England till March. It is quite probable that the White Spanish Reinette is the parent of both the Fall and Holland Pippins. The fruit of the present variety is rather more oblong than that of the Fall Pippin.

Fruit very large, roundish-*oblong*, somewhat angular, with broad ribs on its sides, terminating in an uneven crown, where it is nearly as broad as at the base. Calyx large, open, very deeply sunk in a broad-angled, oblique, irregular basin. Stalk half an inch long, set in a rather small, even cavity. Skin smooth, yellowish-green on the shaded side, orange, tinged with brownish-red next the sun, and sprinkled with blackish dots. Flesh, yellowish-white, crisp, tender, with a sugary juice. Noisette (*Jardin Fruitier*) adds, "the skin is covered with a bloom, like that on a plum, which distinguishes this variety from all those

most resembling it." The tree has the same wood, foliage, and vigorous habit, as our Fall Pippin, and the fruit keeps from November to February or March.

SEVENTEEN-YEAR LOCUSTS.

Prof. Fitch, in his report to the assembly of New York, for the year 1855, remarking upon the seventeen-year locusts, says, "A fourth brood, and which has been the oftenest and most fully noticed of any, reaches from Pennsylvania and Maryland to South Carolina and Georgia; and, what appears to be a detached branch of it, occurs also in the southeastern part of Massachusetts. It was observed as long ago as 1715, and its re-appearance has been recorded seven times since—the last one of which was in the year 1851. It wil consequently re-appear in 1868.

Will our friends in the southeastern part of the State make a note of this propheecy, and look out for its fulfilment.

The pupa of this locust emerges from the ground in the night time. Some of them leave their shells near the holes from which they emerge. Others crawl up fences and bushes and trees, sometimes twenty feet, when, fixing themselves by the feet, the thin, shell-like covering cracks open, and the inclosed insect withdraws itself, leaving the empty case where it was fixed.

The oak is the tree which this locust appears most to infest, for the purpose of depositing its eggs, and next to this, probably, the apple tree. It also infests the hazelnut and the locust tree, and probably most of the deciduous trees, in the absence of the oak.

The full-grown insect attaches itself to the twigs of the trees, and inserts its ovipositor in an oblique direction through the succulent bark and alburnum. The wound is so made as to form a sort of lid of its upper side, under which the eggs are deposited, sometimes to the number of sixteen or twenty. A number of wounds are often made on the same twig. As soon as the eggs are hatched, the worms, which are about .06 in. in length, eat their way into the pith of the twig. The twigs usually die at the point at which the eggs are inserted, and are broken off by the wind and fall to the ground. Mr. Thomas W. Morris speaks of having seen the tops of the forest trees in Pennsylvania and Ohio for upwards of a hundred miles, appearing as if scorched by fire, a month after this locust had left them. Many of the wounded limbs, however, survive the injury which they have received. If the twigs are cut off as soon as the leaves begin to wilt, the worm may often be found in the pith. The worm is of a yellowish white color; clothed with fine hairs, the eyes and the claws of its fore legs tinged with red. It has six legs, the front pair being much the largest. It is quite lively and active in its motions and drops from the limb to the ground, in which it immediately buries itself by means of its fore legs, which are admirably adapted for digging.

IMPROVEMENT OF OUR WOOL.

In the Weekly FARMER of January 4, and in the Monthly, page 87, we published an article written by H. D. Tellkampf, of New York, and submitted by him to the National Wool Manufacturers' Association, Nov. 7, 1867, in the form of a report. In that article Mr. T. proposed the formation of a company for the importation and breeding of "the Escurial breed of Silesia and Saxony breed of sheep," to counterbalance the "Negretti blood," which he objected to "for its heavy grease," "harshness of the points of staple," "pitch tops" and want of the "necessary *fulling* qualifications."

A correspondent of the *Country Gentleman*, in replying to these objections to American wool, says:—

The responsibility for the faults of American wool rests wholly upon the shoulders of our wool-dealers, and the only remedy that will ever prove effectual must be the adoption of simple *justice* to the producer, by the fraternity of which Mr. Tellkampf is supposed to be an honored member. The history of the woolen trade of the country, demonstrates the fact that American dealers have actually paid a premium for "harsh ends," "pitch-tops," and a lack of "fulling qualifications."

From the beginning of 1827 to the close of 1861, the average difference in the price of *fine* and *medium* wool has been but about *seven and a half* cents a pound; and, from tables prepared by Messrs. Tellkampf and Kitching of New York, I find that the average difference in the value of *choice* Saxony and *full blood* Merino, from 1855 to 1862, has been but about *six* cents a pound, and it is the *full blood* Merino that produces the "pitch tops" and wool lacking the necessary "fulling qualifications." Now, every experienced wool-grower knows that it is quite safe to assume a difference of at least two pounds of wool per head between the two breeds of sheep, under ordinary care, and this is in favor of the Merino. "Pitch-tops" and "Saxony" both go to market with their year's clip of wool, and should the first obtain but 48 cents a pound, he receives $2.40 per head: while the latter,

at perhaps 54 cents a pound, pockets only $1.62—the difference of 78 cents per fleece, making so much of a premium for "pitch-tops." After shearing, both sell their sheep to the butcher, and the Merino sells for a full dollar a head more than his Saxon competitor, thus raising the premium to $1.78. The result is, Saxony feels rather *blue*, and resolves to secure one of "Pitch-top's" rams another year, and compete with him for the premium offered by the wool-dealers and butchers. This is the whole secret of the production of "pitch-tops" and wool "lacking *fulling* qualifications."

The remedy proposed by Mr. Tellkampf for the faults of American wool, almost induces me to exclaim, like one of old—"Can these dry bones live?" It needs no comment; but I would advise any one who seriously thinks of adopting it, to study carefully first, the history of the Saxon *mania* that once raged among our wool-growers like an epidemic.

Permit me to assure Mr. Tellkampf that as soon as wool dealers adopt the plan of buying wool upon its *merits*, as other farm products are purchased, he will not have reason to complain of the bad qualities of American wool. The hardy Merino of the land can be made to produce wool as white and clean as the falling snows, and with as *fine* a *crimp* as the wants of the woolen trade demand, as soon as the dealer offers the remuneration he has been giving for "*pitch tops*" and *medium* quality. Farmers, although not all wise, are not altogether fools, and seldom fail to perceive what quality and condition of their productions bring them in the greatest amount of cash in the aggregate.

For the New England Farmer.

BEST STOCK MOST PROFITABLE.

Allow me a word or two in your correspondence column, on a subject too little thought of by many farmers. I allude to the rearing of stock. It having been my lot to travel much during the past year, I have kept my farming eye open for observation, and have had my previous convictions "irrevocably" strengthened that "the best" stock is none too good. I know from a little experience and much observation, that a farmer cannot afford to keep poor stock, much less to raise it. One would hardly stop to pick up coppers, if the silver dollars were just as plenty and as easy to get. The man who raises ordinary animals gets the coppers, and leaves the dollars for others to gather. And why is it? Only because it costs a little more to begin, and perhaps, a little more to keep it up. In the first place, there is too much guess work and not enough thought and system about this matter. Too much is left to chance. There is not enough looking into nature. Her laws are too little understood, and too little heeded, when understood. The poor dame is often treated as if she was a stupid old creature, hardly capable of knowing when she is imposed upon. But incompetent as she may appear to redress her own grievances, she always does it. She is lawyer, jury and judge all in one. Her cases are all settled according to law. No bribes nor threats move her from the direct path of justice. So if a farmer breaks her law and tries to cheat her, she pays him in his own coin. If he breeds crooked legged marrowbones, he gets marrowbones and crooked legs. There is no bill of exceptions, no appeal.

Instead of this loose, penurious way of doing things, every farmer should study his needs, and aim at the end he wishes to reach in a legitimate manner. First of all begin with some pure family, and then breed what he wants. At the present time, there appears to be varieties enough of all animals to satisfy the most notional; and good chances for safe investments, too; much better than raising mongrels. A good stock raiser said to me, the other day, in Manchester, N. H., "I sell all of my heifer calves from my Jerseys and my Ayrshires cows for $100 each, and my Jersey bulls for $50 each." Not many of the old-line farmers in that good old State would take a Jersey as a gift. Yet right in their midst one man gets more for a little calf than they can get for a full grown cow. The dimes are what they are after, but prejudice keeps them in the old track. Is it not better that a man should go for what pays best, rather than wed himself to any old notions? I find it common for particular cows of particular breeds to be valued at $300. They are cows that can be depended upon, either for their milking or for their stock raising qualities. Such cows are invaluable, and should never be suffered to "run out." It is a sorry picture that is presented in many a farm yard, to what it might be if proper care was given to breeding. "Get the best" is a motto that applies to farming as well as to any other business. Let the farmer heed it, and no longer wander from the high road of progress. Yours always for "the best." Z. BREED.

Weare, N. H., March, 1868.

For the New England Farmer.

TREATMENT OF ORCHARDS.

This subject is really one of first importance to our New England farming interests. When some farms, with not one-fortieth of their area in fruit, derive not only more but perhaps treble the revenue from fruit that is secured from all other productions, surely the fruit interest should be thoroughly studied.

I have read the many important articles published in the FARMER and other agricultural papers, which have come under my observation; and I have read in the orchards seen here and there; and have sought to study the subject with plough, mattock and hoe in hand, because I consider it important, not merely to myself, but to the great family of feeders, of which I am only a member.

I suspect that there is at present too much of a tendency to plough orchards. I suspect that the good results of orchard ploughing have been dwelt upon more than the resultant evils have been.

Not all who would raise fruit trees can be

favored with the kinds of soil most suitable to the peculiar kinds of fruit which they wish to raise. If a man wants to raise early apples for use or market, he will want to plant his trees in a light and active soil; but if he ploughs such a soil much, he may fail of success. Most light soils afford very little nourishment to the roots of trees, except so near the surface of the ground that every thorough ploughing will destroy the feeding roots. Some different process, I think, than that of ploughing, should be resorted to in such cases. Certainly it is hard for a tree to be robbed of its power of feeding. The very frequent use of the plough compels the tree, deprived of its feeding roots, to feed on carbon from the air, through its leaves, in too great proportion for the mineral elements it can obtain from the soil; and the wood formed cannot be healthy. I suspect that much of the blight on fruit trees, sudden decay of young trees, &c., may be only a result of this inequality between the mineral and carbonaceous elements in their growth. If so, the mattock, the spade-fork, and other implements to work the soil without destroying the little feeding roots, must take the place of the plough; or the "mystery" of orchard decay will continue to confound many.

I have observed that in ground where the subsoil is of the character of a sweet clay loam, the roots of fruit trees will run much deeper than in other kinds of soil; and I think there is no question that such grounds are more suitable to raising winter fruit, and may be ploughed more frequently than other kinds. Even there, no tree can afford to have its "teeth knocked out," every summer.

Well, Mr. Editor, I have suggested a text for you or somebody else to preach from; and rather than weary you with words about it, now, I may, perhaps, come again on the same errand, some other day. A. G. C.

Lee, N. H., Jan. 1, 1868.

For the New England Farmer.

IS KEEPING HENS PROFITABLE?

For a number of years past I have read with interest the various accounts published in the NEW ENGLAND FARMER, and other agricultural papers, relative to poultry-raising. As a general thing I have observed a *profit* reported, though sometimes a correspondent has ventured to exhibit an account indicating a loss.

I have never had a severe attack of the "*hen fever*," nor have I ever kept a large number of fowls; but for the last fifteen years I have had a few every year. I have endeavored to keep the best I could obtain in the vicinity. I have several times kept an accurate account, and very seldom has the balance been on the *right side*.

Last year I concluded to try it again, and the following is the result.

Stock on hand at the commencement of the year:

8 hens and one rooster	$2 25
9¼ bushel corn fed	6 80
2¾ bushels buckwheat fed	1 10
38 eggs set for hatching	38
	$10 53

CR.

By 64 1-12 doz. eggs	7 18	
By 3 hens killed	80	
By 8 hens and one rooster on hand	2 25	
		$10 23
LOSS		30

I have given the actual numbers, quantities and prices.

Farmers who allow their hens to run at large, can better afford to keep them than any one else. There is always a good deal of loose grain about the barn in winter, that would be wasted were there no hens around. But I have long been of the opinion that those who have to buy all their feed cannot make poultry raising profitable, unless they are near a very good market. GRANITE.

Bloomfield, C. W., March, 1868.

REMARKS.—Who can blame the biddies for not showing a profit on "the right side" when they are credited but a fraction over eleven cents and two mills per dozen for their eggs? We hope this is not a fair example of the encouragement which is afforded to the "industrial pursuits" generally in Her Majesty's Dominions.

A DARK SIDE OF CALIFORNIA.

Mr. T. Woodhaus, Santa Clara, California, has lately written a letter to the New York Farmers' Club, in which, after alluding to the fact that companies of speculators have recently taken up some 200,000 acres of the best government land in the State, to the circulars they have issued, and to emanations of the press generally, setting forth the advantages of California "in glowing language," but which he thinks are intended to conceal information that is important to emigrants, he says:

I deem it a duty to say a few words to the public of what I know and have experienced as a California farmer for the past seventeen years. The climate is generally healthy and pleasant, but some localities are more subject to fevers than others.

Probably all know there are two seasons, a wet and a dry; when the wet one commences, which is sometimes early in November, and at other times not until the latter end of December, spring in reality commences, grass and vegetation grow; while all are parched to perfect dryness through the summer and fall. As to rain, the climate is exceedingly variable, droughts never fail, during which a scorching

sun and drying wind prevail, parching the earth from one to two feet deep. The season for rain also always returns, but with different results; sometimes the clouds seem to have every fastening to the heavens loosened, and come pouring down, flooding the valleys, carrying away bridges, fences, and even houses. At other seasons, and they are numerous, the clouds are attracted to the heavens and mountains, and furnish the valleys only from two or three inches to eight or ten inches of moisture, as in the rainy seasons from 1855 or 1856 to 1864, with one exception, which was in 1862, and called the wet winter.

My own and adjoining farms in Santa Clara Valley, during those years, produced only five or six bushels down to nothing per acre. One year, from 100 acres sown, not a bushel was gathered. This was the case all through that part of the country. It was quite as bad, if not worse, throughout the San Joaquin Valley, and, indeed, all the large valleys of California. Almost all the cattle were starved there, and also through all the Southern part of the State. Those who sowed lost their labor and seed, until the country of the San Joaquin, especially, was thought to be unfit for occupancy. Except for the little pasture it afforded for cattle, every acre of that fine agricultural country would have been occupied before now with bona fide settlers, who have turned away and are gone back to their Eastern homes, disgusted with California.

The abundance of rain the three last seasons has given a different aspect to these valleys, and there are plenty here ready to try them again, and if the seasons prove the same as heretofore, the results will be the same. My experience of California goes to show that the seasons of fertility and stertility come by periods of years. Previous to 1855 there had been plentiful rains, consequently plentiful crops. After that, the rains in the larger valleys were quite insufficient to make crops, except in those places where the water was near the surface. Now, again, we are in a period of abundant rains, mud in the roads ankle or knee deep, and very possibly next season may not give us more than enough rain to lay the dust.

Take another view of the case, and suppose the seasons of plentiful rain continue, there is no building or fence timber in the San Joaquin Valley. It has to be brought some hundred miles down the coast to San Francisco, then up the San Joaquin River 100 to 200 miles, then by teams; and this is not the end, for when you have put that material into buildings and fences, you will have to pay 2½ to 3 per cent. State and county tax, and on all you possess, even to your pigs and wife's chickens, nor is your individual person exempt, for that will be taxed to the amount of six dollars per year. The only things exempt from taxation that I know of are your wife and children, and they would no doubt be taxed, but that there are already so many bachelor housekeepers, that to tax wives and children would not be likely to make the number less. Should such period of drought again prevail, farms in that valley will not produce enough to pay the taxes, which are from double to five or six times that of any other State. Then there are litigations and robberies of homes and lands through the so-called Spanish grants, which afford pettifoggers a fine field for the exercise of their fleecing operations.

CLOVER AND WHEAT.—A correspondent of the *Rural New Yorker*, in Central Illinois, in walking over a field where one of his neighbors was sowing clover with his wheat, and harrowing them in on a field which was ploughed in the fall and was still frozen solid within four inches of the surface, asked him why he always sowed clover. His reply was:

"O, well, it don't do any harm; and I get a fine fall forage from it any way, when I put in the seed in February and March. Sometimes I change my plans and do not plough the field in the fall; if I do the clover and its roots do not hurt the soil much. If I turn it over in the spring for corn, the crop ploughed under the first to the 15th of May, is all that need be desired to ferment green and stimulate the germination of the seed. It is a profitable plan, any way. I like clover in my soil. Some people do not; but either I am a good deal of an egotist or some people are foolish. I find it a good substitute for weeds."

ECONOMY IN THE FAMILY.

The time is arriving when the introduction of more economy in the family expenses will become imperative. Among our mercantile people in the cities I hear of many failures, so that families who have been living in opulence and extravagance that a plain woman like myself knows scarcely anything about, will be obliged to economize fearfully. They will have to adopt a totally different course of life. Luxuries will have to be abandoned, and unless they have wealthy friends to lean on for succor, they may be driven to the dreadful alternative—even the wives and daughters—to labor for their own support. The change will be terrible, heart-rending to them, but it will no doubt promote their health and digestion, enable them to sleep soundly, and wake up in the morning with the consciousness that the breakfast about to be set before them they have earned by the sweat of their brow.

We have no doubt, however, that such a change will in the end prove beneficial. The wastefulness, extravagance and excess of the American people, in eating, drinking and dressing, has not had a parallel in the history of the world; and all this has been against health, happiness, and morals. When, as a nation, we tread in the footsteps of the old nations, we shall have to follow them as fami-

lies and individuals. If we go, therefore, among the rural and laboring classes of Switzerland, France, Germany, Sweden and Russia, we may take lessons in our future modes of life. In health and vigor they are among the first people of the earth, yet their expenditures are nothing in comparison to ours. Indeed, the waste of a common American town of ten thousand people, would almost or quite support as large a population in the rural districts of Europe. Never shall we come to their level, for our country is new and differently situated, but the next generation of Americans cannot hope to live as we have, and there we could take lessons in economy that would be very useful to us. We could discover, as we shall be forced to by some means —that a family can be subsisted upon a very small portion of what Americans are accustomed to expend; nay, that they can be fed on what is now, in many instances, thrown out their back door to the dogs. Those of us who take these lessons and practice upon them first, will be the best off in the end.—*Cor. Germantown Telegraph.*

GRAPE GROWING IN NEW YORK.—At a late meeting of the Herkimer county, N. Y., Farmers' Club, Mr. S. A. Farrington, of Schuyler county, said that along the Seneca Lake they are going largely into fruit growing—apples, pears, and grapes. The pear succeeds admirably but apples are troubled with the borer. Grapes succeed along the lake shore, and it is regarded as a very profitable business when well managed. It is generally conceded that five acres of grapes, to be cultivated properly, is about as expensive as the management of one hundred acres in the ordinary way when devoted to mixed husbandry. The profits will be much in excess of the farm. This year there were raised from well managed vineyards, two tons of grapes per acre, which sold from eight cents to sixteen cents per pound. The grape soil is a shaly limestone that decomposes and furnishes sufficient fertilizing material for the grape. Do not manure the grape with barnyard or other manures, except ashes, as it is regarded prejudicial.

NEW WAY OF SOWING GRASS SEED.—At a late meeting of the Herkimer county, N. Y. Farmers' Club, Mr. Cephas Johnson stated that of late he had seeded down his land by stirring into the grain to be sown just water enough to wet the surface of the kernel. The timothy and clover seed thoroughly mixed with the wet grain adhered to it in such amanner that the whole could be sown together broadcast and very evenly, and, perhaps in consequence of the nutriment derived from the decay of the grain, he thought the grass seed was more sure to take than when sown in any other way. Red top should be sown by itself.

AGRICULTURAL ITEMS.

—Northern Iowa and other western sections are going into the hop growing business extensively this summer.

—Mr. Lincoln Fay, a nurseryman and fruit grower of Portland, N. Y., plants fruit trees for posts, and hooks on to them panels for fence.

—That good New York farmer, John Johnston, says: "Only by mixed husbandry, and with particular attention to sheep and cattle, can grain growing be made profitable."

—The *California Farmer* says we can send away 75,000 sacks, (100 lbs.) of wheat per week until next harvest,—four months hence—and have all we need besides.

—The agricultural press of America is equal in ability, circulation and capital to what the newspaper press in the whole world was at the commencement of the century.

—The subject of beet raising for sugar purposes, is attracting attention in Central Pennsylvania. The White Silesian beet is the favorite for cultivation.

—Mr. Goodrich, the great experimenter in potatoes, raised over 16,000 seedlings, of which number less than ten sorts have proved of value for general cultivation.

—A simple corn-marker can be made by putting a four-foot axle between the front wheels of a wagon and a twelve-foot one between the hind wheels, coupling them together, with braces to the hind axle.

—The *California Farmer* quotes potatoes at $1.75 to $2.50 per 100 lbs., and remarks, "according to the present prices, it takes the whole of a laboring man's income to keep himself, wife and family well supplied with vegetables."

—They who have the hop fever and who are preparing to plant largely, will be glad to learn that a large part of the hop roots in Wisconsin have winter killed, for this will give them a better chance.

—In the American agricultural papers farm machinery is illustrated by decently dressed, smart looking men; in the English papers, by a heavy clodhopper with wide suspenders across his back, or by women following with rakes.

—After the sugar season is over some farmers in New York fill up the bit holes with nicely fitting wooden plugs, which it is believed facilitate the healing of the wound made by tapping, and preserve the vitality of the tree.

—A late number of the Lexington, Ky., *Farmer's Home Journal* notices the sale of one farm of 103 acres at $75 per acre, cash; 117 acres unimproved at $35 per acre; one farm six miles from

Lexington $100.50 per acre; in Woodford County 200 acres at auction at $97.50 per acre.

—The following are the officers of the Piscataqua River Agricultural Association, recently elected: Hon. James H. Butler, of Nottingham, President; Hon. Frank W. Miller, Haven L. Scott and Edward D. Coffin, Trustees; Nathan F. Mathes, Treasurer, &c.; Hiram Hayes, Secretary.

—The latest style of swindling farmers, is to appoint individuals as agents for the sale of a combined washing machine and wringer, with an allowance of $6 on each machine sold, then induce them to sign an order for $125 worth, which order, being equivalent to a note, is sold and sued.

—A correspondent of the *Rural New Yorker*, who attended the inauguration of the Illinois Industrial University, says there were about seventy students in attendance—bright-faced, wide-awake, rough-and-tumble fellows, willing to work, and evidently of the right kind of material for this experiment, which educational hypochondriacs regard so dubious.

—There is a little town in Vermont where the people have considerable fun with their "fence viewers." One of the officers weighs 300 pounds, another is six feet eight inches tall, and the third is extremely small. It was recently voted that all fences on which the fat man could sit, which the tall couldn't straddle, nor the little one crawl through, should be deemed legal fences.

—The State auditor of Massachusetts reports the amount of appropriations for agriculture for 1867, to be $34,042.39, viz.:

Secretary's office	$4,833 32
Expenses of members of Board	1,528 00
Cabinet	1,000 00
Cattle Commissioners	369 09
Bounties to Societies	15,000 00
Printing	11,311 29
Total	$34,042 39

—A correspondent of the *Rural New Yorker*, in Victor, Iowa, has been in the sheep business for eight years, and after trying all the various compounds warranted to cure the foot rot, has come to the conclusion that though it may be alleviated, it is practically incurable. One of his neighbors began the winter, one year ago, with 125 sheep, and in the spring had 124 pelts and one live sheep! Farmers in that section are so discouraged with the sheep business that they neglect their flocks.

—As illustrative of the Western style of farming, the following advertisement, copied from the Chicago daily papers, may be interesting to those who regard farming as a small business:—"*Wanted* —Contractors to break 4000 acres prairie, near Chatsworth, Ford county. Price $3 per acre. Houses, and lumber for stables furnished; no other extras. Address M. L. Sullivant, Chatsworth, Livingston County, Ill. It should be remembered that, when broken, this little patch will be hardly one-tenth of Mr. S.'s farm.

EXTRACTS AND REPLIES.

ASHES FOR WHEAT GROUND.—LIME FOR SHINGLES.

Will it be an object for me to put lime with my ashes for my wheat ground, that was manured last fall with barn cellar manure? Some say it will help the kernel very much. I intend to apply the ashes after ploughing this spring. If so, how much lime per acre?

As I am about to build a new barn, had I better dip my shingles in lime water? If salt should be added, how much is required? I saw a recommendation of this kind some time ago in your paper. Perhaps you can refer me to the paper. Some are dipping in tar. It will be much work to dip forty thousand. ROCKINGHAM.

Stratham, N. H., March 26, 1868.

REMARKS.—Prof. Holmes says that it is believed by some that lime as an application to the soil, acts in two ways—one as a *stimulant* that promotes vegetation by causing the soil with which it is mixed to exert itself; and the other, in promoting the growth of trees and plants by enriching the land as *manure*, and adding to the quantity of vegetable food. By others it is looked upon in a *chemical* and medicinal point of view; acting as an alterative, a corrector, a dissolver, as a decomposer, a disengager of certain parts of the animal, vegetable and mineral substances contained in the soil, and as a retainer and a combiner with others; but not as a substance, like dung or decayed organic matter, fit for the immediate nourishment of plants.

Nitric acid operates on silver, and not on the compounds of counterfeit coins. So perhaps it may be with lime when applied to different soils. In England and in the Southern States lime is much more popular with farmers, than in New England. But even in England, they have a proverb that while lime enriches the fathers it impoverishes the sons. There is also a great difference in the chemical constituents of lime. A writer for the *Germantown Telegraph* says when lime is prepared for agricultural purposes it should be used immediately. If long exposed to rain and dews before being spread it loses much of its power to act on the ingredients of the soil. The same writer says, from thirty to sixty bushels per acre should be applied once in six years. Will not our correspondent try lime on parts of his field, by applying it to strips through the wheat, alternated with those without lime.

A few years since Mr. Ed. Emerson, of Hollis, Mass., communicated to our columns his plan for making shingles last. He sometimes soaked the shingles in "thin white wash, made with brine instead of clear water," at others he laid his shingles in white wash. "I line with red chalk. Then white wash the last course laid, down to the line, and after the building is shingled I white wash the whole roof." He stated that he thought it would make the shingles last twice as long. He spoke of a roof covered with sappy and shaky shingles twenty years previously, and thought they would last seven years longer. He puts nails not over two inches apart, and does not drive them

so as to sink the head, for the purpose of having the heads of the nails hold up the buts of the next row of shingles, to allow the circulation of air. Dr. Silas Brown, late of Wilmington, Mass., prepared sap shingles by throwing them into a large kettle of white wash, made as above, and kept boiling, where they remained a few moments and were then thrown aside to dry. A roof thus covered was good twenty-five years afterwards, and he remarked "it may do for years to come." Sometimes shingles are soaked in a tub or trough large enough to admit one end of a bunch up to the band, and after soaking two hours or so are turned end for end. But they are better soaked when dry and loose. We have heard complaint of nails rusting in shingles that had been dipped in clear salt brine.

CRIBBING HORSES.

I believe all veterinary surgeons agree that after a horse has become a confirmed cribber there is no known cure for him; and all agree that the first cause is a disordered stomach. Therefore the best remedy for a horse just commencing to crib is to regulate the stomach by a change of food or otherwise. Of a valuable pair of young horses that we once owned, first one and then the other commenced cribbing. The first one began to crib on the pole, while in harness. We tried various plans; among the rest, rubbing hard soap on the carriage pole and on the edge of the crib. That seemed to answer for a short time until the soap wore off. At last we changed their feed throughout; giving salt marsh hay instead of English hay; oats instead of Indian meal; also kept by them in one corner of the crib plenty of fresh loam,—it was mid-winter—and plenty of clean salt. They soon left off cribbing, and although we owned them some six months longer, they never offered to crib again. In the above cases there was no alteration made in the crib or manger. By taking away the crib, and obliging the horse to eat from the floor, he is unable to crib in the stable, but will show his propensity if he is allowed to reach a post or top of a fence out of doors. A strap fastened tight around the neck will prevent the horse cribbing while that is on, but does not cure. Z.

Reading, Mass., Feb. 8, 1868.

TREES GIRDLED BY MICE.

Will some one of the numerous correspondents of the FARMER please inform me, through its columns, how to restore apple trees that have been previously gnawed by the mice.

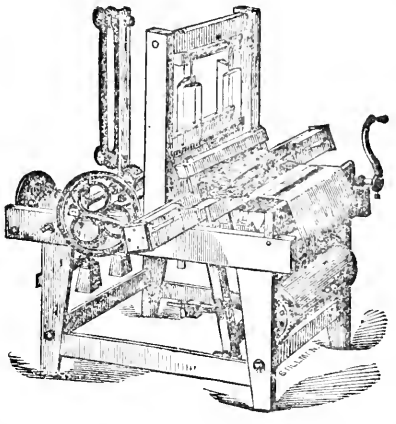
A READER OF THE FARMER.

Windsor, Vt., April 8, 1868.

REMARKS.—As the sap ascends in the sap-wood, and descends in the inner bark, the girdled tree may start well in the spring, but unless some means are provided for the descent of the sap the tree will die. To save girdled trees, Mr. Cole, in his Fruit Book, gives the following directions: Take large scions, long enough to reach over the girdling or decay, scarf off each end on the side to go next to the tree, like the lower end of the scion in side grafting, and insert each end in the same way, under the bark, the upper end being the reverse of side grafting, and like inarching. In large trees 12 or 15 scions are inserted. We have seen trees 8 or 10 inches through that were girdled, or otherwise dead in the bark, saved in this manner.

MENDENHALL'S IMPROVED SELF-ACTING HAND LOOM.

About two years ago we published, in our column of "Extracts and Replies," portions of two or three letters from farmers' families asking for information in relation to the truth of certain rumors that had reached them of a newly invented hand-loom,



said to be a great improvement over the rude implement with which our grandmothers wove their webs which "became garments" and "covered themselves" and their families "with their works," and an improvement, we presume, over the looms of old that suggested to thoughtful Job the remark that his "days were swifter than a weaver's shuttle."

Having recently seen one of these looms, and with our own hands set all its cunning machinery in full operation, we are ready to verify the claim of the proprietors, that it is so simple that a child can understand and operate it. We were also pleased with the perfection and apparent durability of its construction, and do not think it can be liable to get out of order. Occupying a space of less than five feet square, it is, in fact, a pocket factory, turning out on the same warp, Jeans, Satinets, Tweed, Linsey, Blanket, Twill, Double-plain, Fencing Twills, Ribbed Goods, Balmoral Skirting, and by a recent improvement, rag-carpets may be woven with great ease and expedition, and with a fly shuttle.

The advantages of such a machine to farmers who have a good family of boys and girls, are so obvious that any enumeration must weaken the force of those which suggest themselves to every thoughtful parent and housekeeper.

FARMERS' WIVES AND AMERICAN MOTHERS.

Those sensible articles on Domestic Economy induce me to express a few of my ideas. It seems to be a prevailing notion among young people, especially females, that farming is a low business, inconsistent alike with beauty and accomplish-

ments. Thus many young ladies scorn the idea of marrying a worthy farmer's son. They prefer some city youth who has soft white hands and dainty little feet. The ambition which prompts young ladies to seek for a respectable position in society is certainly commenable; but is there a more honorable station than that of a farmer's wife? Napoleon the Great, once asked a celebrated French lady how he could promote the best interests of France. She answered, educate the mothers of the French people. That answer might well apply to American mothers; for were mothers properly trained, their sons and daughters would be better qualified for positions of honor and trust. Too often frivolities of fashion crowd from the minds of both mother and daughter all thoughts of reasonable things. Health is sacrificed, and the mother often mourns when the daughter's beauty wanes, and when fashion fails to please. In my opinion the prosperity, of our country depends on her women; and young females ought to consider the great responsibilities that rest upon them. They should acquire thorough habits of domestic economy, and be qualified for something better than following unhealthy and foolish fashions. Our able bodied young men should turn their attention to the vast agricultural resources of our country. It is a noble occupation to till the soil and get one's bread by the sweat of the brow, and there is much happiness in a well ordered farmer's home. Every industrious, thriving young farmer is worthy of a good and beautiful wife; and more of our young women should rather be anxious to qualify themselves for the duties of that position than for a place among the votaries of fashion, to which so many aspire. MRS. TRASK.

Reading, Mass., March, 1868.

GRAFTING APPLE TREES.

Having had more than fifty years' experience in grafting, and having read all that has come to hand on this subject, I give the following as practical directions:—

Cutting Scions.—For late grafting, they should be cut early. In 1863, I cut scions in the month of November. Some of these were set in June following, and all lived. When caterpillars are scarce, scions do best set in April; but when these pests are thick, (as in 1863) late grafting may be protected from their fatal depredations by placing the lower bud one-fourth of an inch below the top of the cleft, and covering the bud entirely with wax. The wax does not hinder the starting of the bud, and when scions are thus set, during the latter part of May, the worms disappear before the buds appear. I have often known them to kill the upper bud or leaf while the lower one was shielded. And besides, when scions are set in this way they are less liable to be broken by wind or by the weight of birds that may alight upon them.

Splitting the Stocks.—A thin knife is preferable to a thick one, as the stock is generally cross-grained or twisting. A thin knife, driven down about one inch, cuts a smooth place for the scion. My knife is made from a piece of a wood-saw plate, set in the back of a joiner's fine saw, near the centre, and ground to an edge. PHINEHAS FIELD.

East Charlemont, Mass., Jan., 1868.

HOW TO USE CORN COB MEAL.

I have noticed quite a number of articles upon cob meal in the FARMER. As a general thing, it appears to be regarded rather worthless, or not worth enough to pay for grinding. I am a cob meal feeder, and have been for seven years, but should not use it unless I thought it profitable. Some of my neighbors laugh at me for thinking it pays, but I tell them that the condition of my cows and the milk they produce are the arguments that satisfy my mind. With a family of seven, we have made this winter some twenty pounds of butter more than we have used, from two cows, that are coming in this spring. They have had no meal except the cob meal, and they look well, though they have been obliged to eat some coarse fodder, as I am short of good hay.

My manner of feeding it is this:—For two cows about five quarts are put into a pail, to which sufficient boiling water is added to thoroughly scald it. It is allowed to remain in the pail until morning, when it is turned into the swill-tub, where the sour milk and dish-water is kept, and stirred together; it is then ready to feed.

Now if any one is disposed to try cob meal on my recommendation, I hope they will read what you said in speaking of the exposure of orchards:—"Half of the controversies and half of the misunderstandings between men arise from not understanding what each other mean by the words they use," because I believe that the same remark is applicable to our agricultural experiments. The directions given are not understood, or not fully carried out. In my opinion cob meal has got its bad name from the improper manner in which it has been used. If given dry, or stirred up in cold water, I should expect to find it "didn't pay."

Felchville, Vt., March, 1868. T. S. F.

THE BEST WAY TO RAISE AN ORCHARD.

Plant a few seeds in each spot where you wish a tree to stand; cultivate the young trees carefully, and select from each bunch or hill the one that appears the most hardy (not the largest), and pull up the others when they are one year old. When the trees are three years old, if they have been kept trimmed and properly nursed, they will be ready for grafting. Let this be done by setting one scion in each tree, at such distance from the ground as suits your fancy, anywhere from one to five feet. The hardiest and the best bearing apple trees I have ever known are such as have never had their roots disturbed. PHINEHAS FIELD.

East Charlemont, Mass., Jan. 14, 1868.

FISH FOR MANURE.

I have bought some broken fish for manure. I wish to know how to make it into manure, and what crops it is most adapted to. Will you give needed information if agreeable. INFORMATION.

Northfield Farms, Mass., April, 1868.

REMARKS.—Fresh fish are composted in alternate layers of leaves, peat muck, loam, charcoal dust or even sawdust; they are also laid around the hill and covered up when corn is planted; dug in around trees; ploughed under; placed in an excavation of earth, and covered with peat muck or loam, and when they become soft wet with dilute sulphuric acid, and the whole mass of fish and earth thoroughly mingled; or mixed in small quantities with barn-yard manure.

HORN OFF.

One of my young cows knocked one of her horns off, by hitting it against a post, one of the coldest days of the winter. So neatly was it done that not a particle of the skin adhered to the horn, and it bled but little. Not liking the theory of keeping her fastened to the stanchion in one position, till it was well, I gave the pith a good covering of tar, then neatly wound it with cotton cloth, using a strip two inches wide, then put tar on that, and

over the whole I put on a cot, made of strong cloth and tied it on. I then fastened her as usual. For a day or two she was careful not to hit it against anything; after that she did not appear to notice it at all. Repeated trials of this method have always proved satisfactory. B.

Bethel, Me., Jan., 1868.

LICE ON CATTLE.

Twenty years ago I read in some paper that water that potatoes are boiled in would kill lice on cattle. I tried it and found it would effectually kill them. The animal should be washed all over in it. In extreme cases, I put one pint of soft soap in a pail of potato water, and work it in well, and I never have failed of killing every louse. It is a safe and cheap medicine, and will not do the least injury to any animal. I have used tobacco, unguentum and other poisonous things, and came very near killing one ox. O. FOSTER.

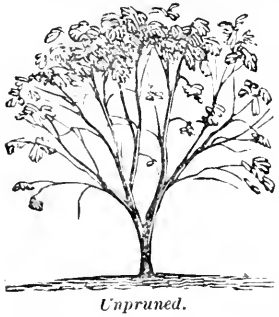
Tunbridge, Vt., March 23, 1868.

PRUNING PEACH TREES.

I have some young peach trees which I wish to head-in. Will you please inform me when is the best time to do it, and what part of last year's growth should be cut off, and will it be best to thin out the top? They made a vigorous growth last year, and it seems to me that the tops are too thick. By answering, you will much oblige at least one subscriber. JONAS HOLT.

Andover, Mass., April 7, 1868.

REMARKS.—For some years past the severity of our New England winters has killed our peach trees so near to the ground, that we have had little opportunity to exercise our skill in trimming them.



Unpruned.

When not so killed, there is a strong tendency, says Mr. Thomas, in the terminal buds to push upward and outward at the expense of the side shoots, which soon dying, the tree is ultimately composed of long, bare poles, with only tufts of leaves at their extremities, as in the annexed cut, and hence the peach requires more pruning than any other of our fruit trees.

As the peach always bears its fruit on the previous year's growth, it is important to keep a continued supply of young wood evenly distributed throughout the head. This can only be done by continued cutting back, either in the fall or spring. Pruning at the trunk should never be practiced, excepting to cut away dead or dying branches. When too thick, however, small limbs may be removed while the tree is young. Generally the peach should be pruned at the extremities of the branches, by cutting off one-third, or when very luxuriant, one-half of the last growth. This, however, should not be done as you would trim a hedge, but in such a way as to admit light to the interior part of the head. Care should also be taken in cutting back to trim down to a fork so as not to make a dead stub. The object is by heading-in to form a low compact top which saves the tree from excessive crops, heavy winds, damp snow, sleet and ice, and promotes health, vigor, longevity, and fruitfulness. Mr. Cole says in his Fruit Book, that for the purpose of inducing early bearing, where the trees are luxuriant and barren, about one-third of the new growth may be removed in July.

Shortened-in.

DISSATISFACTION OF THE BOYS WITH FARMING.

The question is often asked in our agricultural papers why so few farmers' sons are willing to stay at home. Among the reasons for dissatisfaction with farm life, is the fact that parents fail to interest their sons in the farm and its surroundings. Young people often wish to have things look well about the buildings, with a snug little flower-garden, &c. But if they attempt to put things to rights they are called off to the potato field in a manner that indicates that attention to these home matters is a waste of time, and that time spent about these improvements is fooled away. Is it strange that we get tired of drilling on corn and potatoes, potatoes and corn, all the season? And when the produce is sold in the fall, what share or interest have we in the proceeds? When the boys visit the city or village with empty pockets, and see what other boys have, is it a wonder that they determine to leave the farm as soon as possible? When farmers will endeavor to encourage their sons by giving them some personal interest in their business as co-partners, or otherwise, as merchants do their faithful clerks, and allow them the occasional use of horse and carriage, and some spending money, I think they will have less occasion to mourn over the uneasiness of the boys, and will find their sons more willing to remain upon the old homestead and cheer their declining age. Adopt this course, and there will be less idlers in our cities and villages. I believe this course will also do much to allay the Western fever which takes off so many young men to the new States.

Great Falls, N. H., 1868. YOUNG FARMER.

APPLICATION OF MANURE.

I have been anxiously waiting for more facts bearing on the question of ploughing and harrowing in manure. Some of the statements in late numbers of the FARMER go to extremes. In No. 47, "H." says, those who have tried harrowing in manure are staunch friends of the harrow. Another gentleman says he has become satisfied by experience, that three loads of manure put in with the harrow is well worth five buried with the plough for a grain or grass crop, and will hold out longer. If this be so I am satisfied that a great many farmers do not know how to apply manure, or else they would not have such poverty stricken farms as they have, when they could manure more acres every year than they do and receive greater remunerations for their labor. He then says if he was to plough manure eight inches deep, he would feel like saying, good-bye, manure. Another gentleman says he has known some farmers plough in a heavy dressing so deep that they never heard from it afterwards, and he thinks himself if manure is ploughed under, say one foot, it is buried not only out of sight, but out of reach of any grain or grass grown in this land.

Taking these cases, which I call extreme ones, and looking at the plan of putting on twelve loads manure to the acre, and leaving it upon the surface, expose to wind and sun, and ploughing it under eight and twelve inches deep, I can hardly see where such extremes will meet. One says the gases of the manure work upwards; another that the rain washes the essential part of the manure into the soil. If then, we plough manure in from four to six inches deep, shall we not get the benefit of the manure both upwards and downwards? This, at any rate, is my way of farming, as it is of the generality of agriculturists in England, and of some, at least, in this country. By ploughing in manure as advised by Mr. H. Poor, I do not see why wheat might not be raised plentifully in New England.

Another word as to the proper depth of ploughing. This depends upon the nature of the subsoil, and may vary from six to eighteen inches; but in general from six to eight or ten inches will be fully adequate to any useful purpose. The depth of good soil is usually very limited, and below this the plough should never go, or the manure will lose its effects. Good farmers do not deem it best to go to the full depth of good soil oftener than once in two years, and upon the whole advise shallow ploughing. In England the manure is ploughed in for all kinds of grains and roots, and and manure and compost heaps are managed in many respects different from what they are here.

Jeffersonville, Vt., Feb., 1868. E. H.

DISEASE IN HORSES.—ANASARCA.

Our correspondent, "D. F. J.," of Newark, who made an inquiry in the FARMER of April 4, may be interested in the following reply of Dr. Murray, Veterinary editor of the *Western Rural*, to a Mr. Carr, of Wisconsin. Mr. C.'s horse "was taken suddenly sick soon after commencing work, one morning. He appeared to be in pain, and in five minutes was in a foam. He was put into the stable and appeared to be getting better, but in about a week it was noticed that he was swelling under the belly. It continues to grow, running from his fore legs back about half way. Is pretty hard; if it is pressed with the finger it makes a dent, and is some time in filling up. To all appearance the horse was well when taken from the barn on the morning alluded to,—he had no cold."

The Dr. gave the following description of the disease, and directions for its cure:—

The disease your horse has is anasarca, which arises from a general debility of the system. This debility produces effusion and swelling. It is to be removed by liberal diet and *regular exercise*. Take two ounces each of sulphate of iron, powdered gentian, and powdered ginger, make into eight pills, and give one daily, and by those means your horse will be restored to health.

REMOVING WILD BEES.

I would like to inquire through your paper when is the best time in the year to remove a wild swarm of bees, from the tree to the hive, with the view of keeping them. C. M. S.

East Westmoreland, N. H., April 5, 1868.

YELLOW WATER IN HORSES.

I saw by the last FARMER that a certain disease was manifesting itself among the colts of Vermont, which I call yellow water. We had two horses troubled with it last spring, and two or three of the neighbors, one or more. I took three quarts of blood, and then gave the horse two or three quarts of a tea made of cedar boughs, twice a day, in his provender, with some mild physic,—I used salts and sulphur,—and the result was they all got well in a short time, and were put to harder labor last summer than ever they were before, and have not seen a sick day since.

April, 1868. DOWN IN MAINE.

WHY YOUNG MEN LEAVE THE FARM.

There has been considerable said in the FARMER about young men leaving the farm, and engaging in other pursuits. One of your correspondents appears to think it is owing to the girls leaving their homes and going to work in the mills, &c. But I do not think that is the only reason. Many farmers will not take an agricultural paper for their children to read, because it *costs* so much. Then, when their boys are old enough, they are sent to some school where almost everything is taught but a knowledge of agriculture. The result of such an education is that they return home, but not to work on the farm. No, they have got just enough of the "high school" to raise them above that. So they leave the farm for some more genteel employment, and the old gentleman has to lament that none of his sons will stay at home to help him carry on the farm, and he blames them instead of himself for the result. Now if he had taken two or three agricultural journals, and interested his sons in farming before they left home to attend school, they might have improved their opportunities in such a way as to have increased instead of destroying their interest in agriculture, which after all is as noble a calling as any young man can engage in. Adopt this course and I believe fewer parents would be left alone in their old age. Some may say all this is the dream of a boyish imagination, but I am personally knowing to cases similar to those to which I have alluded.

Biddeford, Me., March 20, 1868. J. W.

HOUSE-PAPER WORMS.

Many of us farmers live in the "old homestead," and the "slick worm," or "book worm," as it is often called, make sad work with the house paper, especially in rooms not much used. As this is the season in which the good wife wishes to "fix up," can you, or some one of your many patrons, tell of some way to destroy the worm, or how to make the paste and paper distasteful to them? Will some kind of poison in the paste answer the purpose? I know of several rooms in which the paper would look well were it not for the ravages of this pest. R.

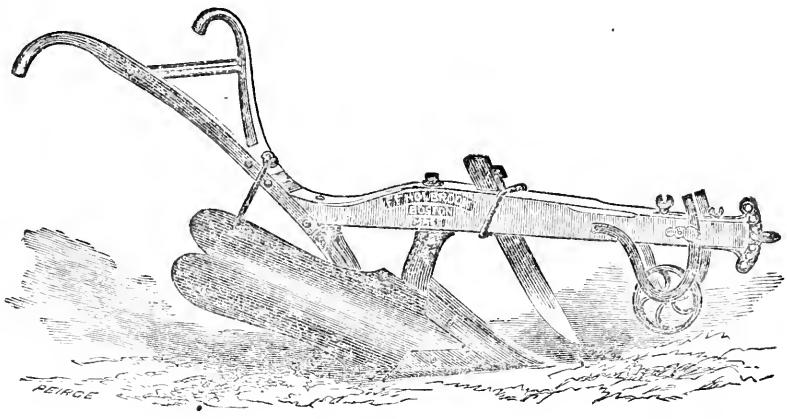
Somerset, Mass., April 2, 1868.

SORE NOSE IN SHEEP.

When my sheep went to pasture last spring, one of them had a sore nose. By the first of June it had spread all through the flock. Just at the right time an article in your valuable paper came to hand, and as it benefited me, and may benefit others, I will here repeat it. It was simply smear the nose with tar and sulphur. In my case it cured them at once, and I shall never let my sheep go to pasture again without it. DOWN IN MAINE.

April, 1868.

—Every garden should have a well assorted bed of useful herbs, such as sage, mint, balm, and other perennial herbs. There are also several medicinal herbs which may be planted with much advantage to the cultivator.



HOLBROOK'S PATENT SWIVEL PLOUGHS.

FOR LEVEL LAND AND SIDE-HILL PLOUGHING.

Since the introduction of the Mower and Reaper, it has been found very desirable to avoid the *dead furrows and ridges* left by the common ploughs, and lay the fields down level for mowing. The Side-hill or Swivel Ploughs heretofore made have been resorted to for level land ploughing, but they turn an imperfect furrows and clog in sticky soils.

Holbrook's new series of Swivel Ploughs are convex and elliptical in form of mould-board, and crack, disintegrate and pulverize the soil very thoroughly, and will not clog. They turn a deep, *flat furrow on level land*, as perfectly as the best Level Land Ploughs, and work well on hill-sides. The team performs its day's work easier than with the common or Level Land Plough, as in going the off ox or horse travels in the furrow, and in returning the near one walks in the furrow, and consequently both are relieved by the change.

These ploughs are furnished with wood or iron beams, as purchasers may prefer. The following sizes are made, viz: No. 0, a small one-horse plough; No. 1, a large one-horse plough; No. 3, a small two-horse plough; No. 5 and No. 6, each a two-horse or cattle plough; No. 7, for three horses or cattle; No. 9, for four cattle, and deep heavy work.

F. F. Holbrook & Small, 10 South Market Street, opposite Quincy Market, in this city, are the manufacturers.

For the New England Farmer.

FLOUR OF BONE.

Having seen a variety of conflicting results, reported in your paper, from the application of "Flour of Bone," I propose to add my quota of experience in regard to its effect. Having an acre of ground that had produced a fair crop of corn the previous year, and which I wished to sow with barley and seed to grass, I staked the whole off in strips, and marked them. Applied flour of bone to one division; lime to No. 2; and left No. 3 without any fertilizer, and sowed phosphate upon the remainder. Nos. 1, 2, and 3, appeared just alike, while the barley was growing; but that portion that received the phosphate was so much darker in color, thicker, taller and heavier, that the difference could be seen at the distance of at least one-fourth of a mile. The bone and phosphate were applied at the rate of 500 pounds per acre. So far, I was not particularly astonished at the result, as previous experiments had led me to expect that phosphate acted rapidly, while the effect of bone was slower in manifesting itself. I didn't write to the FARMER, and condemn the bone, but waited. About three weeks after the barley was harvested, the strip that held the bone, showed a far thicker and greener start of young clover than the rest of the field, and thus it went into winter quarters. Last spring the bone was

ahead again, the difference in its favor, as well marked and as striking as that caused by the phosphate, in the barley. The clover was thickest, tallest and heaviest. The second crop of clover showed the same result in favor of the bone. As some good farmers consider it bad policy to cut the second crop of clover, I eased my conscience by treating the ground to a coating of well-rotted manure, in the fall, directly after mowing. Now if that bone lets go and don't "hoe its row out," in the forthcoming crop of timothy, I trust I may live to report it.

"Do beans mix?" was a question asked in the FARMER, some three weeks since. Most assuredly, they do. I have mixed them several times by dropping alternate colors in same drill. The Horticultural and Indian Chief or Wax Bean will mix "with a perfect looseness," on every chance they can get, with poles four feet apart.

What fertilizer shall I apply to land that was heavily cropped with Swedes, the last season, to render a good crop of beans probable? Corn will not follow ruta bagas.

J. B. HOWE.

Petersham, Mass., March 20, 1868.

REMARKS.— Accompanying the foregoing were specimens of the crossing of the buff and dwarf Horticultural Bean, showing a curious mixture and blending of colors, including considerable dark red and white, neither of which appear on the parent beans. We suppose it is generally understood that beans are very liable to mix. Who can satisfactorily answer the last question?

For the New England Farmer.

CONSTRUCTION AND REPAIR OF ROADS.

The following essay by ELIJAH WOOD, Esq. of Concord, Mass, though written with reference to the roads of that town, and read before its Farmers' Club, contains principles and suggestions that are equally applicable to other sections.

To ride over a good road is an enjoyment which everybody appreciates, who has suffered the discomfort of traveling on a bad one; and it is very surprising that people that have the means should not make a greater effort to improve them. If a road is once built well, it will need but very little repairing for a long time, unless injured by heavy rains, or spring freshets. Our common roads are hardly ever made with much care; often being merely plowed, and the soil and poorest sand from the sides thrown over the centre, for the roadbed.

The idea should be kept constantly in mind, that the best built roads are the cheapest in the end, for a number of reasons:—the thoroughly made one costs but a trifle more; the repairs are of small amount; much heavier loads can be drawn with the same team; much wear and tear of teams and carriages are saved, and much perplexity and hard language from drivers avoided.

In what I have to say on this subject, I shall confine myself mainly to the form, the materials, and repairs.

Roads that are much frequented, or near large cities and towns, should not be less than thirty, and sometimes forty feet in width, with a side-walk of from five to eight feet, for foot travel; the exact width to be determined by the nature and extent of the traffic, as every road should be sufficiently broad to admit of the largest sized carriages which are used upon it to pass each other conveniently. There are many places where roads of twenty feet in breadth would suit the public convenience as well as if they were twice as broad. Now if a road is made one rod wider than is actually necessary, there is a loss of two acres in a mile. Still there is a serious objection to a narrow road in latitudes subject to heavy snows, for they are much more likely to be drifted, and therefore the expense of keeping them open in winter comes quite heavy on the districts. Narrow roads, too, are almost always in bad condition in the spring, which is to be accounted for, from the circumstance that all the carriages are obliged to go in the same place; whereas, if the road was wide, the teams would endeavor to keep away from the ruts, and therefore the track would be more evenly worn.

With respect to the shape of the surface of the road, every body agrees that it should be crowned; but people differ as to the degree of convexity. The proper convexity is to be varied by different circumstances:—First, by the different material of which it is formed,—soft materials being most likely to be worn into ruts and hollows, require to be laid more crowning, from their liability to wash, than hard materials. Secondly, it must be made more convex up a steep hill, as the falling water has a tendency down the track as well as towards the sides, and following the slightest impressions of wheels often wears channels from the top to the bottom of the hill. This may be avoided by bars, or water tables, across the road, made of the best material. These should be large and broad, according to the width of the road and steepness of hill, and at right angles to it, with their sides gently sloping, to occasion as little obstruction to carriages as possible.

The best material for a road surface is broken stone, one and one-half or two inches in diameter, covered with a layer of gravel; but as this process is expensive, we cannot afford the cost in districts thinly populated, and are obliged to use the material at hand,—sand, gravel, clay, loam, road-wash,—and *do* use them, without considering their utility or economy in the long run. Concord is very

deficient in good material for making durable roads. Blue gravel, the next most important article, so abundant in many of the neighboring towns, is hardly known here, and we must therefore make the most of what we have. It is seldom a gravel bank can be found in town, of uniform quality, although there are some that answer a fair purpose, but generally at rather long distances from the work, creating a heavy expense for transportation. Surveyors should not be allowed to put on the road such material as will be of no earthly use, but be required to cart the best that can be obtained, and none other, and do the work thoroughly and well, as far as they go, keeping constantly in mind the old adage that "once well done, is twice done."

The preservation of a road depends on the description of teams passing over it, and the first object is to keep it dry and free from water and mud. Repairs should commence immediately on the opening of spring, by filling up the ruts and hollows, repairing bars, taking out loose stones and correcting any other defects. When the road is much rutted, it not only retains the water, but the rubbing and jolting of the wheels into them wears out the road, the iron of the wheels, and the harness, and also wearies the team. The best service of the surveyor is, then, to keep the road surface smooth and a little crowning, so that water may find a free and easy passage to its proper drain, by scraping or carting just enough gravel, and nothing more, as over-filling creates unevenness, and is labor lost. Much expense of material is thereby saved, and the great end of road-making fully attained, viz: that of rendering it in all seasons, easy, safe, and pleasant to the traveller. It is a credit to any town, and a recommendation to any farm, that the roads through it are neat and in good order.

For the furtherance of this object, I will close with a few suggestions to the Club, which have occurred to my mind while writing, viz:—

1. That the town purchase for each highway district, a scraper of the most approved plan, which the Surveyor be required to use in early spring over his entire road, to level it, and that he be made responsible for the care of the same as long as he holds his office.

2. That a committee be appointed by the town every year, to advise with the Surveyor, directing when, in their best judgment, the work should be done, and to what amount, &c.

3. That no land-owner be allowed to enclose one rod of the public road without the consent of proper authorities; neither shall he be allowed to dig material from the road, without filling the same immediately with sand, to its original grade.

4. That the town direct the Surveyor to fill all places on the road side, where loam has been taken out, so that in future time trees may be planted and other improvements made.

For the New England Farmer.

WHERE WE ARE.

The papers inform me, if I read them aright, that the completion of the Pacific Railroad will place our Republic about midway between Europe and Africa on the one side, and the Asiatic continent on the other. I sometimes incline to the belief that we are somewhere in that vicinity already; and I am beginning to realize the truth of the statement,—made from time to time in our National Legislature,—that the whole world lies at our door. For if I were to advertise to-morrow for a Stormy Petrel, not forty-eight hours would elapse before the postman would bring me a letter from some enterprising individual, offering to send me a "trio" of Mother Cary's chickens for twenty-five dollars! And if I were to inquire for a decoy duck, it would surely come to hand,—guaranteed to be "a non-sitter, and an everlasting layer,"—and in all probability a ten dollar bill would just settle the score! I have a very decided liking for the feathered race. A few weeks ago I tried to purchase some Brahma fowls; and straightway came the assurance from an Eastern fowl-dealer that he would "spare" me a dozen pullets out of his flock, provided I would pay him ten dollars apiece for them! Now, would this accommodating gentleman have fulfilled his promise? I think he would; I believe that at that price he would have spared me a hundred. And the eggs of this variety were offered me for two dollars a dozen!

Yes, the politicians are right in their assertions as to the centrality of our location; for dwellers in out-of-the-way places have no such chances presented to them.

The planting season is close at hand, and the seedsmen hereabouts are doing a heavy business. These gentlemen do their best to gratify the wishes of their patrons, and their endeavors are generally successful. Wanting some seed-potatoes, the other day, I stopped at an out-of-town grocery, and asked for Oronos. The salesman directed me to a bin containing *red* potatoes. I objected to their color. "Very well," said he, "then you can have the *white* variety, for I had as lief sell you the one as the other." I congratulated myself on having fallen into the hands of such an agreeable personage, but at the same time I was forced to admit that he was lacking in particularity; and I was compelled to exercise my own judgment, after all.

Potatoes are bringing a high price, this spring, in this vicinity, although there is an abundance of them in the market. Yorks, Canadas, and other good varieties are being sold for about two dollars a bushel. The Early Goodriches are *said* to be somewhat scarce; and in view of this assertion, it is exceedingly gratifying to me to learn,—as I do from the advertising columns of the agricultural press,—that there are scores of good people not far away who will sell me a few bush-

els of this variety, and will charge me only nine dollars a barrel for them! And I can buy the Vanderveer Seedling for two dollars and a half a peck! Let me never cease to be thankful for having been born and bred in a Christian land! ESSECKER.

Salem, Mass., April 3, 1868.

REMARKS.—Why not always live right in the warm, cheerful centre of the world, instead of shivering on the cold, inhospitable outskirts? We have always preferred the laughing philosopher.

For the New England Farmer.

HOME MANUFACTURE OF "SUPERPHOSPHATE."

EDITORS OF N. E. FARMER:—It affords me much pleasure to respond to Mr. Winchester's inquiries regarding the home manufacture of "superphosphate." The cheapest and most convenient vessel or receptacle in which to prepare it, is formed by dividing in the centre with a saw, a common molasses cask, and using the two parts as tubs. Into one of these, turn half the contents of a barrel of finely ground bone, and moisten it with two pails of water, using a hoe in mixing. Have ready a carboy of sulphuric acid or oil of vitriol, and a cheap *stone pitcher* holding a gallon. Turn this out full of the acid, and gradually mix it with the bone, using the hoe. Fill it again with acid and add as before, stirring constantly with the hoe. The mass will froth up considerably, but will not run over if well stirred. Now add the remainder of the barrel of bone, mix well, and stir in *gradually three gallons more of acid*, und let the contents remain until cold, using the hoe occasionally if it puffs up, or effervesces much. When cold, mix with it a barrel of good dry soil or loam, *thoroughly blend it together*, and it is ready for drying. This may be accomplished by having some rough shallow boxes which can be moved readily, filled with the pasty mass, and placed in the sun. It requires a week or two of clear weather to dry it, and it must be *thoroughly* dried to grind well. The grinding is the most troublesome part of the process, as plaster mills are not accessible to most farmers. It must be well pulverized, and to *pound* it fine with a mallet involves considerable labor and patience; still it can be done. It is best to prepare the superphosphate in the *summer*, the year before it is to be used, as it can be more speedily and thoroughly dried in the hot sun, and then set aside and pulverized in the *winter*, when other work is not pressing. Two men will easily prepare a ton in one day, and it can be beaten up fine in two or three days. In turning out and handling the acid some care must be used not allow it to fall upon the skin or clothing. An old suit of clothing is best adapted to the work. A carboy of acid costs six or eight dollars, and can be bought of the druggists, to whom the empty vessel can be returned.

The writer has prepared many tons of this fertilizer upon his farm premises, and it has produced most marked and satisfactory effects upon crops; especially upon corn and roots. A ton of bone, and a ton of soil with the acid will give a little more than two tons of the powder, which will cost less, and produce much better results than most of the commercial fertilizers in the market. A gill is fully enough for a hill of corn. The bone should be finely ground. A coating of insoluble sulphate of lime forms around each particle of bone, and if they are of the size of a pea, action is suspended before decomposition is effected. It is folly to attempt to dissolve *crushed* or *coarsely ground bone in acid*. This must never be undertaken. It may be well for farmers to prepare at first, a small quantity of this superphosphate, and if they succeed well, and like it, the amount can be readily increased. JAS. R. NICHOLS.

150 *Congress St., Boston.*

For the New England Farmer.

STEAM PLOUGHS AND TRACTION ENGINES.

As the production both of a practicable steam plough and of a traction engine for common roads has elicited the best energies and taxed the ingenuity of inventors for a long time past, and many years of patient experiment have yet failed to produce an implement which shall be both simple and efficient, it may interest your readers to learn the following particulars regarding a machine constructed for the building of common roads, and yet which is used to perform both the offices referred to above.

The machine is called a "Self-track-laying Car," and was invented by Mr. Jesse S. Lake, Atlantic County, N. J. It consists of a truck sufficiently substantial to support an engine and boiler of ten horse power, which supply all the motive force. Over and around the wheels of the truck passes, on each side, an endless chain or band of flat bars of wood, (similar to the tread or track of the common horse-power so much used at our railroad stations) so connected and adjusted that, as the car moves forward, this band is laid upon the ground in front of the truck wheels and picked up as soon as the wheels have passed over it; thus supplying a uniformly solid and compact track for the machine. This enables it to travel over the roughest or softest ground with a reliable footing.

To this car are first attached a gang of ploughs with which to break up the ground, on which when fully prepared it hauls and distributes loads of gravel. Its usual amount of work is to start and pull four to eight two-

horse ploughs, according to the nature of the soil, which it easily accomplishes. In hauling the gravel or stones it will pull from twenty-five tons over soft ploughed fields to fifty tons over a level highway, drawing a train of the same kind of cars or trucks, but without the engine on them. It runs eight miles per hour easily on level ground with twenty pounds pressure of steam, and could easily attain fifteen miles at full pressure.

Although the truck, with boiler, engine, and all included, weighs about seven tons, it runs so easily that two men can push it over an ordinary road. The engine, which seems to be a most important part of the car, as it is the only one that Mr. Lake has ever been able to find adapted to such work, is known as the Hicks engine, made by the Salem Machine Co., of Salem, Mass. Being a double engine (and of course without dead points) and entirely enclosed in a steam-tight box, it can meet the incessant strain without any ponderous fly-wheel, and is fully protected from the great exposure to the dust and weather.

Here, then, seem to be found both the principle and the power, of which the agricultural interest of the world stands so much in need, and but slight modifications are needed to adapt them so that in a short time steam ploughs may be seen on all our prairies, and freight engines on all our highways. With this combination the farmer can build his roads, plough his lands, haul his manure, stones, fuel and produce, thresh his grain, saw his lumber and wood, and draw his crops to market. Similar engines are coming largely into use in France as auxiliaries to railroads, collecting and delivering freight at one's very door, miles away from the stations.

One of Mr. Lake's self-track laying cars is now at work in Atlantic County, N. J., and astonishes the natives. A few days since, while drawing three heavily loaded cars up a moderate hill, some thirty-five men made a simultaneous rush and mounted the train for the purpose of stopping it, and were quite confounded at the little giant continuing its uphill course with its increased load without the slightest hesitation or abatement.

PROGRESS.

Salem, Mass., April, 1868.

For the New England Farmer.

THE FOUNDLING APPLE.

Accompanying this communication, I send you an apple which in some respects far excels any variety known in this region. It is a fair sample of the "Foundling," grown on a tree which I obtained in a lot from the nursery of the late S. C. Wheeler of Groton, Mass., in 1855. Out of twenty-four trees bought of him at that time not a single tree has shown the least degree of disease of any kind, or suffered in the least from our severe winters. Set on some half dozen different farms, every one of them is thrifty, has made a large, bushy top near the ground, and in every respect seems to be as hardy as a beech or maple.

Had I set 100 of them at that time my farm would now be worth at least $1000 more in consequence.

There is one peculiarity in this apple not possessed by any other known to this region. While it ripens about Aug. 20, to Sept. 1, in Massachusetts, here it is beginning to be eatable early in September, and not fully in prime till near October, or about a month behind its ripening in Massachusetts. There it is called a fall apple, while here the same tree will furnish one with dessert from September till March and even April, with no extra care. In this respect I think it has no rival.

The specimen I send you has probably past its prime, but is taken from a barrel that were sound and fresh as Greenings, March 1st, and with no care save hand picking and barreling.

From an extensive knowledge of the various localities in Northern Vermont, gained while canvassing for the FARMER from 1853 to 1862 inclusive, I am convinced that this apple is the best to be found for this region, and if I were to confer a favor on my old patrons and friends, in the line of fruit, I would unhesitatingly recommend to them the cultivation of this apple.

It originated, a seedling, on the farm of Rufus Moors in the southerly part of Groton, Mass., or was so claimed by Mr. Moors.

There seems to be difficulty in getting a supply of the trees at the nursery or nurseries in Massachusetts, for the reason they grow too *scraggy*, (or at least this is my experience in trying to get supplies for my farm), and take up too much room.

This same "scraggy" or low-topped propensity is the very thing that recommends it for this latitude, and nurserymen will do well to bear it in mind.

Now, Mr. Editor, allow me to add that I have no ax to grind, no trees for sale of any kind, but have four bearing trees that have borne *every* year for the last eight years, and will *give* to any one scions from those trees. I have scattered many in years past and shall be happy to do so still, as a lasting legacy to my old friends of the NEW ENGLAND FARMER.

GEO. L. NUTTING.

Randolph, Vt., April 10, 1868.

REMARKS.—The apple was duly received, and tested the 22d of April. Something of the sprightliness of its prime was undoubtedly wanting; still it was quite juicy and good-flavored, and in connection with friend Nutting's recommendation we think the fruit, particularly in the northern part of New England, is worthy of a fair trial. Mr. Cole, in his Fruit

Book, published in 1849, calls it a new variety, and says that it originated in Groton. He gives "Groton" and "Shirley" as synonyms. The following is his description, to which the specimen sent corresponds very well: Large; flattish-round; ribbed; greenish-yellow, mostly covered with bright red; stem medial, very deeply sunken; calyx large, open, in a narrow, very deep basin; flesh yellowish-white, quite juicy, of a sprightly, sub-acid, aromatic flavor. Aug. and Sept. Moderate grower, good bearer. One of the handsomest and best.

TRANSPLANTING IN THE NIGHT.

Occasionally it becomes necessary to transplant a valuable tree or shrub while in leaf or blossom, and thus try to save it, or lose it entirely. This occurs where a building is to be erected, or a road laid out, or for some other cause. In Cambridge, near Boston, a bank was to be built on the spot where a large and fine pear tree stood. This was removed—but not in the night—and is now a productive tree. The cost of removal, however, was considerable. A trench was cut several feet wide and sufficiently deep to go entirely below all the small roots, about which a ball of earth was left and encased in stout planks. To this, sufficient power was applied to slide the whole along on the bottom of the trench, until it came to the spot where it was to remain.

A gentleman in whose powers of observation the editor of the *Working Farmer* had confidence, made the following experiments:

He transplanted ten cherry trees while in blossom, commencing at four o'clock in the afternoon, and transplanting one each hour, until one in the morning. Those transplanted during daylight shed their blossoms, producing little or no fruit, while those planted during the darker portions maintained their condition fully. He did the same with ten dwarf pear trees after the fruit was one-third grown. Those transplanted during the day shed their fruit; those transplanted during the night perfected their crop and showed no injury from having been removed. With each of those trees he removed some earth with the roots.

We are well aware that when plants are accidentally frozen in green-houses it is customary to render the house dark before applying cold water to thaw them; and that when this is not observed they are injured, while if entire darkness be secured during the operation, many of them are saved. But the experiment of our friend seems to have but little analogy to this fact and is entirely new to us.

The effect of night transplanting, we presume, is the prevention of excessive evaporation. The leaves of plants take in moisture, and other properties, during the night, and give them off in the day time,—and when we consider the vast number of pores or mouths, through which they do this, we shall not think it strange that a tree transplanted when exposed to the sun, should wilt and cast its leaves and blossoms.

In certain plants growing in damp places a square inch of a leaf will have 40,000 pores, while on the same space of a leaf growing among dry rocks, there will be 70,000 pores, or mouths. Then look at the immense superficial surface which the leaves of a tree present, and we shall no longer wonder that it would rapidly breathe away its life, unless constantly re-supplied by the action of the leaves in the night. It is probable, too, that not only excessive evaporation is prevented by transplanting in the night, but that the action of the leaves has not been so much disturbed as to prevent the accumulation of moisture and the formation of carbonic acid during the night.

That the evaporation of which we have spoken does actually take place, there can be no doubt. "We do not indeed see vapor flying off from the surface of plants; neither do we from that of animals, except when the air is so cold as to condense the vapor; yet we know that in both cases perspiration is perpetually going on, and it would appear that in plants it takes place more abundantly than in animals. If a plant covered with leaves is placed under a glass vessel, and exposed to the sun, the sides of the vessel are speedily covered with dew, produced by the condensation of the insensible perspiration of the plant. If the branch of a plant is placed in a bottle of water, and the neck of the bottle is luted to the branch, so that no evaporation can take place, nevertheless the water will disappear; and this can only happen from its having been abstracted by the branch, which lost it again by insensible perspiration."

In Lindley's *Theory of Horticulture*, in which he attempts to explain the principal operations of cultivating plants upon physiological principles, the reader may find many exceedingly interesting and instructive facts relating to the garden and the farm.

—English dairymen object to the establishment of cheese factories on the ground that they will deprive their wives and daughters of an honorable and healthy employment, and by relieving them from labor lead to idleness and extravagance.

OUR "NATIVE" CATTLE.

After alluding to the introduction of European cattle into Mexico, as early probably as 1525, which were undoubtedly the progenitors of what are now known as "Texan Rangers," Mr. Allen in his new work, gives the following brief summary of the introduction of neat cattle into the United States and Canada.

In what are now the "United States," the first English colonial settlement was made in Virginia, on the James river, in the year 1607, by a colony of a hundred men, which, by suffering, disease, and want of food, was reduced within a year, to thirty-eight. In 1609, by new emigrations, the colony was increased to five hundred persons; but in a few months they were reduced by death to sixty. Many cows were carried from the West India Islands to Virginia in 1610, and 1611. In succeding years more adventures came out, but in 1622, three hundred and forty-seven men, women and children were massacred by Indians, and the colony, in effect, broken up. Whether their cattle were also destroyed, we have no account; but the settlement was soon after renewed under better auspices and protection, and neat cattle were further introduced and propagated.

New York was first settled in the year 1614, by the Dutch. That colony, after some vicissitudes, prospered. The first importation of neat cattle there, is said to have been in the year 1625, from the mother country, Holland, and they rapidly increased in numbers, both in breeding and further importation.

In 1620, the English Plymouth colony landed in Massachusetts. In 1623, further English colonies came out and settled at Boston and in New Hampshire. In 1624, the first arrival of cattle entered Massachusetts Bay. These were soon followed by other arrivals. New Jersey was settled by the Dutch in 1624, and Delaware by the Swedes in 1627, who brought cattle with them. The early records of New Hampshire state that in the years 1631, '32 and '33, Captain John Mason made several importations of cattle into that State from Denmark, to supply the Danish emigrants who had settled on the Piscataqua river. These Danish cattle were coarse, large beasts, and yellowish in color. Settlements were made in Maryland in 1633; in North and South Carolina in 1660 and 1670; and in Pennsylvania in 1662, all by the English, who either with the first settlers, or soon after, brought cattle over, chiefly from the counties nearest the ports from which they sailed. In all probability, numerous importations of cattle were annually made into the several colonies, during successive years, as the emigrants came in rapidly, and the few early importations, with their increase, were insufficient to supply their wants. That cattle multiplied, both by natural increase and importation, is evident. We see it recorded, that in the year 1636, a party of emigrants went out to settle the town of Northboro', Massachusetts, thirty miles west of Boston, and in a company of one hundred men, women and children, they drove with them one hundred and sixty cattle—and that was but twelve years after the first importation into the colony.

From these diverse and miscellaneous beginnings, our "native" cattle originated. Of what distinctive breeds they were selected, if selected with reference to breed at all, we have no information, nor, at this distance of time, can we be at all certain. Distinct breeds did then exist, well defined in their characteristics, both in England, and Scotland, and we are to presume, that needy and necessitous as the emigrants mostly were—going out for "conscience sake," as many of them did, and in a hope to better their fortunes with all—they paid little regard to breed or race in their cattle, so that they gave milk, performed labor, and propagated their kind.

As the colonists grew in numbers, and prospered in gear, their cattle, now become a a leading branch of husbandry, aided much in their subsistence. Families of considerable wealth from "home," began to add their numbers to the earlier emigrants, and brought with them domestic stock of various kind, provided them forage, and gave them shelter, and in some instances, probably, selected choice specimens from favorite breeds in the localities from whence they came, with which to improve those previously imported, or their descendants, the then native herds. But in a new country, harrassed by hostile savages, difficult of locomotion and intercourse with each other in distant settlements, their cattle were localized and confined to their own immediate neighborhoods, pushing out into new districts only with the adventurous parties forming settlements, where they could, of necessity, pay little attention to selection or "improvement" in their herds. They took such as they had, or such as they could get, at the least possible cost, as "browse" for the first few years was their principal forage in winter, "leeks" in spring, and coarse grass in summer and autumn for pasturage. The best they could do was to provide food for their families, and let their cattle shift for themselves. We presume however, that the earlier colonists, having become well settled and thrifty in circumstances, cared well for their herds and measurably improved their quality.

Thus, undoubtedly, stood the condition of the neat cattle of the colonies down into the years 1700, and after. We have accounts that, as the merchants of the sea-coast towns grew rich, some enterprising ones made importations of choice breeds from England, which were driven into the country neighbor-

hoods, and very considerably benefited their common stock.

In the year 1608, Quebec, in Lower Canada, was founded by the French, and soon afterwards, colonists came in considerable numbers from the western coast of France, and brought with them the little Normandy, or Brittany cattle, closely allied in blood, appearance, and quality, to the "Alderney" cows of the Channel Islands. They are now propagated in all Lower Canada, and throughout the many ancient French seignories in large numbers, forming their principal stock of neat cattle. They proved excellent milkers, hardy, easy of keep, and profitable for the dairy. They are also tolerable for the yoke, and for beef. In their remote distance, and limited intercourse with the people of the English colonies, it is not probable that their herds became intermixed. We have no accounts of the kind, and the peculiar characteristics of the cattle now there, after nearly two hundred years of acclimation and breeding, show no relations with the New England stock of our Northern States.

REMARKS.—Our cattle market reporter informs us that large numbers of Canada cows and heifers are annually sold at Cambridge and Brighton. Though very small and inferior looking animals, they give very good satisfaction as milkers. They are sold at low prices, and the drovers often laugh at those who pay high for petted Jerseys, and are unable to perceive the same "blood" and the same "points" in these little "Canucks," whose hard usage and hard climate have given them a rougher coat and a somewhat countrified appearance.

WHEAT IN DRILLS.

Mr. Gilpin, of West Iowa, Pa., in a communication to the *Rural New Yorker*, says he seeded an acre of wheat in drills, twenty inches apart, using three pecks Mediterranean wheat. In the spring, when the ground had become sufficiently dry to work, a small garden hoe harrow was run between the rows, working three inches deep. This was done only once.

"The wheat took a rapid start and outgrew the rest of the field. As the season advanced it grew tall and strong, and no amount of wind or rain had any effect to lay it down. When the heads formed their greater length was apparent. It was backward in ripening, and the rest of the field was cut and hauled in before this was ripe. Now, for the result: the experimental wheat yielded twenty-three bushels to the acre, and the rest only nine bushels; the quality of each was about the same.

Too many plants of any kind to the square yard or rod invariably crowd and starve one another. Till the ground deeply and thoroughly, and have no more plants than will have room to develop their roots and leaves perfectly, and you will see longer and better filled heads of wheat or corn than can grow where plants are crowded by the use of too much seed, or starved by defective cultivation. Isaac, the son of Abraham, probably did not plant over a peck of wheat on an acre, which being hand hoed, and duly irrigated, gave him one hundred fold or one hundred pecks on an acre.

Herodotus informs us that the province of Babylon raised wheat at the rate of two hundred-fold for the seed planted. From this statement it is a legitimate inference that the people used about a gallon of seed to the acre. If so, 200 gallons harvested was about twenty-five bushels to the acre. Wheat-growers in the south-west seldom sow more than a bushel of seed to the acre, and this often among standing corn, the stalks being cut near the ground in the winter. The seed is ploughed in."

Will Mr. Gilpin, or some other careful observer repeat the above experiment, using a half bushel of seed only to the acre, and make another experiment using only a peck of seed, and make known the result? By a series of such experiments we may ascertain the amount of seed that will give the largest crop. There can be no doubt that stirring the soil among wheat, by the hoe or harrow, is as beneficial to the crop as it is to corn.

CATTLE FEEDING IN IOWA.

A correspondent of the *Prairie Farmer*, at Vinton, Iowa, having tried the Illinois plan of turning his cattle into the corn field to help themselves and to tramp mud for exercise and for bedding, concluded it did not pay, and adopted a new plan after this wise:

My lot, twelve to fourteen acres, and hilly, is surrounded with timber. In the fall I made shedding for seventy-five head of cattle, (number on hand,) eight rods long on north side, with wings on east and west sides, and open to south. In the centre is a large straw stack; and I kept building as fast as they would destroy it. Cut thirty acres of corn; in fall, before frost, and shocked same in field. This is better than hay for a change. Fed shocked corn once a day, at night; and "snapped" corn in the morning, with timothy and clover hay at noon. This method of feeding kept the cattle well bedded, as they would eat nothing but leaves of fodder and corn. Fed shocked corn with an eye to bedding. Had a separate lot for hogs, and drove them out when we fed shocked corn.

To sum up:—My cattle cost me from 2½ to 3¼ cents per lb. Sold fifty of same in January, to be delivered the 29th day of February, for 6 cents per lb., to be weighed in the yards at home. I fed about forty bushels of corn to

the head, and all the hay they wanted to eat. Now, if you will figure out the "keep" by my method, the result will be—made some money.

For the New England Farmer.

DOES IT PAY TO USE COMMERCIAL MANURES?

This is an important question. After the farmer has used all the manure he can possibly make on his farm, I think he can use to advantage many of the fertilizers in the market. I have used more or less superphosphate of lime for several years past, but with varied success. The brands I have used have been Coe's and Bradley's, from Boston. There has not seemed to be that uniformity in the material or in the manufacture, in different years, that is desirable. The past season, I used several barrels manufactured by Paddock, Dean & Co., which proved the best I have ever used. I mixed two parts of fine soil or dry muck with one part of phosphate, using it in the hill for corn at the rate of 300 pounds of phosphate to the acre. The soil was loam, well manured on the sod with stable manure, turned under in the spring just before planting. Where I did not use the phosphate, the corn yielded one-third *less*, by actual weight, than where I used the phosphate. I am sure it paid me more than double the cost. It has one advantage over stable manure in the hill, —it grows no weeds, and breeds no worms. I used it on India wheat on very poor land. Where I put the phosphate at the rate of 200 pounds to the acre I had a good crop; on the other barely enough to pay for harvesting.

JONATHAN LAWRENCE.

St. Johnsbury, Vt., 1868.

TIME TO CUT TIMBER.—A correspondent of the *Southern Cultivator* in communicating the following experiments, remarks that the best time to cut timber is when in full leaf—July and August—and that the knowledge would have been worth thousands of dollars to him, had he possesed it years ago:

Lot No. 1, was cut in July 1860—house logs to put up cabins; red oak. They were put up, but not covered; been exposed the whole time; still sound.

No. 2 was square timber for gin house, of red oak, post oak and over cup, was gotten out in December, 1860; piled and covered with plank till 1863; exposed since that time; sound on the outside about two inches; perfectly rotten in the heart; red oak the worst rotted.

No. 3 was of same kind of timber, subject to more exposure; gotten out in June, 1861; much sounder than No. 2; green timber sawed in July, 1861; subject to same exposure as No. 2; still quite sound.

EXTRACTS AND REPLIES.

PREMATURE FALLING OF GRAPES.

I have a wild grape vine which has been pruned for several years, and still the fruit drops off as soon, or before it is ripe. Will you be kind enough to inform me through the FARMER, if there is anything I can do to prevent this. CATAWBA.

Weymouth, Mass., April 17, 1868.

REMARKS.—Can any of our grape-growing friends afford "Catawba" the desired information? That formidable disease, the mildew, causes the fruit to drop prematurely; and so do several of the varieties of the "rot." Most of the wild vines do not bear trimming very kindly, and possibly the vital force of the vine may have been impaired by this means. Perhaps, too, this may be only a youthful freak of this particular vine which it may outgrow in due time.

THE YEW OR YEW PINE.

Can you or any of your correspondents inform me where the "Yew" or "Yew Pine" is found in such forests as grow in certain parts of a few counties in Western Virginia. Here in unbroken forests, where two or three hundred trees stand on an acre, it shoots up 150 or 200 feet, with scarcely a limb on the lower half of its trunk, spreading out its spear-like top into an unbroken wilderness of dense foliage that for ages perhaps has never been penetrated by a single sunbeam. While thus effectually shielding the surface from the sun, it appears to appropriate every power of the soil. Thus grown, the timber is exceeedingly valuable; being very elastic, strong and of such fine grain as to require the sharpest tools to work it, and is employed for building and other purposes. But when standing alone, or mixed with other trees, it is of comparatively little value, being short, full of knots and limbs and greedily occupying a large space. It, however, makes a delightful shade-tree, forming a thick egg-shaped mass of foliage, that few of the other evergreens can equal. H.

West Virginia, April, 1868.

REMARKS.—The Yews are considered by some botanists as constituting merely a sub-order of the pine family. But so far as we know, they generally seem to prefer solitude, being unsocial in their habits, and we think such a forest as our correspondent describes is very rare. The Yews in the church-yards of England are of very great antiquity, and of extraordinary size. They are even supposed to mark out the sites of Pagan and Druidical temples which existed before the introduction of Christianity. The use of the Yew for making bows was familiar to the earliest Greek and Roman authors; and at one time in Switzerland its use was prohibited for any other purpose than bow making.

TO PREVENT POTATOES FROM SPROUTING.

From more than fifty years' experience, I am satisfied that whether intended for late planting or for the table, potatoes that have not been sprouted are far more valuable than those that have been. The first sprout that starts from a potato is stronger and better for growing than those which start afterwards.

A convenient and easy way to prevent sprouting is to put the potatoes into barrels carefully filled and head them up. Then lay the barrels in a sin-

gle row on joists or poles which extend some three feet beyond the row of barrels, so as to give room to roll the barrrels half way over. They should be put in the coldest place you can find. Every day if convenient, certainly as often as three times a week, roll each barrel half way over. This places every potato in the barrel bottom side up. The sprouts which start both from the upper and lower sides of the potato instinctively point upward; consequently by turning the barrel the perpendicular of the sprout is reversed, and is put in a similar condition to the man who halts between two opinions, and, like him, not knowing what to do, accomplishes nothing. Twenty barrels, arranged as above directed, may be turned bottom upwards in about one minute. A. G. SHELDON.

Wilmington, Mass., April 18, 1868.

BUILDING FENCE.

I saw directions in your paper a short time since for building board fence which differ somewhat from my plan, which is as follows:—First, instead of setting the posts three feet deep to prevent heaving, I dig the hole oval, or long, instead of round, about two feet one way and the width of the spade the other, and not over two feet deep, with the centre six inches deeper; the hole being dug across the line of the fence. About six inches from the lower end of the post, I bore a two-inch hole through it and drive a strong pin through, so as to project about a foot on each side. Set the post in the hole and tamp the dirt around the bottom and up level to the top of the pin, then lay a flat stone or piece of board or large chip on the pin each side the post, and fill up with dirt or small stone. This I think is the surest and cheapest way to prevent heaving that I know of, and it also prevents the fence from being blown over, the pins being crosswise the fence serve as braces to the posts.

To prevent the damage to fences that often occurs in consequence of the unequal heaving of posts, I prefer to have the boards short enough to dispense with a middle post, and have them held only at their ends. My practice is to lap the ends of the boards on the post, and then place a narrow strip of board in front of the post, and drive one large nail or spike through the strip, through each set of the lapped boards, and firmly into the post. This holds all secure and allows the boards to hinge on the nails, in case of heaving.

Williston, Vt., April, 1868. F. C. NARAMORE.

THE LEGHORNS.

The Leghorns are a hardy medium-sized fowl, of a quiet disposition, persistent layers and non-sitters, of a pure white color, yellow legs without feathers. The cocks have large single combs, which should be perfectly erect, full wattles and large white earlobes. The hens have usually large combs, lopping like those of the Spanish. They mature very early. A good healthy pullet will lay at five months old, and often before; and when the chickens reach the age of one month, you can easily distinguish the hens from the cocks, and at four weeks of age the latter will be strutting about and crowing. Those who breed them in numbers should carefully adopt a system of points, towards which their efforts should be directed, and thus the high reputation of this race may be perpetuated. MAT.

Concord, N. H., March 15, 1868.

RANDOLPH, VT., FARMERS' CLUB.

This institution closed its sixth annual course of meetings on Monday evening, April 6,—one of the most pleasant and profitable series of meetings it has ever held. One of the last transactions of the Club was the election of officers and other preliminaries necessary to holding a town Fair next autumn. It is hoped that all tillers of the soil, all breeders of stock, mechanics, inventors, patentees and lovers of the fine arts in the vicinity will bear this in mind and prepare to put the best foot forward. The Club meets on the first Monday in June to make further arrangements. N.

Randolph, Vt., April 20, 1868.

A PIG WEAK IN HIS HIND LEGS.

I have had a small shoat two months which weighs about a hundred pounds. It has done very well until the last week. He now appears to be weak in his hind legs. He eats well, his eyes look bright, but it is with difficulty that he stands on his legs. If any one will tell me through the FARMER what ails him, and what to do for him, I shall be much obliged. A READER.

West Townshend, Mass., April 5, 1868.

REMARKS.—Our own opinion is that the trouble with your pig is the result of high breeding, high feeding, and want of exercise. We have known many "pampered" pigs of about the size of yours, and from eight to twelve months of age, that were in like manner more or less "gouty," and suffering the penalty which is affixed by nature to a life of indolence and luxury. The root-hog-or-die breed know nothing of this "disease." Let the pig have some ashes, lime or other alkalies, sods, &c., to root over, and a good fast; if this does not put him on his feet, give him one tablespoonful of epsom salts and one of sulphur mixed in a little bran slop every day until a free passage is secured, when the salts may be discontinued, but a little sulphur may be given occasionally. In extreme cases a tablespoonful of copperas may be given in daily doses for a week. But generally abstinence from food is sufficient.

HOT BED.—SALT AND LIME FOR HAY, AND LIME FOR POTATOES.

Early gardening in this town is attended with some difficulties this season. To-day I dug through a snow drift three feet deep, and finding my hot bed, which I made a few days ago, in a proper condition, deposited my seeds therein.

You asked a few weeks ago for reports of the effects of salt and lime applied to hay. I applied it to early cut hay, put in without as much drying as usual; to late cut hay put in the same, and to hay which got wet after it was partly cured, and on account of a succession of poor days could not be perfectly dried. In every case the hay came out exactly as I should have expected it to come out if nothing had been applied; the early cut, of a bright green color, fragrant, just the thing for milch cows. The late cut did not feed out so clean, and cows in milk shrank considerable on it. That which got wet none of my stock wanted, and it went for bedding.

I did not notice as the health of the stock was in any way affected by the mixture. This year's experiment would lead me to conclude that the mixture is harmless and useless.

I think that hay, both early and late cut, may safely be put in with less drying than is usual, without any application of preservative or curing compounds. But would recommend that it be allowed to lay up in the barn as light as possible a few days, and that care be exercised to fill the pitching hole with the dryest. If the hay gets

wet after it is down, thorough drying is absolutely necessary.

And while we have the lime question in mind. Some one said—and I have seen the item in several agricultural papers—scatter slaked lime over your potatoes when you put them in the cellar and they will not rot. I do not know but that is so. But if the potatoes are not perfectly dry it adheres to them, looks bad when you take them to market, and makes it very disagreeable for the ladies when they come to prepare them for the table. L. E. BICKNELL.

Windsor, Mass., April 11, 1868.

EXPERIMENTS.

I consider that there is scarcely any other department of science or art in which conclusions supposed to be drawn from experiments, need to be so carefully scrutinized as in agriculture. So many unknown elements enter into the great natural processes of vegetation,—so many disturbing influences which we can neither understand nor control, affect them—that all our attempts to ascertain the laws and rules by which they act, by what are termed experiments, should be watched with the greatest care, and the supposed results taken with very many grains of allowance. The seeker after knowledge ought constantly to ask himself whether such and such a result may not be attributable to some other cause than the apparent one, or than the one he hopes to fasten it upon. No conclusion ought to be considered as reached till after the most thorough examination of all the facts and conditions in the case.

Now, Mr. Editor, I do not say this to throw discredit upon the many very valuable reports made in your columns by your numerous intelligent, practical correspondents, but to induce them to use greater care in their studies of nature; and also to afford a hint to men, who, attempting to accomplish like results with those thus detailed, by using the same method, yet failing of success, attribute their failure to the fault of the process, when in reality the error should be looked for in a totally different direction.

POTATO RAISING.

Having read and heard much about the effects of the various methods of using potatoes, as seed, I resolved last spring to try them in several different ways, and see what would come of it. I had a piece of ground which was of a uniform quality in every respect. I prepared it all alike, then planted as follows:—

Four rows of butts, two pieces in each hill, hills ordinary distance apart.

Then four rows, seed ends exclusively, same as above.

Then four rows, whole potatoes, fair size, one in a hill, somewhat nearer together than before.

Then four rows, small potatoes near together, one in a hill.

Then four rows, two small potatoes in a hill, ordinary distance.

Then three pieces of potato mixed, just as they would cut up, seed and butts together.

When dug, I let them lie on the ground so as to get a view of all at once, in order to ascertain if any perceptible difference could be seen in the field. The conclusions I reached were these. The tops were somewhat more healthy and vigorous where the butts were planted alone. In digging and hoeing I found greater convenience in the rows where the single whole potatoes were put; not nearly so much labor being involved in either operation, as where there were two or three bunches of tops and clusters of tubers in the same hill. But, upon the whole, I am forced to confess, that the quantity of potatoes gathered did not materially vary through the whole piece of ground; though there probably were more small ones where small potatoes were put in for seed. The only result I can reach from the whole experiment is, that for economy of work and material, from first to last, I should recommend the use of whole potatoes, fair size, one in a hill, and the hills near together. Good barnyard manure was spread and ploughed in, then a half pint of ashes and hen manure, equal parts, was put into each hill.

If this result coincides with any other man's experience, I should like to know it. It would be interesting to inquire whether either of the methods I have above specified, would, by being followed up, year after year, improve or injure the crops; and perhaps herein lies the most important point of all. Men will take a good bull and cow and make from them by patience and skill a breed of cattle better than either of the progenitors; but in matters of seeds we rarely have the requisite patience, and hence may fail of reaping the best results from our labor.

FARM MECHANICS.

Will you allow me, though not exactly a farmer, to say, that in my opinion, the NEW ENGLAND FARMER, as now conducted, is the most valuable periodical for the use of the agriculturists of New England, that is published. If I were to venture a suggestion, it would be to give us somewhat more on the mechanic arts and processes, as applied to agriculture. The farmer must be almost a "Jack at all trades" now; and as time goes on, and one machine after another is added to the list of farm implements, knowledge of mechanics will become almost as necessary to the successful farmer as of agriculture. Some form of the steam engine promises, at no distant day, to be as common among our hills and valleys as are now horse and ox teams, and perhaps will soon take the place of them for many purposes not now dreamed of.

DICTIONARIES.

I noticed a short time since an editorial recommendation of Webster's Dictionary. This is a great and valuable work, and *almost* good enough for anybody; but could you not find room to mention Worcester's Dictionary, as at least of equal value. In spelling and pronunciation very many wise men prefer the latter, in so far as it differs from the former. C.

Claremont, N. H., 1868.

REMARKS.—We use and highly prize Worcester's dictionary, and accept it as authority on several controverted lexicographical points; still, by way of reference and illustration, Webster's is much the most frequently used, partly perhaps the result of association, as our first lessons in reading, spelling and picture study were in his primary school books.

BUYING TURKEYS.

Noticing, some time since, in your paper an article, written by H. A. Sumner, Brandon, Vt., on rearing turkeys, I wrote to him last fall to know what weight he could promise, and at what price he would sell a pair of turkeys His reply was that he hoped by Christmas to be able to fill orders for spring turkeys, weighing thirty pounds per pair, for $8; yearlings, weighing forty pounds per pair, at $10. I enclosed $10 for a pair of yearlings. In return I received a pair weighing 42½ pounds,—gobler 25½, hen 17 pounds. Mr. S. says that seventeen pounds is the largest hen he has as yet been able to raise. He had a tom at home of same age, weighing 28½ pounds,—three pounds more than the one he sent me. I received as a favor one spring hen weighing 13½ pounds. The box was well supplied with corn; and although

three days on the road the shrink on arrival was only one pound. The three at his door weighed 56 pounds; at mine 55 pounds.

Piermont, N. H., Feb., 1868. N. SPENCER, Jr.

EXPERIMENT WITH MANURES FOR CORN.

I am much interested in reading the NEW ENGLAND FARMER, particularly the "Extracts and Replies." Willing to do something towards keeping up this department of your excellent paper, I send you an account of my experiment with corn. I planted, May 25, five rows—fifty-five hills in a row—four feet apart each way. In No. 1, put a large shovelful of first-rate manure in each hill; in No. 2, no manure; in No. 3, 1½ bushels of compost, being a mixture of plaster ashes and hen manure; in No. 4, twenty pounds Bradley's XL Phosphate of Lime, thoroughly mixed with the soil; No. 5, one bushel Lodi Poudrette. Husked the corn on the hill and weighed the ears of each row separately.

	Sound.	Unsound.	Total.
No. 1	76 pounds	5 pounds	81 pounds.
" 2	42½ "	6½ "	49 "
" 3	60 "	4½ "	64½ "
" 4	69 "	2½ "	71½ "
" 5	59 "	3½ "	62½ "

Land poor, gravelly, moist; was turned over in September. No manure spread.

From this experiment it will be seen that the row with manure in the hill yielded the largest quantity, although the one with phosphate had the least unsound corn. J. M. M.

Raynham, Mass., April 20, 1868.

PAID FOR A FARM, LOST IT, AND TRYING AGAIN.

When I was twenty years of age, I bought a farm of sixty-seven acres on credit, in Tionesta, Pa. In the course of a few years I paid the whole, and had a large orchard of apples, pears, peaches, &c., of the choicest varieties, mostly from Mount Hope Nurseries. When the war broke out, I enlisted and was sick for a long time; in fact, until the expenses took my farm Last fall I went into the lumbering business, but trade has been so dull that I cannot make a living at it. I have now rented or leased a small house and barn at this place, with six acres of land at the small sum of seventeen dollars a year. On this place there is plenty of lime, stone coal, and wood. At a sawmill, half a mile distant, I can get plenty of sawdust by hauling it away. I hope to make my little patch produce more money than some of the fifty-acre farms in this vicinity. Please change the direction of the FARMER, accordingly, as I cannot, though rather poor just now, do without it. D. J. STOW.

Big Bend P. O., Scrubgrass,
Venango Co., Pa., March 23, 1868.

REMARKS.—With your experience and pluck, we cannot doubt that you will succeed, if you have recovered your health, which many of your brother soldiers have failed to do. The value of sawdust depends much on the kinds of wood from which it is made. Mr. F. J. Kinney, of Wayland, Mass., who has used it extensively, stated, in the FARMER, of 1862, that the best was from hard wood, hickory, oak, maple, birch, &c.; the second quality, from poplar, basswood, chestnut, &c.; and the poorest from spruce, hemlock, pine, &c. Sawdust is valuable, first as an absorbent of urine, &c., in stables and yards; secondly, it is worth something for forming vegetable mould. When used as an absorbent it should be dry; but when the direct object is vegetable mould, it should be subjected to fermentation in the heap. Most likely you can use it in both ways; by drawing a quantity in dry weather to be housed and used as a bedding for your animals and to keep your privy and house slops sweet and tidy; and allow a part to ferment and rot in heaps out doors.

Mr. Kinney used 100 cords in nine months as bedding for two horses, seven cattle, and several swine, and says he never smelt a disagreeable odor about his stables while using the sawdust, unless it was allowed to burn. In the stables, the floor was covered about six inches deep, and as fast as it was saturated it was shoved into the manure cellar, where it was trampled as hard as possible. He soon found that it must be turned, or something else done, to keep it from fire-fanging. After trying several ways, he finally adopted the plan of letting it remain in a solid heap and turning on water enough to keep it moist and cool until it was drawn out to the field, when it was put in flat heaps about a foot thick after being well trod down. Most of the water used was from the roofs of barns and sheds. In this way from 80 to 100 cords of compost was made from the same stock which produced fifteen cords of manure the year before, with ordinary bedding. The value of a part of the sawdust compost which was allowed to lay over the summer and digest or rot, proved to be greatly increased for the purpose of a top-dressing for grass land. This compost worked well on all parts of the farm. Carrots, corn, potatoes, wheat, all sorts of roots and grass were alike benefitted—the more compost the larger yield, in all cases. Still, sawdust of itself, is rather weak manure, and the more urine, droppings, house-slops, &c., that can be mingled with it, the better it will prove.

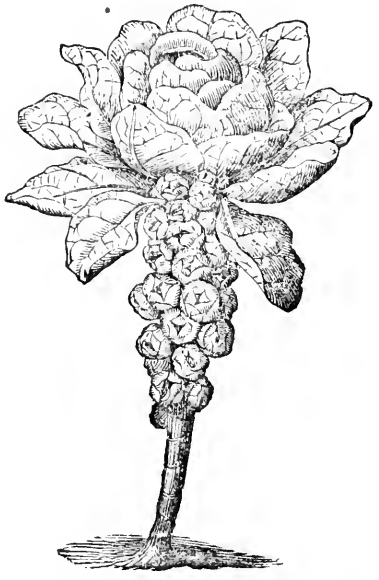
A HOME-MADE ROCK LIFTER.

Many farmers might cut their grass with a machine if their fields were not covered with rocks weighing from one to three tons. A good and cheap machine to pull them out may be made by any man who has good tools, in the following manner:—Take two sticks, nine feet long and four inches square, these are for the sides; one stick for the hind end, four inches square and four feet long; for the rocker a piece six inches wide and four feet long, set back eighteen inches from the fore end; mortice them together as you would a heavy wagon body, and put a short brace in each corner. Next take two sticks about seven and a half feet long and four inches square, set them up on the side pieces of the body in the form of an inverted A, half way between the fore and hind axle; bring the top ends within six inches of each other and fill the space between them with a large tackle-block or pulley, containing two wheels; fasten the ends together with two large bolts, running one of them through both wheels. The upright part must be braced with four braces four feet long. For a roller, take a round stick four inches in diameter, and long enough to reach from one side-piece to the other; bore two holes near each end for the levers; fasten the roller to the side pieces about a foot ahead of the rocker; get a tackle-block containing two wheels with a large hook in one end; take forty feet of two-inch rope, pass

it over the wheels of both blocks; fasten one end to the roller and the other to a staple and ring near the upper block. With this machine and the necessary skids, two men can roll up as big a stone as a good pair of oxen will draw off on the wheels.

Middlesex County, Mass., 1868. PHILIP.

BRUSSELS SPROUTS.



Last fall I wrote two notices of this vegetable for the FARMER, and if I can say anything more which will induce its more general cultivation, at least in gardens for home use, I shall set myself down as thus far a public benefactor. I never saw the vegetable till I saw it growing in my own premises this season. I have heard so much of its delicacy from travellers abroad that I procured some seeds in the spring (at Washburn's, in Boston, I think), and planted them a little too late, however. They did well, but did not come into bearing very early. I had only a few plants, and late in October I secured enough sprouts for a trial, and found them tender and delicious—a refined cabbage. I supposed I should have no more, but since then they have flourished well and given me several messes from some dozen or more stalks. I gathered a fine dish to-day, after the snow and severe cold weather which we have had. There is no vegetable that comes upon my table which is more generally commended by my family. I think it is perfectly hardy, easily raised, prolific, and I can see no earthly reason why it should not come into general use. I cannot find out much about the manner of treating it, but propose to take up the stalks for spring planting, and believe it will produce delicious sprouts for early spring use. Now, if each one of the 17,000 weekly purchasers of the NEW ENGLAND FARMER will try this vegetable another season, and the much larger number who occasionally get a glance at the paper without subscribing, will do the same, then if the vegetable does not thereafter go into pretty general family use, even in this climate, it will be because their experience differs much from my experience of this year. I might add, the little heads or sprouts which are eaten, grow upon the stalks. They are easily cooked, requiring but a few minutes boiling. We serve them with butter, pepper and salt.

Since writing the above, I have seen the communication of your Jeffersonville, Vt., correspondent, "E. H.," and am glad to have one early endorsement that this dish is "fit to set before an epicure." His failure in this country was doubtless owing to his soil and exposure. My land is a deep, heavy, rich and rather moist soil, but I think the sprouts will grow anywhere side by side with the cabbage.

November 24, 1867. INQUIRER.

REMARKS.—The above communication was received last December, and its publication postponed for the purpose of procuring a cut of the vegetable with which our correspondent is so well pleased. So much delay has attended the several processes of drafting, engraving, and electrotyping, that it appears rather late in the season. We hope, however, that what was published last fall and winter, in relation to this Thousand-headed Cabbage, as the Brussells Sprouts is often called, has induced many to procure and plant a few seeds by way of experiment. It may not be entirely too late to do so as yet.

"The seeds," says Mr. Burr, in his book on the vegetables of America, "should be sown at the time and in the manner of the cabbage, either in hot beds in March or April, or in the open ground in April or May. When three or four inches high, transplant two feet apart in each direction, and cultivate as for cabbages. In September, the early planting will be fit for gathering; whilst the later plants will afford a succession that will supply the table during the winter. They are quite hardy, easily grown, thrive well in New England and in the Middle States, and deserve more general cultivation." Mr. Burr also describes two varieties,—the Dwarf, growing from eighteen inches to two feet, and the Giant from two to nearly four feet in height. The seed in the market often produces plants corresponding with both varieties and numerous intermediate kinds. The small heads are used either as cabbages or as the cauliflower.

CULTIVATION OF POTATOES AND CORN.

Our spring has been cold, rainy and backward; being almost a duplicate of the weather last spring. Some of the Island farmers planted early potatoes three weeks ago, but probably will have to plant again. Until last year, the potato has been the most profitable crop raised in this section. The perpetual rains of last season almost destroyed the crop, and little remains for seed.

Heretofore the potato crop, being very sure, has been carelessly cultivated, but as the price is now very high, I would suggest economy in seed, and greater care in preparation of the land.

We have seen statements in the FARMER of success in using eyes cut out singly and planted in drills. This involves some work, but the same seed thus planted would doubtless yield twice as much as where the whole potato is planted in one hill. Three or four eyes planted in the drill, is the practice here. I hope experiments will be tried this season as to these points. No one can have pulled potato vines without noticing roots running far away from the hill; nor can any have hilled up potatoes without finding himself cutting off a great many roots, which are the feeders of the growing potatoes. Hence we doubt the practicability of hoeing deep and hilling high. A slight flat hill, holds water best in dry times. The cul-

tivator and hoe to stir the surface and keep weeds down are sufficient, without deep trenching around the hill. When the manure is ploughed in, the roots diverging from the hill get the benefit of it. A shovel full in a hill, acts upon a limited surface only. So it is with corn, the roots do not stay in the hill where the shovel full of manure is dropped, but they seek from afar the nourishment with which to give you the "full corn in the ear." If the farmer would, as was said by one of your late correspondents, plough in his manure at the second ploughing, say four or five inches deep, his land would be pulverized and made more mellow, and his corn would show the result at harvest time. Here again experiments are wanted. Plant alternate rows of corn, in hills, in the usual manner and in drills, and report the yield of each in the FARMER. H. POOR.

Brooklyn, L. I., April 25, 1868.

FOOT DISEASE IN SHEEP.

Can you or some of your readers tell me what is the matter with my sheep, and what will cure them? In about one week after I bought them, they began to be lame, and small round sores between the toes appeared, that soon spread over all the space between the toes and up as high as the issue. I have doctored them for the foot-rot, and have used Whittemore's Patent Foot-rot Medicine once; hot tar, once; powdered blue vitriol, turpentine, white lead, and vinegar, twice; pure nitric acid, three times; blue vitriol, vinegar and turpentine, three times; white lead, blue vitriol, (powdered,) turpentine, linseed oil, five times. I began doctoring in November, and in March the flock was nearly well, but now there is hardly a sound sheep in a flock of eighty. Two have died. The disease has not worked under the hoof. I have acted on the best advice I could obtain.

Ascutneyville, Vt., April 15, 1868. D. F. A.

CORN COB MEAL.

A few years ago, after having perused a long treatise in favor of cob meal as a feeder, I concluded to try it, although at the time I placed no confidence in it as a food; for I could not see how a dry cob, with no taste or smell, could possibly be nutritious,—scientific researches and analysis to the contrary, notwithstanding. Fearing the ridicule of my neighbors, I loaded into my wagon about twelve bushels of cobs, minus the corn, and a few bushels of clear corn, and started for a grist-mill *eight* miles from home, when there was an excellent one within about one and a half miles. When I arrived at the mill and told the miller my object, my mortification was still more increased by being informed that the toll for grinding the *cobs* would have to come out of the corn, as the cobs were useless to the miller. However, I was not going to give up the trial, after having come that distance, without satisfying myself; so I had my cobs ground, paid my toll out of the corn and went home.

That night I fed my cattle a good ration of ground cobs, but instead of eating it they turned up their noses in unfeigned scorn and lowed lustily for something better. This, too, was a damper on my feelings, but I suppressed my chagrin and consoled myself with the thought that not being used to the food they would not eat it until they knew what it was. So I mixed a little corn-meal with it and tried them on that. I found from several trials that they would eat it that way; but the only trouble was that I could not mix more than about a pint of the cob meal with a peck of the corn meal, or they would not touch it, so I gave up the cherished idea of feeding cob meal and returned to the trodden path of my forefathers.

Afterwards, however, I tried feeding meal, made of the corn and cob ground together, to my horses, the result of which nearly proved disastrous to my team, as it caused such a stoppage of the bowels and urinary organs as to be nearly fatal. The moment I stopped feeding them on this mixture and resumed the clear corn meal they were all right again.

I was at one time speaking to the proprietor of a line of stages that formerly run between Burlington and Montpelier, in regard to the effect of this meal on my horses, and he told me "they had lost more horses in that way than any other." There seems to be an acid in the cob that contracts the intestines and bladder, and in that way causes the stoppage. My experience, which they say is the best teacher, has led me to eschew the use of cobs entirely as food for my stock, and should advise all who feel interested in the welfare of their cattle to do the same. NIX COBBS.

North Underhill, Vt., April, 1868.

LICE ON CATTLE.

A thorough washing of cattle in water in which potatoes have been boiled, with a sprinkle of ashes under them occasionally, I will warrant to prevent their ever being troubled with lice. I think hens should never be allowed to roost with cattle.

Port Kent, N. Y., Feb., 1867. J. C. MILLER.

CURATIVE MEDICINE FOR FOWLS.

Indian meal, lard and cayenne, mixed of suitable consistency to be administeredby putting the left forefinger into the biddy's mouth and force a pellet of the dough into the throat; then gently work it towards the crop. I knew it to cure a pullet in a cold night, that failed to roost, and one whose claws were drawn up, and thus made helpless, and a rooster that kept putting his head to the ground and going heels over. These cases were cured in an hour. C. NEMBYSEE.

York County, Me., April, 1868.

AGRICULTURAL ITEMS.

—The Contoocook Agricultural and Mechanical Society will hold its next fair at Hillsborough Bridge, September 16 and 17.

—The London dairymen have decided that the most profitable cows are graded short horns, not because they give more milk, but because when past milking, they make most beef.

—The veterinary editor of *Wilkes' Spirit of the Times* recommends the following for scratches in a horse: Take sulphate of zinc, one drachm; glycerine, two ounces; apply every morning.

—A correspondent of *Wilkes' Spirit* urges that early breeding has produced the deterioration in horses rather than in-and-in breeding. He advises never to breed a mare to a stallion under six, and never before the mare is five.

—Mr. E. Dorland, of Sherwood, N. Y., writes to the New York Farmers' Club that his cows were bitten by mad dogs, and about two weeks afterward he found greenish lumps in the milk, about the size of peas, and holes were continually eaten through the pans.

—In selecting cows for dairying, or furnishing milk for market, the *Farmer's Cabinet* directs as

follows: select good wedge-shaped animals; heavy hind quarters, tapering towards the head; with light heads, long faces and long wax-colored horns; slim necks, small tails, capacious udders, running well forwards; milk veins large; teats good size, rather long, and set well apart.

—The *Farmer's Cabinet* says a piece of lard as large as a walnut mixed with dough, will cause a hen to commence laying immediately after she has been broken up from sitting; and by giving hens fat in this way, they may be kept laying all winter.

—Dr. Piper sends the New York *Evening Post* the following remedy for garget in cows: hydriodate of potash, one ounce and a half; water, one pint; to be given in doses of one tablespoonful two or three times a day. It may be mixed with meal, or put into a pail of water. This is probably the best remedy known.

—In a recent discussion before the Bedford, N. H., Farmer's Club, the question of applying manures to sod ground was discussed, and at the close of the discussion twenty to one voted that manure should be applied to the sod after it had been turned over, and as near the surface as it is possible to cover it, not over three inches deep.

—To prevent smut in grain, a correspondent of the *Prairie Farmer* directs to spread the grain thinly on a floor, sprinkled with brine strong enough to bear up an egg. Then add two quarts of slacked lime, and shovel over until the kernels are uniformly coated. This should be done the day before it is sown. It will kill the spores of smut and quicken the growth of the seed.

—At a late discussion by the New York Farmers' Club, Horace Greeley said, "I consider deep ploughing a remedy for the woes of this country. No garden or orchard ought to be planted unless trenched two feet deep, so that the roots can penetrate to the moisture. Two feet is not deep enough, but I am so modest I stop here!" With some of our New England teams and on some of our New England soils, we think, if obliged to "either hold or drive," one-half of that depth would fully satisfy his "modesty," by dinner time of the first day's trial.

—A correspondent of the *Country Gentleman* recently found the bees in a hive kept in a cellar, the temperature at the time being about 38°, very uneasy, trying to get out at the entrance and at the holes in the honey board, both of which were covered with wire cloth. When dark he removed the honey-board, made five additional holes, cleaned out the dead bees from the bottom board by the use of a bent wire, and all have been perfectly quiet since. They were suffering from want of sufficient ventilation.

—Notwithstanding a scarcity of water which rendered it impossible to work up the whole crop of beets at the Chatsworth factory, last fall, the *Prairie Farmer* says that sixty-five thousand pounds of sugar, of fine quality were produced, and have been sold at good prices. The work will be prosecuted with renewed vigor the coming season. It is also stated by the *Western Rural* that at this establishment about 400 head of cattle have been fed through the winter on beet pulp, with a small amount of grain, the cattle fattening finely on the pulp.

—A correspondent of the *New England Homestead* has for the last twenty-five years, planted potatoes, not larger, on an average, than an ordinary hen's egg, and they yet produce as sound, and as large a product as at first. Potatoes inadvertently left undug, if they do not freeze during winter, invariably produce sound ones, larger and more abundant than those kept in the cellar through winter. This has lately suggested to him the plan of keeping potatoes excluded from the air from the time of digging and planting, which has invariably prevented rot.

—At the late meeting of the American Dairymen's Association, a committee was appointed on statistics. The committee propose to obtain correct information in regard to the product, demand and sales of American cheese and issue circulars at frequent intervals to dairymen, advising them of all useful information in regard to the cheese and butter product and the markets. To carry out this scheme money is needed, and the committee has levied a tax at the rate of two cents per cow on all the factories in America. If this should be paid in, the work will go on, but if not, then the money will be returned to such as do pay.

—Some time ago, a cow belonging to a farmer on the line of the Pittsburgh and Chicago railroad, ran upon the track in front of the train, throwing the train off the track, and injuring several persons. The railroad company sued the farmer for the full amount of damages, and recovered a verdict for $4000. An appeal was taken to the Supreme Court of Indiana, which affirmed the verdict of the lower court. This is an important decision as it holds that persons living upon lines of railroads cannot allow their stock to run at large so as to endanger the safety of passing trains.

—A correspondent of the *Rural New Yorker*, who put 28 swarms of bees in his cellar, left two on the stand and put one in his chamber, for the purpose of ascertaining which was the best place for wintering. The two left out on the stands, the one put in the chamber, and two of those put in the cellar were weighed December 15th. March 26th, they were weighed again. One of those on the stand had shrunk fourteen and the other sixteen pounds; the one in the chamber fourteen pounds, and of the two in the cellar one lost fifteen and a-half and the other sixteen and a-half pounds. As this does not settle the question as to the condition of the bees for the summer campaign, he promises to watch and see which swarms first and yields the most profit, and report next fall.

For the New England Farmer.

THE BLUEBIRD.

BY THE PEASANT BARD.

When warm rains fall and soft winds sweep
Away the wintry drift,
When swollen brooks roar down the steep,
And gray with mist the lift;
When through the vale the floods outpour
And crashing icy floes,
With swash, and dash, and wild uproar,
Trend with the melted snows;
When all the plain with snow-broth swims,
And teams, on half bare road,
With swinging heads and cordy limbs,
Drag the resistant load;—
A twitter from the tree we hear,
Some bars of music sweet,
And gloomy thoughts give place to cheer
As we the minstrel greet.

Sweet little harbinger of Spring,
Green fields, and sunbright days!
O, welcome! with thy azure wing
And softly warbled lays.
While other songsters loiter still
In regions of the sun,
I bless thy hardy little will
To tell of Winter done,
Its dark, cold days and bitter skies,
Its wild and gusty nights;—
Of Spring, unfolding to our eyes
Her mantle of delights.

The farmer hears thee, and he knows
Of earth's awaking life;
Tells of thy advent as he goes
Homeward, to "weans and wife;"
And eyes grow bright, and smiles steal o'er
The sober face of care,
And crowded grows the cottage door
To catch the vision rare.
The swart boy in the sugar-bush,
Who loves his gun to try,
The crow's discordant croak will hush
With "murder-aiming" eye;
But when thy liquid numbers fall
On his delighted ear,
He welcomes thee with answering call,
Nor harms thee, hovering near.

Sweet bluebird, type of winged HOPE!
When darkness like the tomb
Begirts earth's pilgrims, and they grope
In sadness and in gloom;
Hope whispers soft a word of cheer
O'er the dismaying scene,
Till through the folds of blackness peer
Bright skies and living green.

Gill, Mass., March 14, 1868.

EXPLODING WOODCHUCKS.—A gentleman recently informed us that he had been entirely successful in destroying these pests on his farm by an invention of own, which he said was simply a "small earthquake." This he produces in the following manner: a good handful of gunpowder is put into a cloth bag, to which a fuse is attached. The bag is then put into the woodchuck's hole some two or three feet, with the other end of fuse projecting from the hole, which is then filled in and carefully tamped with earth. If the burrow has other openings these must also be closed. The fuse is then lighted, a dull explosion follows, and poor chucky is never heard from again, being probably unable to breathe the air in his narrow house after the burning of the powder.

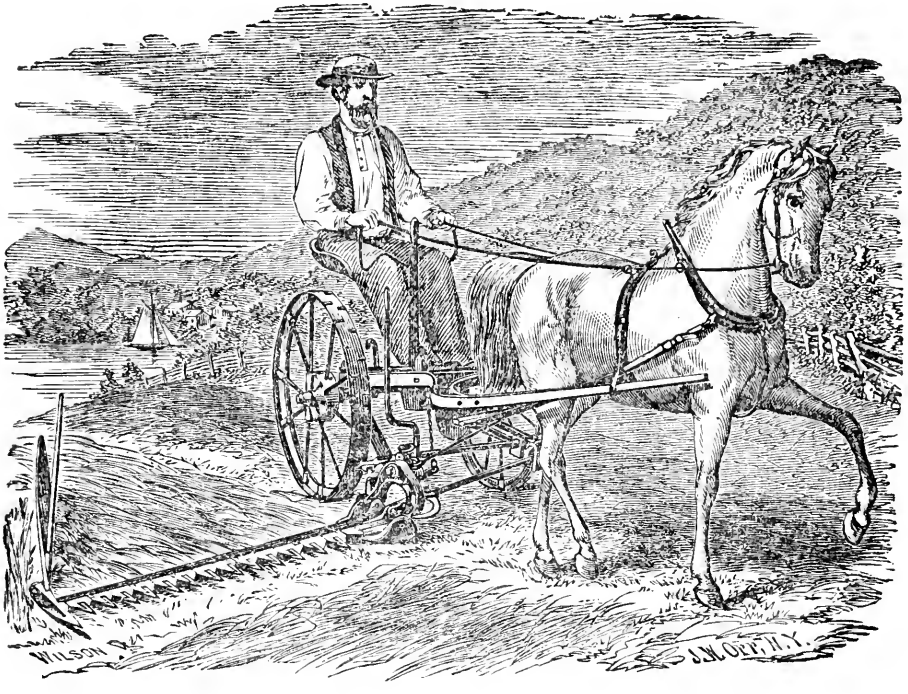
CONTOOCOOK, N. H.—The agricultural and mechanical association of the Contoocook valley has voted to hold its next annual exhibi- at Hillsboro' Bridge on the 16th and 17th of September. Its newly elected officers for 1868 are as follows:—President, Horace Gove; Vice Presidents, Cornelius Coolidge and C. E. Potter; Secretary, John F. Chase; Assistant Secretary, Daniel Johnson; Treasurer, J. C. Campbell.

SOWING GRAIN.

Seed can only be distributed evenly from the hand in a semi-circle, and to do this while walking at one end of the semi-circle and casting it all on one side is impossible.

Let the sower walk in the middle of the cast and throw it equally on both sides, and shift his track one half the width of the cast at each end of the lot, and the most slovenly hand will make fair work. Thus each line of track will have the edge of two casts and the middle of one. But still a careful examination will reveal a difference between the right and left sides, which would be unnoticed by a casual observer. This arises from the head or first part of the cast being apt to be the thickest, and the tail, or last part, flying the farthest, and with this way of walking the head falls on the same place, both going and returning. This, however, is effectually remedied by sowing with the right hand one way and the left when returning, which will become an easy and agreeable habit with an hour's practice

All this could be made plain on paper by a drawing, but still plainer by a trial on the field, and the experimenter will be surprised at its ease and success. But in the sowing of small seeds, such as clover or ruta-baga seed, the best plan is to carry the seed in front and sow with both hands, swinging the arms as in walking, the right hand advancing with the left foot, and *vice versa*. This is particularly needful with ruta-baga seed, of which a quart should cover an acre, and remarkably even distribution is required to facilitate the hoeing and insure a crop.—*W. H. Mabbs, in Western Rural.*



THE GOLD MEDAL CLIPPER,

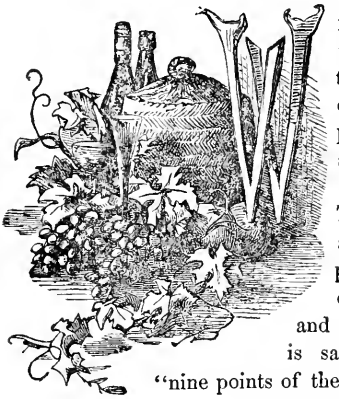
AT THE GREAT NATIONAL TRIAL AT AUBURN, N. Y., 1866.

We present a cut of the Clipper Mower as one of the leading standard machines of the day; and one which, in our judgment, is worthy of particular criticism by those about to purchase. It is claimed that its steel guards; iron frame; enclosed gearing; malleable shoes; adjustable height of cut while at work; height of wheels; front draft; ease of draft; adjustable gear shifter; with its simplicity of construction and tasty style of finish, are considerations to be appreciated.

We notice in the report of the committee at the Auburn, N. Y., trial, (see report, page 65 to 67,) the following highly complimentary remarks to the inventor, Mr. Rufus Dutton: "Its mechanical execution reflects upon him the highest credit; in this respect it surpasses all the rest; all the bearings are as smooth as machinery can make them; all the joints are closely fitted; all the working parts are mathematically in line; all the materials of which it is composed are the best that can be procured. So excellent was the workmanship, that a protest was made by one of the exhibitors, in writing, that it was better than those offered for sale. A sub-committee was appointed, and after a careful examination of machines in the hands of farmers, and at their warehouse, reported that the machines at Auburn were in no respect better than those offered for current sales."

ONLY ONE CUSCO.—In the table of the comparative products of different seed potatoes, in Mr. O. C. Wait's communication, in the FARMER of April 11, Monthly page 210, by a mistake of the printer, it appears that the same number of the Cusco was planted as of the four other varieties named; when, according to copy, the seed for the twenty-eight hills which produced two bushels, was from a single tuber.

WEEDS.



EEDS have the advantage of all cultivated plants in several respects.—They usually have possession of the soil and possession is said to be "nine points of the law."

They are either heirs of old settlers, and claim by regular descent, or they are holding by the claim of "squatter sovereignty," or they have been inadvertently placed in the soil by the farmer, in the manure, or mixed with his seeds. In some way they have got possession, and the weed is not particular about the soil. It is at home anywhere, and always ready to assert its claim, and push its way; and, like the child of poverty among the heirs of wealth, it seems to know that it must fight its way through the world, and sets about it with energy and pluck, and generally, like him, wins the fight at the expense of those whose prospects were apparently the best. It does not require dainty food or watchful tending, or careful protection from heat and cold. All it asks is, like other rebels against good government, "to be let alone," and it will accomplish its purpose, will mature its seed, and thus secure the continuance of the pest as a source of trouble in future. We think cultivators do not always treat the weeds as wisely as they might Would the commander who allowed his enemies to entrench themselves and gather reinforcements before he offered them battle, be considered a skilful general? And the farmer who waits till the weeds are firmly rooted, and have grown large and strong,—is he any wiser? When weeds have attained a firm foothold, it is much more difficult to destroy them. You may turn them under or over with the plough or cultivator, but they start up in increased numbers and commence anew the fight for possession. As soon as the rows of plants can be seen, set the cultivator in motion, and turn up the weeds to the rays of the sun, while they are yet tender. Indeed, the Western farmers use the harrow, drawn in the direction of the rows, before the shoots of the corn are visible, and say it does not hurt the corn. On old ground, the surface should be stirred as often as a new batch of weeds begins to show itself. If the weeds and plants are allowed to grow together, the weeds will grow the fastest, and monopolize the nutriment in the soil, and starve out the plants.

In our old soils, this fight with the weeds is an important part of the husbandman's labors. It cannot be put off, like some other work, till a convenient time, but must be attended to at once, and continued so long as the plants continne to grow; and if one would have an easier contest another year, he must continue it this year through the entire season, and not suffer a weed to mature its seed.

We have a neighbor who commences early his battle with the weeds in his garden, which is a rich soil and annually filled with manure. He rakes over its entire surface twice a week and keeps it "swept and garnished" all the fore part of the season. When the plants become large and thrifty, he gets weary of his work, and leaves plants and weeds to themselves, and in the autumn he has a fine crop of weeds, which mature a full store of seeds, so that he may be sure of work for the next year. When he digs his potatoes in the autumn, he mows off a full swarth of weeds before he can find the hills. If he would keep his ground clean through the entire season for a few years, he would find his labors much lightened. "A word to the wise," &c.

> "The sire of gods and men, with hard decrees,
> Forbids our plenty to be bought with ease;
> And wills that mortal man, inured to toil,
> Should exercise with pains, the grudging soil."

RULES FOR BUYING WOOL.

Recently we made a note, by way of an "agricultural item," of the fact that a Chicago convention of manufacturers had promulgated certain rules by which they were to be governed in buying wool. But as it takes two to make a bargain, we supposed the one-third shrinkage resolutions of this association were little better than a "puff of empty air." But taken in connection with similar resolutions adopted by a similar convention in Rochester, N. Y., about a year ago, we see by late numbers of the *Rural New Yorker*, that Dr. Randall treats the matter as one of

more importance, and thinks the agricultural press should define its position on the question, and do its utmost to bring the combination rules into discredit and disuse. For our own part, we have considered the idea of establishing any such arbitrary and preposterous rules for buying wool as too absurd for serious protest.

Suppose that a convention of consumers were to fix a standard of "merchantable cloth," and then adopt a one-third or any other positive rate of shrinkage on which they would buy all other cloths, and who would feel called upon to define his position on that question, or to attempt to bring such combination rules into discredit and disuse? Or, try it on horses or cattle, houses or lands, sugar or salt, stockings or shoes, and what would be said to a proposition to administer trade on any such principles?

Still we very well know that wool growers have long submitted to somewhat similar edicts, and perhaps their emancipation from their unjust operation is more distant than we had supposed. It may yet be necessary, as suggested by Dr. Randall, for the producers "to fight the devil with fire," by forming a combination of their own to checkmate the combinations of the buyers. But we had hoped that the good sense and best interest of both parties would lead to the adoption of more sensible and more equitable principles of traffic; that wool, like all other articles of produce and merchandise, would soon be bought and sold for "what it is worth," and that both buyer and seller would see the necessity of being better posted as to the quality and condition of the article and the state of the market.

TO PREVENT CATTLE FROM JUMPING FENCES.

One of the most trying annoyances to the farmer is to have breachy cattle. They not only set a bad example to other cattle, and destroy fences and crops, but they frequently lead to bitterness of feeling between neighbors, who have lived in harmony for many years. This sometimes ends in a fierce and protracted litigation, ruinous, perhaps, to some of the parties, and destroys the good feeling and amiability that had previously given the neighborhood a good name. This change of feeling is not confined to those who were at first most interested in the matter, but extends to relatives, witnesses and others, until the whole neighborhood is drawn into the gulf, and all are more or less demoralized. In this unhappy manner, feuds are commenced that sometimes pass down through several generations, and all springing from the fact that a breachy cow, ox or horse broke down the fence, or leaped over it and destroyed a few bushels of apples or corn, or fed to repletion in forbidden fields.

Various devices have been resorted to in order to prevent such trespasses, and especially in regard to sheep, but none have succeeded, or only in a limited degree. Now we have a new one, and if it is not cruel or painful, or will not greatly discommode the animal operated upon, and is a remedy, we can see no objection to employing it. It is to "*clip off the eyelashes of the under lids, with a pair of scissors, and the ability or disposition to jump is as effectually destroyed as Sampson's power was by the loss of his locks.* The animal will not attempt a fence again until the eyelashes are grown."

This fact has been promulgated by that distinguished breeder of cattle, Mr. SAMUEL THORNE, of Dutchess county, N. Y., who states that he tested it upon a very breachy pair of oxen with entire success. He considers a knowledge of the fact of great value to himself, and hopes it will prove so to others.

LEICESTERS AND MERINOS FOR MUTTON.

A few weeks since our cattle market reporter noticed a fine lot of 263 sheep, averaging 144½ pounds, fatted by Mr. Jurian Winnie of Albany county, N. Y., and sold to Mr. Henry Goodnough, a Brighton butcher. We now learn that Mr. Winnie fed 901 head the past season, 180 of which were Merinos, and the remainder Canada Leicesters, and that they were sold for $12,049.15. To test the comparative profit of feeding the two kinds of sheep, Mr. Winnie set apart 60 Leicesters and 61 Merinos which were weighed February 10. The *Country Gentleman* says:—

A careful account was kept of all the food they consumed during the continuance of the experiment, forty-six days, to March 28, when they were again weighed and sent to market. These numbers were thought to represent fairly the whole, and were taken as avoiding the trouble and additional risk of error, which would have been in-

cured by larger numbers. The experiment began after both lots had been got in good progress—the previous and subsequent treatment of both having been precisely alike. The Merinos were an extra good lot, the 180 having been selected out of 600—and no complaint could exist against them, as we know by personal examination, on the ground of being below the best merits of their kind

The following are the figures as regards weight, &c.:—

Feb. 10—60 Coarse Wools weiged, ...	8,870 lbs.
March 28— do. do.	9,878 lbs.
Gain in 46 days, ...	1,008 lbs
Total cost of feed, (hay, grain, oil-meal, roots, &c., for 46 days,)	$174.43
Feb. 10—61 fine Wools weighed, ...	6,909 lbs.
March 28— do. do.	7,389 lbs.
Gain in 46 days, ...	480 lbs.
Total cost of feed as above, ...	$144.78

When both lots were sold, March 31st, the former realized 10¾ cents per pound, and the latter 10½ cents.

A calculation in simple proportion will show that if the coarse wools gained 1008 pounds at a cost of $174 43 for feed, the gain of the fine wools at the same ratio upon an expense of $144.78, should have been 836 pounds, whereas it was only 480 pounds, or a little more than one-half a proportionate amount as compared with cost. As compared with live weight, Feb. 10th, the coarse wools gained 11⅛ per cent. in the forty-six days—the fine wools not quite 7 per cent.

In this connection it should be remarked that Mr. Winnie is a careful, but we hope not prejudiced, breeder of pure Leicesters, as well as a noted and most successful feeder. Among the last year's lambs of his Leicester flock of forty head, some weighed 175 pounds on the 17th of March last.

RENOVATING WORN LANDS.

There is much complaint that lands are exhausted. That they will not yield remunerative crops, and there is a constant inquiry how they may be restored to a fertile condition. We have long been convinced that clover for this purpose is not estimated at its true value. Clover for many purposes, is one of the best kinds of food. For sheep, milch cows, and horses that are not worked much, there is no better hay. And while a crop of clover that pays the expense is obtained, the land is improving. The *Rural New Yorker* gives the following experience of one of its correspondents:—

The lot of which I write is dark gravel and sand, with a little yellow sand. It had been pretty well summer fallowed when I bought it, and there was nothing better to do than to sow it with wheat, no manure on hand to top dress with. I sowed it to wheat, and the next spring with clover. Harvested 11 bushels of wheat to the acre. Some time previous to cutting the wheat, it had been very dry, and the clover was much dried up,—it seemed as if would die. Immediately after cutting the wheat, I sowed a hundred pounds of plaster to the acre, hoping that this, with the dews, might save the clover. The clover lived and grew finely. The next season mowed once and pastured moderately. Mowed again the next season. In August ploughed eight inches, turning under but little but the roots, and after cultivating the surface with drag and cultivator, sowed wheat again. From this, harvested seventeen bushels of wheat to the acre. Went through the same process again for the next two seasons, and harvested twenty-two bushels of wheat to the acre, thus doubling the yield of the wheat by the clover roots, and the plaster. What has been done is the best guide to what can be done.

In this case, in six years, at a cost only of three hundred pounds of plaster to the acre, the land had been brought into a good condition; the crops in the meanwhile paying well for the labor. There is much land in this State, that by a similar process might be brought into a good condition. No doubt manure would do the work quicker, but when this is wanting, why not resort to clover and plaster. Twenty-two bushels of good wheat is as much as we can expect from well manured lands.

WEIGHT OF FLEECES AND PRICES OF WOOL IN OLD TIMES.—The *Rural New Yorker* has discovered in one of Shakespeare's plays a price current of wool two hundred and sixty-four years old. In the Winter's Tale, Act iv., Scene 2, the clown making preparation for the "sheep-shearing feast" thus counts up the funds at his disposal:—

"Let me see:—Every 'leven wether—tods; every tod yields—pound and odd shilling; fifteen hundred shorn,—what comes the wool to?"

This is explained by the commentators to mean that the wool of *eleven sheep* would weigh a *tod* or 28 lbs. Each fleece would, therefore, be 2 lbs. 8 oz. 11 dr., and the whole produce of fifteen hundred shorn, 136 *tod*, 1 clove, 2 lbs. 6 oz. 2 dr., which at a pound and odd shilling per *tod* would yield £143, 3s.

THE COTTAGE SYSTEM.

In his recent address on retiring from the Presidency of the New York State Agricultural Society, Gen. M. R. PATRICK, after alluding to the difficulty of obtaining skilled labor on the farm, made the following remarks, which are well worthy the attention of New England, as well as New York farmers, and are corroborative of the views expressed by our correspondent "N. S. T." in an article published last August. On every farm where hired labor is required through the year, this system might be adopted, and would be

attended by many advantages. In addition to those specified in Gen. P.'s remarks, the laborers would be scattered through the community, living in close proximity to their work, instead of crowding into some "Dublin" or "Cork," in the centre of our towns and villages, by which arrangement much time is spent in going to and from their work.

"The cottage system appears to present the most favorable solution to the problem, for both the farmer and the laborer, as well as for the best interests of society generally. By the erection of snug cottages, at convenient positions for attending to farm work, and the employment of married men as permanent farm laborers, not only boarding themselves, but such other occasional help as may be required, the farmer's wife is relieved from the burden of caring for a house full of hired men, and will, in all probability, secure from the wife and daughters of the cottager, such female help as may be needed in her own kitchen and dairy. Wherever this system has been introduced, it has given the best satisfaction to all parties concerned, especially to the laborer, inasmuch as it gives him a home—a castle of his own; making him realize that he, too, is a householder and a citizen.

His self-respect is increased, his manhood is developed, he acts more considerately; your interests and his become more identified, and your influence in molding and Americanizing the ideas of his growing family is as potent, quite, as his own. Hitherto only the wealthier classes of our agriculturists have adopted this system, but there seems now to be a necessity for the adoption of of such a system by farmers of the middling class, and those who own smaller farms."

For the New England Farmer.

THE APPLE TREES.

Shall we lose the apple trees? This is a question of great importance. Solon Robinson says "we shall lose the apple as we have the peach crop." I no more believe this than I believe that we shall lose our maple orchards, or our beach and hemlock timber lots. But the present system of *planting* and *cultivating* apples must be essentially revised. The statute laws intended for the government of a nation in "the piping times of peace," are no better adapted to the exigencies of the changing fortunes of a wasting war, than the old careless system of planting and cultivating fruit trees is to carry them safely through the destructive war which the Curculio, Codling Moth, Borer and other inveterate enemies, have made upon them. Plain, practical results, deduced from experience and careful observation must lead men in this work, and not theory. Theory is much better, and will produce greater results in the school-room than in the open field. The man who tills the soil with his own hands, and learns the varied workings there of the laws of vegetable physiology, is the man to establish general principles for the cultivation of fruit and fruit trees, and not the chemist in a city labratory. "Soil analysis" died in the arms of the chemist, so will his trees, just as Mr. Robinson says.

The man who plants with intelligence, cultivates with prudence and care, guards against over-bearing and trains his trees so as to resist the effects of the sweeping winds, the biting frosts and the ever-changing atmosphere, will not only find the cultivation of fruit profitable, but one of the most pleasant occupations of life. Every fall we hear that the "fruit drops prematurely, the apples are wormy," "the fruit crop a failure," &c., &c.

But where is the remedy? The destruction of the perfect insect is beyond our reach; but there are remedies which we can bring to bear upon them while in the embryo or larvæ state. The constant gathering up of all the fallen fruit, and if apples in sufficient quantity, make them into vinegar; but if few, or of other varieties of fruit — such as pears, plums, or peaches,—burn them. By persevering in this line of treatment, and occasionally washing the trees with strong soap suds, or some other like wash, the destruction by these pests of the orchard may be greatly averted. This, however, is rather anticipating our subject. Other questions must be considered.

What kinds of fruit shall we raise? What varieties, and in what proportions of each? What adaptation of soil and climate shall be observed. Shall we bud or graft? When and where obtain our scions or buds? What stock shall be employed? Shall we mulch, and with what material? What preparation of soil, what amount and kind of fertilizers, and what cultivation generally shall be given? These and other kindred questions, demand the careful attention of every fruit grower, wherever located.

Varieties.

How few of all the hundreds of varieties under cultivation in the Eastern States combine all the characteristics of a good fruit. What we now seriously need is an extensive planting of seedling and experimental orchards. From this system of planting by our forefathers came nearly all the choice varieties which we now cultivate. These orchards are now fast disappearing, from old age and neglect. From the abundance of our forefathers, our fathers neglected to plant. Central and Western New York supplies the eastern markets with apples to-day. The time has come when it pays to raise apples for cider and vinegar, and there must be a *new* class of apples produced for this purpose. The Baldwin, Greening, Russet and Nonesuch are entirely unsuited to this purpose. Under the present system of planting and cultivating trees, it is almost impossible to originate a new and valuable variety. That any seedling apple grafted and re-grafted for forty years, more or less affected by the diseases and imperfections of a score of different trees, can maintain its native character and qualities unimpaired, I think no man will assume to maintain. A great portion of the Baldwins now produced in this section, are far below the high standard of this valuable apple

twenty years ago. Science has demonstrated that the physiological laws of growth and decay positively forbid the *perpetuation* of varieties. They are simply incidental. I know of no pomological society, no agricultural or horticultural association, that has at any time offered premiums or inducements of any kind for the production of a seedling apple or pear that should possess merit. We must advance from this position, or our fruit crop is a nullity. Apply the money appropriated at State and County fairs for horse-racing, to stimulate the production of new and valuable seedlings, and these New England hill-sides and vallies would again smile with golden fruit. With proper treatment, a seedling orchard may be brought early into bearing, to test its fruit, and but a few years will be required to top and change them into trees of some good or valuable variety.

How to Procure Good Trees.

Thousands of trees are annually set in this country that are worse than worthless at the time of setting. The nursery business has become an important one, and many abuses and "tricks of trade" have crept into its details. Not that nurserymen do not prosecute an honest and legitimate business, and some of them have proved themselves benefactors of their race by disseminating valuable fruit; but irresponsible peddlers of fruit trees are constantly travelling with fruit books of highly colored plates of scores of varieties of fruit, entirely unadapted to our soil and climate, for the purpose of selling refuse trees from distant nurseries, trimmed up like whip sticks to facilitate transportation, but precursors of untimely decay. It is not surprising that we make failures in setting orchards from these worthless sprouts. The free interchange of fruits between States and *nations*, even, is very desirable. But still, as a general rule, we should raise our own stocks, into which we should introduce such varieties as are known to succeed in our particular localities, and on our varied soils. These stocks should be cut off to the ground the second or third year, and budded or grafted with a perfect scion from a good, healthy, bearing tree—using none but those from the ends of bearing limbs of the last year's growth,—never use buds from a sucker or sprout from the trunk of the tree; train it close to the ground, by cutting the leader or upright shoot back to within about six buds. Do this in the early spring of the next season after grafting, before the buds start.

Cultivate as well as you would a field of corn, in order to fully develop the natural capacity of the tree for productiveness. Never allow it to overbear. Mulch well, to keep moist and maintain an equilibrium in the sap and fluids of the tree. Keep the borers out, and the worms off, and God will assist you in making a tree that shall be a pleasant and profitable thing to you and to those that shall come after you.

From this system of planting and training would come orchards productive and remunerative, by having a native hardihood peculiarly adapted to our soil and climate. I have said varieties are incidental,—they appear and disappear. The tree in its old age is unfit to continue the propagation of its species. This system of producing new seedlings, opens up to us an intensely interesting field of enterprise.

Varieties.---Manuring ---Mulching.

The Baldwin is our leading variety, though it may not equal the Spitzenburg or Spy. It is a rapid grower; acclimated and productive. The Roxbury Russet and Rhode Island Greening we originated. New York adopted them, but with varied success. After the Baldwin come Green Pippin, Porter and Danvers Winter Sweet, &c. New York has the Spitzenburg, Spy, Rambo, Melon, Twenty-ounce, Newton Pippin, Codlin, Swarr, Wagener, Smoke House and Primate, all good and nearly all their own by origin. We also have the Nonesuch, Seek-no-further, Tolman Sweet, Pippin and others—the Pippin paying best, and only, for generous cultivation. The Red Astrachan, Williams and Gravenstein are fine apples. The first named I would plant in my garden if for nothing but the beauty of its fruit.

We must revise and increase our list from seedlings. Most varieties of apples will bear but little animal manure. It stimulates and fills the tree with diseased sap, producing a rapid growth of wood, which is immature and will not elaborate into healthy leafy tissue or woody fibre, and resulting in a constitutional disease which proves fatal to the tree. A soil well drained, made rich with a liberal mixture of leaf mould from the woods, and wood ashes, *well mulched*, will make a tree that shall be enduring. This treatment will produce a strong, healthy growth, and the tree will mature its wood every year. I have only spoken here of the apple. From the nature of the case, I am strongly inclined to believe that the pear will soon become our most profitable fruit crop. L. L. PIERCE.

East Jaffrey, N. H., Feb., 1868.

BIDDY vs. PORKEY.

J. C. Thompson of Staten Island, after referring, in the *Country Gentleman*, to the reports of various individuals who obtained respectively, per annum, from single hens 145, 156, 126 and 115 eggs, goes on to make the following humorous comparison between the profits from Porkey and Biddy.

I gather from the numerous reports in your paper, that porkey does well if he turns out ten pounds of grease for every bushel of corn consumed. But let us allow the swinish multitude a fair average, say 12½ pounds of flesh for one bushel of corn, although it is oftener

under than over that number of pounds. Now let us see how the account stands with biddy. For one bushel of corn, piggy gives 12½ pounds of flesh. For one bushel of corn biddy gives say only 100 eggs, which at eight to the pound, make 12½ pounds. The eggs of the larger breeds will run eight and often seven to the pound. Thus giving piggy a fair average, he makes 12½ pounds, and biddy at a low rate gives the same number of pounds of food.

Now put both in the market at the present prices. Piggy 12½ pounds at ten cents, $1.25. Biddy 12¼ pounds at 32 cents per pound, (eggs 48 cents per doz.) $4 00. Showing a difference in favor of biddy, of $2.75. Returning to the product of eggs, as by the reports referred to in the beginning of this article, we find it to be 136 eggs per head, that each hen converted per bushel of grain (for that is all she can eat in a year) into seventeen pounds of food, beating piggy just 4½ pounds on the bushel. I conclude by asking if there is any better mill than a hen's gizzard for making grain into food, quietly, cheaply and well, and withal suitable for so many purposes? If any one knows of a better, please advise.

We are afraid Mr. T. has hardly done the fair thing, in putting pork at wholesale, and the eggs at retail. If the pork is put at 17 cents per pound, $2.12½, and the eggs at 25 cents or 37½ per dozen, $3.12½, it will give $1 in favor of biddy, instead $2.75, and we think be nearer the truth.

REMEDY FOR RUST IN WHEAT.—The following, from a distinguished German Agriculturist, is taken from a Bremen paper:—

For thirty years I have found this method successful in preventing rust in wheat: Some hours, at the longest six or eight, before sowing, prepare a steep of three measures of powdered quicklime, and ten measures of cattle urine. Pour two quarts of this upon a peck of wheat, and stir with a spade till every kernel is covered white with it. By using wheat so prepared, rust of every kind will be avoided, and I have often noticed that while, in the neighboring fields, a great part of the crop is affected by rust, in mine, lying close by it, not a single ear so affected could be found.

The same writer says he takes the sheaves and beats off the ripest kernels with a stick, and uses the grain thus obtained for seed.

THE HORSE "CONSTERNATION."—In addition to the facts stated by us in May number, page 219, in relation to the history of this horse, the *Country Gentleman* says that he was imported in June, 1842, by Mr. T. C. Albot, of Stokes, Oneida Co., N. Y.

Ladies' Department.

DOMESTIC ECONOMY;

OR,

HOW TO MAKE HOME PLEASANT.

BY ANNE G. HALE.

CHAPTER XI.

WOMAN'S WORK AMONG GARDEN PLANTS.

Before we begin our work let us see if we are ready for it. In the first place, we must have a suitable dress to wear. Long and full skirts are a great impediment to activity anywhere—they are entirely unfit for garden work; but the working dress, directions for making which were given in Chap. VIII, is just what is needed. It allows free exercise of all the limbs, and there is no fear of tripping, nor of stumbling, of spoiling plants or flowers, or incurring rents and soiling from the flowing or dragging of its drapery.

As a protection from the too great heat of the sun, or the too frolicsome breezes (every woman likes to keeps her hair in good order) some use the close palm-leaf or Shaker hoods, or else gingham bonnets made in the same shape, having a cape attached to cover the neck, but a straw hat is ample shelter and much cooler. Stout, thick-soled shoes are necessary, because of the dampness of the ground, and also to guard and support the foot when digging. For this work some persons wear clogs over their shoes, or fasten irons under them by leather straps, lest the pressure of the foot against the spade should be uncomfortable. Gloves are also needed, for there are many rough and sharp things to handle. Leather gardening gloves may be bought; these are best, but old kid or cotton ones, taking two pairs—one within the other—answer very well, though they do not come high enough to cover the wrist,—for this a gauntlet, cut cape-fashion from silesia may be sewed to them. These you will want generally, but not always. Don't be troubled by a little soil upon your fingers, it can easily be removed when the hour's work is done by means of a brush and borax water. Keep this always ready for use. To make it add one table-spoonful of powdered borax to a quart bottle filled with water. See that the borax is all dissolved, and when you wish to wash your hands take one tablespoonful of this water to a quart of soap-suds. If your hands are very much soiled use pomace-soap or a piece of pomace-stone; by so doing they are kept smooth and fair. These preliminaries ought properly to have been settled in the previous chapter, as also the subject of tools, which we will now dispose of as quickly as possi-

ble. Procure a small light spade—one of those that are made for ladies' use—a fork, à hoe, a rake, and a trowel; and a small weeding hoe.

Now we will suppose that the surface of the ground has been thoroughly raked, the dried grass, dead leaves, sticks, etc., carried to the compost heap. This, made of refuse vegetable matter, bones from the kitchen, ashes, the sediment of drains—in fact, all animal and vegetable waste that can be collected—must be in every garden; for out of decay spring the subtle forces that will crown your work with life and beauty. Just as the ragged, dingy, disagreeable bits of scrip may be returned to Uncle Sam's treasury and we get in their stead, clean, crisp, new bank notes and gleaming gold, so mother earth must have her wornout treasures back again in her bosom before she supplies us with new riches. Of the stones, bits of brick, and similar rubbish, by-and-bye we will make make a rockery,—where some of our flowers will delight to dwell—so these must be put away for that purpose, and if the soil is dry enough to crumble easily we will commence operations. If you have men, or large boys, that you can depend upon to do the digging, it will be well to avail yourself of their assistance. But you can do it alone, and also design and lay out your ground if you will work moderately.

To begin: attach two stakes to the ends of a rope two yards long; this is to be a measuring line, and also a guide for the digging. Stretch it parallel to the boundary of your land, along the sunniest side, driving the stakes into the ground to hold the line steady. Follow this with your spade, keeping your work straight and even by it, and moving it and arranging it so that the furrows which you make are of equal width. It will take two or three thrusts of the spade to dig the soil deep enough, because you have not yet the skill or the strength to raise a large quantity at once; after a little practice you will get along faster. But do not hurry ever, gardening is to be recreation, not toil. Get all the pleasure out of it that you can. Stop often to look at the objects around you, and to inhale the odor of the newly-opened ground. Bonaparte used to say that if he were blindfolded he could distinguish his father's garden in the island of Corsica by the smell of the earth. At the first feeling of weariness, lay aside your spade and busy yourself about something else, for this is the hardest of garden work and you must accustom yourself to it gradually. If you do not attempt to do too much in the outset you will enjoy the occupation; but, rush on, with only the idea of getting things finished, and you will quickly find yourself finished instead—will acknowledge that you are really "used-up," and declare that gardening is too hard for you. One hour at a time is the utmost that a woman ought to spend at once in gardening, half of that is enough when she uses a spade or a hoe. After the land is dug it must be made fine and smooth by raking; this can be done, different portions at a time, according to the design, the most important parts first.

We have provided for vines in the previous chapter, now we will see about trees. Fruit is desirable, certainly, but we want ornamental trees along the street, or road, or at the corner of the house. American people have not the same ideas of good manners, or of honesty, that the Prussians have, or we might line the roads, as they do, with fruit trees, and feel sure that the fruit would not be the cause of the tree's destruction. But then the variety of form and foliage which the different forest trees present is particularly agreeable when contrasted with that of their orchard brethren, and we must think of something beside bare utility if we would elevate and cultivate our tastes.

I never could agree with the matter-of-fact old man who said to his neighbor, just transplanting a fine young elm at the end of his garden, "Oh, sho! what a waste o' sile! That ere elum aint good for nuthin'. Ef 'twas apple, or winter pear, or cherry, say, ary one on 'em's wuth havin'." But there the "elum" stood, and flourished. In the beauty of its pendant boughs and delicate foliage providing other than material sustenance for its owner, long after cider, and cherry bounce, and good dinners, had made of the old man a clumsy, grovelling human dodo. For we all have wings, and if we gratify only our earthly appetites, as Dr. Brown, the genial biographer of Pet Marjorie says, "if we never soar, but pick up all our daily food at our feet, we shall suffer the fate of that ugly bird; which, according to ancient naturalists was once a true dove, strong and beautiful of wing, but because she would not plume her feathers, and let her pinions grow, she lost the ability to soar."

Until recently little attention was paid in this country to the cultivation of shade trees. The "forests primeval," in all their magnificence, crowned the hill-tops with glory, and sent the blessings of health and long life on the breath of wandering breezes to the valleys and plains below. But man cared not for their companionship. They afforded good fuel and timber; that was all he could see in them. So whenever he wanted ornaments for his grounds he imported prim Lombardy poplars, and gloomy sighing aspens, and melancholy weeping willows. And we meet them now occasionally on desolate country roads, looking like grim ghosts of the past; save when the joyous spring time brings a shower of gold to the swaying elms and hangs the boughs of the maple with rubies, then they get up a semblance of life; and so drag on, year after year, growing more and more misshapen and distorted. We can imagine them as sentinels and out-posts to a desolate battle-field, keeping silent and mournful watch over the remains of the fallen; but they are too sombre and cheerless for any other position. Everything about home should be cheerful and suggestive of happiness, so if we have trees for ornament or

shade or shelter, we will choose such as from association, or by their form and foliage, represent those qualities. The deciduous trees being more changeful in their beauty are on many accounts most desirable; but the evergreens afford great protection from bleak winds, and enliven a wintry landscape.

In selecting trees to adorn our homes we must regard the extent of premises and size of buildings. Thus, if the lot is somewhat circumscribed and the house high, one tall, stately tree will have a finer effect than several of smaller growth; while for a cottage these would be very appropriate. Again, in a small enclosure, or along a narrow walk, trees of a close, compact habit look better than the spreading varieties.

The English elm, ash, and larch, and the pines generally, are trees of the highest growth. The mountain ash, laburnum, acacia, locust, alder, elder, lilac, are the smallest. The maple, linden, willow, lime, plane (or button-wood), beech, birch, abele (or poplar), oak, sumac, American cedar, and elm, the nut trees, hemlock, spruce, arbor vitæ, fir, catalpa, tulip, ailanthus, are of medium height. The chestnuts, particularly the horse chestnut, the butternut, some oaks, poplars, limes, maples are of the closest foliage and most compact form. The American elm, and willows generally, of spreading shape and light, open foliage. The English elm and ash are narrow, with round heads. Firs, cedars, and pines, are broad at their bases, with pointed heads. The longest-lived are the oaks, poplars, and firs; next to these the elms and the limes. Oaks, elms, and most pines, grow slowly. The willow, the sumach, larch, and the birch, rapidly. The sycamore (a species of plane) will grow six feet in a season; the larch, four feet; spruce, and some firs three or four feet.

All nut trees require a tender and rich soil; maples, a sandy loam; also pines and firs. Elms, oaks, limes, poplars, ash, willows, do best in rich soil. The birch, the larch, the elder, the alder, will grow in the poorest. Many of these are easily raised from their seeds. Nuts should be planted about an inch deep, in fine, moist, rich soil in the autumn; ash seeds as soon as they are ripe, in a sunny situation, the same depth; sycamore, not quite so deep, in dry, sandy soil in April. Elms, maples, pines, larches and firs may also be started in this way. But where only few are needed it is best to procure young trees of a thrifty growth.

Having decided what tree to set, be sure that your soil will suit it. This often varies in a square rod, and if the spot has not properties for holding the tree's roots and yielding them nourishment you must supply them. Thus, if the ground be sandy and too loose, mix it with bog-earth and leaf-mould; if too heavy and close, gravel from the street—chip-dirt from the wood-house.

Trees should be re-set as soon as possible after being taken from their native soil. If the roots get dry, put them in water till thoroughly moistened, and trim off all decayed and broken portions. The surface of turfed ground in which trees are to be set should be cut into sods that are to be replaced afterward. Make the hole at least a foot deeper than the length of the roots, and wide enough to spread them naturally. Throw in at first soil, and then soil mixed with your strongest compost. Place the tree upright upon this. Shovel on the roots sufficient soil to cover them lightly, and then pour in water. Add more soil as it sinks around the roots, and more water, until the tree stands well. Then press the earth with the spade, beat it, and tread it, to make it firm and smooth. The soil ought to lie closely enough to keep the tree in an erect position without any support, but if it sways or begins to lean in a day or two, tie it to a stake. If your land is wet it will be well to place a layer of large stones at the bottom of the hole to serve as a drain.

As to pruning, there will be little need of it if you watch the growth of your trees and rub off all buds that would develop into superfluous branches. The object of pruning is to assist the tree in attaining a natural shape, to give it a strong, stout trunk and symmetrical head. No branches should be cut off that do not interfere with the leading ones, and always before they attain an inch in diameter, or not at all. Use garden shears or a pruning knife—very sharp,—to make a smooth cut that will heal readily. The branches of evergreen trees should be tied in for the winter if in bleak positions to protect them from the frost. They seldom need trimming; if ever, in early summer. Fruit trees should only be pruned in the latter part of May or in June—shade trees, in the autumn.

Among fruit trees, the Apple should be our first choice, because it is most likely to flourish in ordinary garden mould; its fruit is the most valuable as an article of food, the tree is less liable to disease than others, and it lives to a great age—an English author speaks of one over a thousand years old—it frequently yields good crops two hundred years. With all these excellent qualities, it is at times very beautiful; what finer object does nature furnish than an apple tree in full bloom, or in its ripened fruitage? Although the apple is so widely known, and reaches its highest perfection in this country, it is not native to our soil,—there were none here before its settlement by the whites. But it seems well fitted to the climate, has improved so much by its migration and culture here that the once boasted pippins and pearmains of England are outrivalled by the same fruit now exported from New York and Massachusetts.

Apple-trees that yield summer fruit are of more upright form and lighter habit than those that bear fruit for the winter; these have widely-spread branches and dense foliage. In planting a garden it is best to take these matters into consideration. Again, russet apples have more pulp, and therefore are more desirable for cooking; pippins are

most highly flavored; sweet apples, most nutritious. But, as with grapes, we should choose those varieties that have proved remunerative—and most satisfactory in localities similar to that which we intend to occupy. This is a safe rule for a woman to follow. She thus gets all the benefit of the numberless experiments that cost somebody a good deal of time and money. When setting your trees be sure to give them room enough,—apple-trees should be six or eight yards apart; pear, four or five, if standard; dwarf pear trees may be nearer. Remember that they need a plenty of air as well as sun to perfect fruit.

Pears, by their greater delicacy of pulp and flavor, stand higher in estimation of many than apples; but, although healthful, they are wanting in the substantial qualities of that fruit. Still, the cultivation of so many choice varieties upon quince stocks, which from their small size are very convenient for the garden, has brought the pear into very general use. The best way to apply fertilizers to these trees is to spread a generous coating from the compost-heap upon the surface of the ground; this should be done in the autumn. Spring is the best time to set out the new trees. They need air at their roots, and moisture, so the soil must be kept open by stirring it frequently with a fork. To promote this, it is a good plan to raise vegetables in the mould around them. Both apples and pears should be taken from the tree when the fruit-stem separates easily from the branch. They gain higher color and flavor by being placed away from the light and air after gathering. Italy is said to have originated the pear;—the Romans had many varieties, and modern Italy and France excel in the culture of this fruit. The apple is also probably a native of Italy.

Heap wood-ashes around the trunk of apple and pear-trees (a foot high at least) to keep off the borer. Washing the trunk and limbs with whale oil soap-suds, using a stiff brush, prevents the accumulation of moss and destroys small insects. Old trees are much benefitted by scraping their bark and afterward washing. Caterpillars and canker-worms may be prevented in a great measure by surrounding the trunks with small zinc or tin troughs filled with whale oil, or strips of canvass or thick paper frequently tarred. Watch your trees for caterpillar's nests and remove with a brush immediately, or cut off the twigs on which they rest and burn them.

The Peach comes from Persia. This tree has such a delicate nature that it is extremely difficult to keep it thrifty in New England, but in the Middle and Western States it flourishes well. The tree needs a light, rich soil, and a situation sheltered from wintry winds,—yet not so much exposed to the sun as to cause the fruit-buds to open too early in the spring, when there is danger from late frosts. Keep wood-ashes at the base of the tree, for a fertilizer, and also to destroy insects. The peach-tree needs no trimming except to remove decayed branches. The lower limbs produce the most fruit; no matter how low they are, only keep them from injuring the tree by trailing with their weight. Peaches need great care in handling; after gathering, keep them in cotton or soft paper till used. As it is comparatively a small tree, and its fruit of superior beauty—exceedingly agreeable both to the eye and the palate—wherever there is any probability of its flourishing, it should have a place in the garden.

Cherries are of easy culture and generally prolific. They are from Asia Minor, so also are most of our cultivated plums, but there are many wild plums in our Western states that would no doubt well repay careful cultivation. To kill the curculios, that are very injurious to the fruit, some persons shake powdered brimstone, others slaked lime and wood-ashes over the tree, after the fruit is set. Something of the kind should be done three or four times a week for a month. The black knots that form on plum-trees should be cut off with a pruning knife, and spirits of turpentine applied to the wound. If wood-ashes are heaped about the base of the trunk of cherry and plum-trees, through the winter, they grow more healthy. Apricots are an early variety of peach—the name comes from the same root as our word *precocious*. Nectarines, so called from their delicious flavor, in allusion to the drink of the gods, are also a variety of peach. Both, were well-known to the ancients, but are not common with us. Quinces are only suitable for cooking,—if you have low, wet land they will flourish there. Probably every one knows that a seedling fruit-tree is not likely to resemble its parent. The process of budding, or of grafting, by which it is made to produce choice fruit, ought perhaps to be given here, but we have not space; for the same reason many interesting facts relating to fruit-trees and their culture must be omitted.

Of the smaller fruits all gardens should have at least one specimen—either of currants, gooseberries, raspberries, blackberries or strawberries. Mulberries are delicious, but the leaves are of more value as food for the silk worm, so we seldom find the tree in gardens; perhaps, however, on account of its rapid exhaustion of the soil and its enormous size in comparison with its fruit. Gooseberries, either native or English, also currants, are best raised from cuttings. They will flourish trained against a fence,—but yield more abundantly, and ripen their fruit more quickly, if placed where they receive the full benefit of the sun and air, and are trimmed into a tree form; they thus make an elegant appearance. Wood ashes mixed with decayed vegetable matter should be laid upon their roots in the autumn. Raspberries need a rich, loamy soil and a plenty of sun. The bearing stalks should be cut down every two years, and all superfluous suckers removed every spring. Blackberries, as rich, but a moister soil, and sim-

ilar treatment. Both these fruits should be trained with bands against a fence or wall, and they, as well as strawberries, need frequent stirring at their roots, and watering after the fruit is set.

The strawberry grows everywhere, and is among the most healthful of fruits. Great attention has been paid to its culture, but, though enormously large berries have been gained, the original flavor cannot be improved. Strawberries should have rich, light soil—a sandy loam with leaf-mould. Set the plants in August about one foot apart, in rows; hoe them frequently, cut off all runners, and keep them free from weeds. It was an old custom to lay straw around the plants to keep down weeds and to prevent the runners from taking root—hence the name *straw*-berry. Cover them with straw, stable litter, or dead leaves, through the winter. Rake these off in the spring, and hoe and water them frequently; keep the soil damp until the fruit is all ripened. The way to provide for a continuance of the strawberry, now brings us to vegetables.

Side by side with strawberries plant a row of beets, carrots, lettuce, radishes, as you please, for family use; and as they are removed, direct runners into their vacant places to form a new strawberry bed for the next year. Make the soil light and fine with fork and rake. Heap it into a narrow ridge, forming it straight by means of the measuring line, and firming the ground with the spade and hoe. Draw a furrow along the top about half an inch deep, and in this scatter the seeds. Beet seeds should be soaked a day before sowing, in cold water; mix sand or dry loam with carrot and lettuce seed, in order to plant them sparingly. If the beets come up too thickly they can be thinned out and the young plants used for greens. Lettuce must be transplanted to form large heads. For radishes make holes half an inch deep, two inches apart, and drop the seeds singly in these; cover them over lightly with soil and smooth the surface,—also the furrow. After the plants are up use the weed-hoe to stir the ground and to keep it clear of weeds till they attain their full growth.

Rings, beds and hills, for other vegetables, may be arranged tastily around and about the young trees and the currant and gooseberry bushes. To make a ring about a tree, wind your measuring-line three-quarters of its length around the trunk; then draw the end thus left straightly towards yourself, and walk slowly around the tree, dragging the stake that is attached to the line through the soil, and you have drawn a circle. Within this mark, shovel mould from without—sufficient to raise it six inches above the walk that is to surround it—pulverize the soil, and firm the edge of the ring as you would a row. Stake out square or oblong beds by means of your measuring line and its stakes, and prepare the soil and finish their edges in the same way. Angular beds you can make by drawing your line from opposite corners of a square; and these may be changed into crescent shape, very easily, with your hoe. To draw a circular bed, drive one stake of your line in the centre of a square whose area will contain the diameter of your bed; wind your line around that stake, leaving just enough to reach the edge of the square; take the other stake and walk and mark the circumference of the circle as you did for the ring mentioned above. Lay out hills by measuring a plot of ground and dividing it equally,—allow a half yard for each hill (melons and cucumbers need hills three or four feet apart—squashes, six;) mark the places and hoe the soil into circular heaps, treading the mould around and between them till it is firm. The hills should be at least a foot higher than the walks. The principal walks through your vegetable garden should be half a yard wide; among your flowers you will want them wider. In making beds, rows, etc., all the soil in the walks adjacent, that was loosened in the spading, should be used, then you have a good foundation left for paths, which ought to be gravelled, and, if possible, rolled.

A few words now about the arrangement of the vegetables, which should be as near the kitchen as possible: Suppose the apple-trees are along two sides of the garden, distant eight yards from each other and two yards from the fence. Between them and against the fence form a row of hills, in which tomatoes may be set supported by stakes or frames, or trained upon the fence. Or, running beans planted, five in each hill, half an inch deep, and poles set for them to climb. In front of these a walk. Then rings around the trees, or rows between them, for bush beans and peas—the lowest, nearest the trees. Around the pear trees the same. Soak peas and beans till the germ bursts its covering; plant them in furrows, two inches apart, half an inch deep; cover them with soil, and press the surface with the spade, or some slight weight. Surrounding the dwarf-pear and other fruit-trees, and currant and gooseberry bushes, narrow beds and rings for sage, thyme, marjoram, savory, parsley, pepper-grass, etc; and walks dividing them from each other. The seeds of these kitchen herbs should be laid in furrows, one third of an inch deep, covered by soil sifted upon them, and then pressed, as for peas and beans. Peas, excepting the dwarf kinds, need a support of frame or sticks.

Soil for the asparagus-bed should have a generous dressing from the compost heap, with salt. It should be thoroughly mixed, and made fine and light. Plant the seed, one-third of an inch deep, in autumn. The stalks will be small the first year; but keep out weeds, cover the bed with stable litter or dead leaves, in the fall, rake it off as soon as the frost is gone, stir the bed carefully, water it with a decoction of salt, water, and soil from the hen-house, and you will soon get good heads—larger and large each year.

Melons, cucumbers, and squashes, need rich, fine soil, and the best situation in the garden, facing the south if possible. Enrich the melon plot from the compost heap, with a good supply of

soot added. Place five seeds in a hill, with a spoonful of guano from the hen-house, cover them with half an inch of soil. Spread straw or brush for the vines to lie upon. If the seeds all start well, take out two plants, three are enough for a hill. Water them freely. If they show few fruitful blossoms pinch off the ends of the shoots. Cultivate cucumbers in the same way. Cucumbers need so much water that if their hills lie in a hollow they do better. Arrange squashes as a screen for the compost heap, by means of stakes or brush for their support. All flat seeds, like those of the squash, should be planted edge-wise. Place seven seeds in a hill, cover them an inch deep, lightly—if they all come up take out two—if the insects do not destroy them, two more. To destroy the "bugs" sift wood-ashes and soot over the plants while the dew lies on them. Some persons make screens of gauze, strainer cloth, or paper for all these vegetables, to keep off insects.

Rhubarb is generally raised from a division of the root. Cover it with stable litter through the winter. Stir the soil around it early in the spring. Place a headless barrel over it to make the stalks grow long and to lessen their acidity. Water it freely till August—keep it dry after then.

Sow cabbages in boxes, then transplant into light soil mixed with wood-ashes. Make a hole over an inch square, place the plant, fill in water, then cover all but two leaves with soil. Set them two feet apart. After they begin to grow stir the ground around them very frequently. Sow turnips after radishes and early peas and beans are gone,—spading over the soil and adding ashes. It is said that black pepper sifted over cabbages and turnips will destroy insects. Parsnips, plant early, in rich soil, in rows, half an inch deep. Onions require a sandy soil mixed with ashes,—and hen-guano is a good addition—sow as parsnips. Keep them clear of weeds. Start peppers and tomatoes in the house, in boxes, early in February;—set in soil enriched as for onions, in May. Give them plenty of water. Raise horseradish from pieces of the root in rich, damp soil;—in the spring, after using the larger part, re-set the slim end. Cover it with ashes through the winter.

Don't attempt to raise corn or potatoes unless you have plenty of room and sunshine. Both need light, sandy loam. Soak corn (use only the sweet) three or four days before planting, in cold water; put four kernels in a hill, cover with half inch of soil. Potatoes do not depend so much on sun but they want a sheltered spot. They need hoeing two or three times, as also corn. This is such hard work for women that the new method of raising potatoes is best for them to try. For this prepare a bed. Take out the soil to the depth of six inches; spade over the subsoil, spread upon it two or three inches of hay or straw, cut potatoes so that three eyes are in each piece, lay these pieces on the straw, eight inches apart, cover over with two inches of soil. Pull up what weeds appear, water the bed occasionally, and loosen the soil with a rake. This is called the French method—it has proved successful with many. Spinach, for spring use, sow in rows, in the fall, where potatoes have been; and cover with straw through the cold weather. Dandelions, transplant from the meadows to rich soil in a sheltered place; to increase, sow the seed in the autumn, or divide the roots.

[The next chapter, treating of Garden Flowers, etc., will conclude the author's remarks upon this subject.]

A HOUSEKEEPER'S STRICTURES ON "DOMESTIC ECONOMY."

Mr. Editor, or Miss Hale, the author of "Domestic Economy":—Do you mean all mothers, or "women," to follow your advice given in your articles? Or do you mean such mothers as have time to do it? For although a "stitch in time saves nine," it requires a goodly share of the time allotted to woman's daily work, not mentioning her time of sleep, which she ought to have and certainly needs after her busy day's work. Few mothers who do their own work, and have the whole care of children, husband and hired man or men, find many days but what are busy ones, and need certainly from 11 o'clock until 5 in the morn to sleep what they can. But, between caring for baby, and keeping Charlie and Susie covered up, &c., bedtime would find the mother up much later than 11 o'clock, if she followed all the rules in "Domestic Economy."

Now, I don't mean to say that the rules are not good ones, most of them at least, but I do think some of them are more particular than wise. I, for one, have tried the washing and turning of old coats and pants which father has worn threadbare, and have taken pains and care to cut over and fit nicely, and have had hard work to get out the article required from anything which seemed fit to use, with an inward feeling all the time that my time, lining and thread were not being spent profitably, and which proved to be the case when Charley or Frank came to wear the garment, even if he was no more than four or six years of age—for such are by all means, or we want them to be, busy bodies, for we none of us want "dead heads" around us in the shape of children,—for after a few days of rough and tumble, we find knees and elbows out, ready for patching, and many times nothing left of the garment to patch with—which will not pay for the work any more than the garment paid for making. I think such articles are better in a carpet or given to the poor, and some new material, even of a coarse and rather ugly looking surface if need be, bought and made, and when finished, and while being made, the mother can breathe freer and feel when it is done, even if she have to take time out of sleeping hours to make it, that one more load is lifted from her shoulders. One of the flock is rigged out for a

while, and she won't have to be watching for rents and rips, and buttons off, and button-holes tearing out, really because the cloth had not strength enough to hold itself together.

The stocking heels and toes are recommended to be lined nicely with leather or kid, or good strong cloth, and ripped off and sewed every week. I find knitting a new toe and heel, now and then, saves me more time and is quicker done, than the other way. Although the sewing on of cloth I approve, yet I find a double heel, when the stocking is knit, answers all purposes for me. Many other things, too numerous to mention here, such as have time and think it profitable, would of course approve.

I am not one that sustains the Woman's Rights excitement, only so far as looks reasonable. I do think if a farmer, or man of any other occupation, would look as much to the good of his wife as he does to his stock of cattle, or a nice horse to drive —for but few men like a lame, poor, rough-looking animal to drive off out of town—there would be less poor, sickly, suffering looking wives and mothers. A man gets up before breakfast,—goes out doors, gets the fresh air, comes in all right and hungry for his meal. His wife, who, perhaps, has sat up and worked the night before, two or three hours after her liege-lord was in bed and asleep, then has had to nurse a fretful babe all night, or get up from one to five times to see to cronpy Susie, and then must be up betimes in the morning, with weary head and bones, hurrying to get breakfast and dress baby and the other little ones. Breakfast ready, husband comes in, hurrying it on the table, not even helping the little one into his high chair—mother must do it all, and be round in time to pour out coffee, and fix the little ones' breakfasts, too, which "father" can never spend time from eating to do. By this time, husband's coffee is out and needs replenishing, then the hired man's, and by this time, baby finds out she won't lie in the cradle any longer, and Charlie and Susie have cleared their plates and want more. Mother has not had a breath of fresh air, or a mouthful to eat, yet—husband is done by this time, gets up and says, while buttoning up his coat, "Wife, I expect some men here to-day, to look at them South Downs and Devonshires, they will be here to dinner, probably. Fix up something nice. I must ride over to town an hour or two—if they should come before I get back, entertain them 'some how,' " and the master is off to another airing, gets braced up, cheered up, sees folks and country, talks, and comes back all right. Where is mother all the time? Hurrying through her breakfast, she hurries all the forenoon to get tidied up, and prepare a good dinner—she neglects baby—which frets her, hearing it cry —gets up her dinner for those out of town men, and so another meal goes by, and so goes day by day.

Does her husband ever think of these things, when he wonders Susan grows old so much faster than he does, and looks so poor and yellow, and is getting almost ashamed of her? Does he think of the times he has hatched up excuses for not carrying her home, or out to Uncle John's, or somewhere to spend the day, and give her an airing and put a flush on her sallow cheek? Oh, husbands and fathers, I wish too many of you that are just such husbands could be made to change places with that patient wife of yours, before you are brought up suddenly, finding your children motherless. Your second wife, if she looks better than the last has, for a while, will not fill her place to your children, or take more pains to shield you from cares.

Where is such a mother's time to follow all the rules in "Domestic Economy?" Every one knows our land is filled with just such mothers and wives.

One thing more, Mr. Editor,—please send in a petition to the Legislature that mop and broom handles shall be made as smooth as men's hoe or spade handles, or the makers shall pay a fine. Just look at our broom handles—left just as they are turned, and rough, and splintered and scraggly enough to keep our hands chapped and sore constantly. This I call one of Woman's Rights—don't you, Mr. Editor? SUSAN.

No. Ferrisburg, Vt., March 4, 1868.

REMARKS.—We can only say that we are in full sympathy with the overburdened wives and mothers whose daily routine our correspondent so graphically describes. We heartily advocate any improvement which can lighten their labor, and, by expediting their household work, increase their leisure time for self-improvement, for neighborly calls, or for more than occasional breaths of that life-giving air which their husbands so plentifully draw into their lungs in their daily out-door employment.

As regards the broom-handles, competition in cheapness is very apt to cause carelessness in finishing; but a little sand-paper will smooth down the rough places, if not inexcusably bad, and a little care in buying the broom, on the part of the husband, who generally looks out for the household furnishing, should spare his wife that annoyance, at least. Let the husbands look out for *the little things*—for they are what render life happy or miserable. ED.

THE
NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

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R. P. EATON & CO., PUBLISHERS, OFFICE, 34 MERCHANTS' ROW. MONTHLY. SIMON BROWN, S. FLETCHER, } EDITORS.

WORK FOR JULY.

JULY is the month of the early harvest. By the middle of the month, the upland hay will be, or ought to be deposited in the barn. That which remains uncut will be of much less value for the coming winter, than if it had been stored before it became hard and woody. We trust our readers have given heed to the advice we have already given them on this subject. Hay got into the barn, while it retains the properties of grass, is both more palatable and more nutritious, and for dairy purposes especially, this is of the utmost importance. It should be our object to cut it at such time, and make it in such a manner as to retain these properties.

And now the mower and tedder must be laid aside, and the reaper must come in their place. The rye, the wheat, the barley and the oats must be attended to in their season; and as it is with grass, so the grains should be cut before they are dead ripe. If they stand too long, more will be lost in harvesting. The crop will not bear handling so rapidly or so well, and the straw will be of greatly less value as forage. Good bright, early cut wheat and oat straw are being valued much more for fodder than they were formerly among us. Those who steam the food for their cows, and their number is every year increasing, cut and steam the straw and mix it with bran, oil cake, cotton-seed meal, or other grain. They find it nutritious and palatable food, and their cows thrive on it, and yield a full flow of milk.

Grain of all kinds, as soon as dry enough to keep securely, should be put under cover. It will be better both for the grain and straw. If suffered to remain in the shook, it is exposed to the rains, and in long storms the grain will swell and sprout, as was the fact with a large part of the western wheat the last season, which is the principal reason why we have had so much poor flour, and why good flour has been so high. Our small crops in New England can all be housed, and should be, as soon as practicable.

And now, too, we begin to get "aid and comfort" from our labor in the garden. The green peas and early potatoes and beets have come, and soon the string beans and sweet corn will be on the table. The cold and wet weather of May deferred the planting, and the gardens are late; but now those who persevered and planted the seed, and have

carefully tended the plants, are reaping the fruit of their labor. The summer fruits are now coming into use, and what can be more delicious than a bowl of fragrant strawberries or refreshing currants, with the evening meal. Do not insist upon sending these all to market. Let the boys and girls who have helped to raise and pick them, have a liberal share.

In the vicinity of the market it too often happens that the best of every thing and the earliest is sent to market, and only the refuse is used at home. Poor encouragement this to the good wife and the children. Even where market gardening is the leading business, the family should never be neglected. The first thing should be to make them comfortable and contented and nothing contributes more directly to this end than a good supply of early vegetables and fruits, not doled out with a begrudging hand, as though every pea and berry used at home were so much money lost. No; let the family enjoy all they need, and sell the balance, and you will all be the happier and healthier for it. The farmer should always feel that he and his family are a unit,—that their interests are one and the same, and their enjoyments should be common. We should like to write a sermon from this text, and perhaps we may some time.

But just now we must say that the season thus far has been a fine one for the weeds, and it has required much more than the usual amount of labor to kill them. If cut up, they refuse to die. If buried they shoot up again directly. The cultivator and the hoe must be in constant motion. We need a weed tedder to keep stirring the weeds till the life is dried out of them. The wheel hoe is very useful in such seasons, as it will go over a large surface in a short time.

At any rate, there is no other way but to keep stirring the ground. The soil will not produce two crops at the same time, and the weeds must be kept down or corn will not grow. To finish the haying, to harvest the grain, to take care of the garden, and to keep down the weeds among the growing crops, will be the work of July, and upon our success in doing these will depend the result of our farming operations for the year.

—A little alum mixed in chicken food is recommended both as a preventive and cure of chicken cholera, by the *Prairie Farmer.*

PERMANENT FARM IMPROVEMENTS.

The farmer, as well as the mechanic or the tradesman, will not, and perhaps should not, be satisfied without adding something every year to his capital. It is not enough merely to support himself and his family; it is not enough to add something to the comfort of his family, in the shape of clothing and conveniences; but he needs to add something by which his operations can be carried on with greater facility, with less hard labor and with more profit. He needs to do something by which some portion of his land will yield a larger crop; and this should be some permanent improvement,—as grubbing up a piece of rough land and fitting it for the plough; draining or ditching another piece, fencing a third, digging and burying the stones in a fourth.

As his crops increase, he needs to add some stock every year, and this will enable him to cultivate more or cultivate better. He needs a mowing machine or horse rake, a new harness, better ploughs, new tools.

All these are additions to his capital. They enable him to do more work and better, and at a less cost. The farmer should look upon them as so much added stock in trade.

The mechanic and trader invest their earnings in their business, until it has reached the limits which circumstances justify, and then they often remove to a wider field of enterprise; and this is generally better for them than to invest their surplus in stocks or real estate, because they understand how to manage their business better than they do to manage stocks or other property. As they advance in business and expand it, they acquire skill in its management.

So the farmer can turn his earnings to better account in his business, than by investing them in other property. The increase in the beauty and productiveness of a ten acre lot, from the investment of five hundred dollars in its improvement, will afford him much more satisfaction than it will to count the six per cent. interest on five hundred dollars.

The farmer, then, after counting the cost, should decide what permanent improvement he can make each coming year. Perhaps he has a meadow which yields only poor, sour grasses, and yet is susceptible of being drained, and then by being dressed with sand and compost, and sown with herdsgrass and redtop, may be made to yield large crops of good hay.

If operations begin with the winter, haul on the sand while the ground is frozen,—it is the very best time,—and cut the ditch if he can. If it is too wet, wait till after haying next summer, and then cut as many ditches as are needed, and spread the sand, and haul on the compost, and sow the grass seed, and harrow it in. It is quite as well to seed down in the autumn, as in the spring. If you wait till you have cut the ditches before you haul on the sand, you will have to wait until another winter, and it will be two years before you get a crop of good hay.

Fencing with durable fences, may be considered a permanent improvement of the farm. If you have good land encumbered with stones, take them from this, rather than from some distant rocky pasture or poor land that will not be benefited by their removal, and you will kill two birds with one stone. You improve the land from which you take them, and at the same time get material for your fence. If you must use posts and rails, let the posts be cedar, chestnut or white oak, and if possible cut in the summer. The rails may be of white pine or red oak, got out in the winter.

Special attention should be given to make your exterior fences permanent and substantial. As to interior fences, have as few as you can get along with. It would be a permanent improvement of no small value to many farms, to remove one-half or more of the cross fences, and throw the small fields into large ones. Inquire if you cannot remove the cross walls to the outsides of the farm, and thus have sufficient material to lay over, in good shape, your exterior walls.

Have you a piece of good land near the house, always under your eye, and ever a noticeable feature in the face of your farm, that is disfigured by boulders, lying on the surface or partly buried in the soil, which are in the way of the plough and mowing machine? The loose ones should be hauled off as you have leisure, and the larger ones dug under and sunk, if possible, out of the reach of the plow. Will not the land be worth as much more as the labor will cost, besides getting rid of a nuisance and an eye-sore?

Have you a pasture that yields but little grass, and is covered with moss and bushes? What can you do to restore the feed? This is an important question and should be seriously asked with respect to much of the pasture land in New England. If it is near the barn—even if it is somewhat rough and rocky—had you not better plough it, and plant it one year. The sod is thin and loose, the grass roots having mostly died out, and it will decay and become mellow in one year. Then sow it down with several kinds of grass seed, and you will have a good pasture for ten years. If it is at a distance from home, so that it will be expensive to cart on manure, plough and sow rye and grass seed and harrow thoroughly, or harrow thoroughly and sow grass seed and plaster without the rye, harrowing again after the sowing. If it is an old pine plain, plough, and sow buckwheat, and when it is in the blossom plough it under and sow another crop. Plough this under in the fall. The next spring, sow clover and redtop, and harrow it smooth, and in the fall feed it off, and you will have a good pasture for some years. If you decide not to plough, sow on a liberal dressing of ashes and plaster, and sow redtop and harrow it thoroughly, and it will pay.

Does your farm need all these improvements? If so, do not attempt to make them all in one year, but decide for yourself which is most needed, and set about making one of them at least. It will cost some money, but it will be a good investment, better than bank stock.

LOCAL REPORTS ON AGRICULTURE.

The last Legislature of Iowa enacted that when any county or district agricultural society shall have raised for actual membership during the year any sum of money, it shall be entitled to an equal sum from the State treasury, not exceeding two hundred dollars, *provided* that the society shall make report on the condition of agriculture in the county or district to the secretary of the State society.

The affidavit of the treasurer is necessary, and when this is accompanied by the certificate of the secretary of the State society that a proper report has been made, the auditor issues his warrant for the amount to which the society is entitled.

Here is an important suggestion, and one that may be easily carried into effect. Let a proper report of the agriculture of each county and district be made a condition of receiving the State aid, and we should have an

agricultural survey of the whole State presented annually which would be of great value, and would do more to stimulate improvement and progress than is accomplished by the thousands of dollars now given in premiums for articles of accidental growth or for those which need no encouragement.

The giving of premiums for big squashes and beets, or even for apples and pears, the profits of which are sufficient inducement for their cultivation, is only money thrown away. However useful it may have been in the past, it is no longer required. But careful reports which would bring before us the changes and improvements in agriculture that are taking place in all and every part of the State,—the methods of culture, the condition of the crops, the stock, the dairy, the markets and the facilities for reaching them, the implements, labor and all the important subjects included in "agricultural reports,"—would be of great value. A series of questions might be prepared, which all Societies receiving State aid should be required to answer truly and honestly before receiving their share of the bounty.

This subject is respectfully commended to the Legislatures of the several New England States.

MORTALITY AMONG VERMONT SHEEP.

The singular disease of which we gave some account on page 321, appears to be quite general in the eastern parts of Vermont. A gentleman in Vershire informs Dr. Boynton that "sheep are dying in large numbers in every direction, and there will not be lambs enough raised to make the number good. Lambs are dying both here and in the neighboring towns of New Hampshire, in many flocks to the extent of two-thirds and three-fourth of all that are dropped," and he has information of the same import from other sections of the Connecticut valley.

In relation to the effect of the muriated tincture of iron which Dr. Boynton administered to six yearling bucks that were too weak to stand but a few moments at a time, and could with great difficulty be made to walk ten rods, and would take little or no food, he says, in the last *Mirror and Farmer* :—

We commenced giving them each a table-spoonful of the muriated tincture of iron, in water, three times a day. At the end of two days we could see a marked change. The rose color began to return to the blanched lips, the eye was brighter, the discharge from the nose less, and signs of a returning appetite were unmistakable.

Of the six thus treated, I killed one the second day by kindness—I choked it to death in trying to feed it some gruel it was too weak to swallow; the smallest and most feeble one of the lot died; the other four are now so well I have stopped my medication, and I regard their recovery beyond a doubt.

For the New England Farmer.

THE GARDEN IN JULY.

The backwardness of the spring, and consequent shortness of the growing season has tended strongly to concentrate work on growing crops; and in this concentration and hurry, some things may be slighted, or put off for others; and, with too many farmers, the garden is the one that is thought can be left till the field crops are laid aside. But is it economy to thus do? I think not, for every dollar gained from field crops, at the expense of neglect of the garden, two dollars are lost in the economy of the household, besides a great amount of satisfaction and enjoyment of the farmer and his family. It is better to let those crops suffer neglect, if any are to, where the least loss will occur, yet still better is it to hire extra help than let either suffer neglect.

The main work for the month is to hoe the advancing crops, to kill weeds, and stir the soil; for every weed that grows robs other plants and the soil of just the amount of elements that enter into the composition of the weed, and frequent stirring of the soil has the effect of manuring, warming and moistening it. The ground occupied by an early crop can be made to produce a second, by planting lettuce, cabbage, celery, turnips, &c., after removing the first. The following hints will serve to recall some of the labors in the garden during the month.

ASPARAGUS should receive a dressing of fine manure or superphosphate, worked lightly into the soil, and cutting cease, to let the roots recover from drafts made during the cutting season. If any tops are infected with the larvæ of the "asparagus beetle," cut and burn them; let the rest grow.

BEANS.—Plant dwarfs for late crop, pickling, &c. See that the Limas incline to the pole, and have strong encouragement to grow, by frequent hoeings when dry, and an occasional stimulant of liquid or other manure around the roots. Gather string beans as they become fit for the table, but leave some of the most prolific plants to go to seed.

BEETS.—Thin out where too thick, and use for greens,—they make excellent ones; keep them well cultivated. Seed may be sown early in the month for a late crop.

CABBAGE,—for winter use, may be transplanted any time up to the middle of the month. Those already set need frequent hoeing. There is no crop that requires more culture than cabbage in order to grow extra good

heads; frequent stirring the soil tends to encourage heading.

Celery.—Prepare your beds and set it out, if not already done, although set now it often matures as early or goes ahead of earlier set. Manure high and work into the bottom of your trenches, and set the plants nine inches apart in the rows, which should be at least three feet apart.

Corn may still be planted for late use, canning or drying. A quick, rich soil is needed.

Cucumbers.—Save some of the earliest and best, grown on the second and third joints of the vine, for seed; keep others picked off as they come in size for use, gather for pickles and salting; hoe and keep clean of weeds. For pickles, seed may be planted early in the month.

Egg Plants need encouraging by frequent hoeing, giving liquid manure, &c.; earth up and stir the soil frequently for a mulch.

Herbs.—Cut them when about to come to flowering, dry them in the shade, or an airy room in the house, and when well cured, put up in paper bags or boxes, and lay away where they will keep dry.

Rhubarb.—Keep the seed stalks cut down, not allowing them to grow, as it injures and exhausts the roots; a little manure worked in around the roots has an excellent effect in assisting them to recover the spring cutting.

Seeds.—The gardener who suffers all his earliest and best fruits to be gathered for eating, &c., and saves none to ripen, except late ones, soon finds that his crops deteriorate, or run out, and is obliged to renew his seeds from other sources; whereas had he saved from each variety some of the earliest and best specimens, they would not only have held their own, but might have improved in quality. All our cultivated vegetables have been brought to their present state of perfection by careful selection and saving of seed, &c., and judicious culture; and unless great care is used to retain these qualities, they are apt to deteriorate. All vegetables are as capable of improvement as animals, by superior breeding, by using corresponding means.

Sweet Potatoes.—Plants may be set the first of the month, in warm early localities, in conical hills or on ridges either, raised ten inches high, and well supplied with manure in the bottom. Set two plants to a hill, if in hills; on ridges set the plants sixteen inches apart. Hoe those already set by using the hoe or garden rake, and hauling the soil up the ridge or hill,—see that the vines are kept from rooting at the joints, by lifting, &c.

Turnips.—Sow Swedes or rutabagas early in the month; white or English turnips from the middle to the last.

Gooseberries.—Thin the fruit, where thick, using that removed for cooking; those left will be all the better for it. If you desire extra sized berries of this or the currant, thin to only a few on a bunch, and pinch off the end of the shoots, giving liquid manure liberally. Should the borer or currant worm infest the bushes, use diligence to destroy both moth and worms. Various devices are recommended for their destruction. Remove needless shoots, to save future pruning, and give the strength to bearing canes and fruit.

Strawberries.—As soon as the last of the crop is gathered, weed the bed thoroughly, fork in manure around and between the plants, and keep the runners cut, unless you wish new plants, when the ground should be well enriched and forked up mellow, and the runners encouraged to root therein. New beds may be formed by spading up through the old ones, leaving a ridge of plants between to spread their runners over the newly spaded ground.

W. H. White.

South Windsor, Conn., 1868.

For the New England Farmer.

CIRCULATION OF SAP.

The Farmer of the 16th copies from the *Maine Farmer* a few lines about the flow of sap, which, to a Vermont farmer who has watched this phenomenon for forty years, makes the darkness surrounding this subject unusually visible.

"Spongioles," says the writer, "have a mysterious power of eliminating sap from the earth."

Of course sap includes the sugar also, which is a part of the sap. Mysterious, I should think, must be the power that makes sugar down there in the cold dark ground, frozen solid from ten to thirty inches. Suppose the sugar to be elaborated during the summer by the action of sun, air and light, the process will be a mysterious one, but has many analogies in nature's great work shop. Hydrogen and carbon, large constituents of sugar, are evolved largely in all directions, in summer. It may well be doubted whether sugar is "eliminated" from the roots of the cane.

Again,—neither the axe, the gouge, nor the auger show that the sap comes wholly from below. Further,—let there be three warm days in April, swelling the buds of the maple, and the sugar tastes of *buds*. In 1866 I made seven hundred pounds of "budded sugar," as we call it here in Vermont. Every old sugar-maker knows that the sap will run freely for hours when the mercury is falling and icicles forming from the spout to the bucket. On the theory that sap descends in cold weather, the pores of the wood being pinched, we should look upward for the sap. There is something curious and not yet explained about the flow of sap. In all the pores opened in the side of a tree by a hole half an inch in diameter and three-fourths of an inch deep,—in all of these pores and fibres, from top to root, there is not room for the barrel of sap that often issues thence. The *air* must be in a peculiar condition to produce

a "sap-day," and the sap *seems* to answer a soliciting influence, acting through the incision made in the live wood. Other outside influences are also indispensable conditions of a sugar year. Mild and frosty, crispy weather must alternate. Action and reaction, movement and rest seem to be a law of the sap-flow, but not of its circulation. For the spring may be all clouds, rain, mist, yet the sap is in the limbs, but you are none the richer or sweeter for it.

It has rained more or less each twenty-four hours for ten days. The foundation for grass, hay and small grain is well laid. C. N. A.

Chelsea, Vt., May 22, 1868.

REMARKS.—We feel proud of our race sometimes when we consider the extent of man's knowledge and the greatness of his exploits. There is poetry if not sublimity in the idea of his harnessing up steam as a coach horse; of his making a servant of the invisible "electric current;" of his resolving air and water to their prime elements; of his measuring the "mountains of the moon" with his telescope, or of his watching with his microscope the contests of the leviathans that inhabit a drop of water; but a different feeling is excited when he answers our question about the flow of sap, by the humble confession that he cannot "tell whence it cometh or whither it goeth." Our correspondent presents some "posers" for the *Maine Farmer*, and other learned botanists. We turn to the great American Cyclopædia, now extended to some twenty-two large volumes, and find the following article, which we suppose embodies the gist of present knowledge upon the subject:—

Sap, in botany, the fluid imbibed from the soil by plants and carried through their tissues, being the usual source of their nutrition and of their peculiar secretions. The external agencies in the vital principle of plants are water, heat and light. Water does not exist in nature in a pure state, but is constantly combined with earthy, saline, and gaseous matters. Most plants are furnished with roots, and these organs are so contrived that they can absorb these aqueous solutions, transmitting them through the different tissues to the various parts. This transmission is called the circulation of the sap, and alterations in its constituents are continually going on in its progress, that nearer the roots being destitute of certain principles which are found higher up the stem. Thus, before the sap reaches the leaf buds and leaves, a considerable change has taken place; but when exposed to the light by means of the expanded leaves a greater one occurs, which may be termed digestion, consisting in the decomposition of carbonic acid, the giving out of its oxygen into the air, and the combination of the carbon with other elements to form the various secretions of the plant, such as gum, sugar, starch, lignine, &c. The manner in which each plant elaborates from the same soil its essential products remains as yet unexplained. The cause of the motion of the sap has been a fruitful source of speculation among physiologists, and for a long time capillary attraction was adopted as the most probable. The opinion of Dutrochet, that exosmose and endosmose were the explanation, is now most generally received. Two special motions called rotation and cyclosis are also known. The former is to be seen in the joints and cells of certain aquatic plants, such as *vallisneria, chara, nitella*, &c. This rotatory motion of greenish globules floating in the sap may be increased by raising the temperature till it reaches 77° F. Cyclosis occurs in such plants as have spiral vessels, and especially in the tissues of such as secrete a milky fluid known as the *latex*, which seems to bear the same relation to the plant that the blood does to the animal, and is more slightly organized and separated from the other fluids. To inspect these phenomena the compound microscope must be employed.

For the New England Farmer.

FARM LIFE IN NEW ENGLAND.

The picture of farm life, as drawn by "John" is indeed a gloomy and discouraging one, yet it may have its "sunny side." I have always lived upon a farm, and in an agricultural community, but have seldom seen a specimen of that miserable class of which he remembers "a whole neighborhood full;" nor can I believe that farmers' wives are inferior, physically or intellectually to women of the so-called higher stations of life. I well remember some, whose lives, prolonged to more than fourscore years, were spent in the farm-house, in the days, too, when labor-saving inventions were not, and when spinning, weaving, milking the cows, and taking care of pigs and poultry, were a customary part of their duties, who were cheerful, active, and intelligent; fond of society and of books, and interested in the great political, moral and social questions of the day.

The houses, too, which "John" describes,—where could he have found the originals! Very different is my idea of a farm-house. The large, pleasant old mansion, facing the south,—whether the road lay before it or behind it,—shaded by stately elms, with lilac and rose bushes growing beside the windows, and tulips, peonies and many-colored annuals blooming around the doors. A "best room" seldom used; a large, east room, with abundant windows, floor painted yellow, and an old-

fashioned clock in the corner; a capacious kitchen and sleeping-rooms twenty feet square, were characteristic of these homes of the true *New-English* nobility. In process of time, the house was modernized,—the grounds tastefully laid out,—the best room was named the parlor, and made the recipient of carpet, sofa, pictures and piano, but the pleasant east-room, almost always found in the old farm-houses, remains unchanged.

Such are the homes which the sons and daughters leave because of their unattractiveness! I believe that a more correct reason would be found in the false ideas of life gained from the pestilential literature which floods the country. Novels which paint city life in glowing colors, and speak of labor as synonymous with poverty or disgrace, are, to say the least, no blessing to society.

I would not ignore the darker side of the story. It is true that farming is not altogether the delightful employment that it might and should be made, and eventually will be; but what occupation is exempt from trials? I know of none so capable of unlimited improvement as agriculture, none so well adapted to develop normally the whole nature.

It is true that farmers' wives sometimes lose their health when it is most needed, and drag out a miserable existence which can scarcely be called life. But in almost every class of society the same sad story is told. In many cases the foundations of the disease were laid in the school-room, or shop.

It is true that some farm-houses are cheerless enough; but they are the exceptions. The majority of them in this vicinity, at least, though not "palatial residences," are cheerful, pleasant and homelike. They are usually occupied by their owners and often remain for several generations in the same family.

It is true that some men care little about making "home pleasant;" but I believe that such men are quite as apt to be found in superfine broadcloth, as in the plain suit of the farmer. Many a woman whom the world envies her elegant house and costly apparel, "has the weary, careworn, despairing look," which tells but too plainly of sorrow proudly and silently borne.

I have no fears that agriculture will suffer from a free discussion of its merits and demerits, but rather believe that in regard to usefulness, pleasantness and the character of those who follow it, it will bear comparison with any other calling whatever.

MATTIE.

Marlboro', Mass., June 3, 1868.

—Lewis F. Allen, in his American Cattle, estimates the number of neat cattle in the United States at 28,145,240, worth $950,051,778, and he very pertinently asks if an interest of such magnitude is not worthy of more care and study than we have hitherto given it.

For the New England Farmer.

KATIE.

BY ANNE G. HALE.

The tardy spring again hath brought
Her garland for the brow of May,
And every lagging breeze hath taught
The music of her roundelay.

The murmuring pines a new life fills,
As their old trunks the brooklet laves;
And all the river's margin thrills
To the glad anthem of its waves.

The sweet arbutus' modest blush
Lights with auroral glow the woods;
And joyous voices break the hush
Of the dim forest's solitudes.

I list the blue-bird's timid trill,
I hear the robin's merry notes;
And down the vale and o'er the hill
The perfume of the violet floats.

But sad to me the silvery flow
Of brook, and birdling's carol clear,—
A gentle cadence, soft and low,
I miss amid the spring-time cheer.

Oh! sweeter than the violet's grace,
And fairer than the May-flower's bloom,
The beauty of one meek young face
Comes not the season to illume.

When bleak winds from the hills swept down,
And all the plains were white with snow,
From her pale brow pain's thorny crown
Dropped in the grave, so dark and low.

The chill—the change—our hearts appalled,
To hers it brought a glad surprise;
Our souls to lonely sorrow called,
Hers to the joys of Paradise. . . .

'Tis o'er—her simple village life
Of lowly toil and pleasures few—
Yet, with all highest issues rife,
It will not, cannot fade from view.

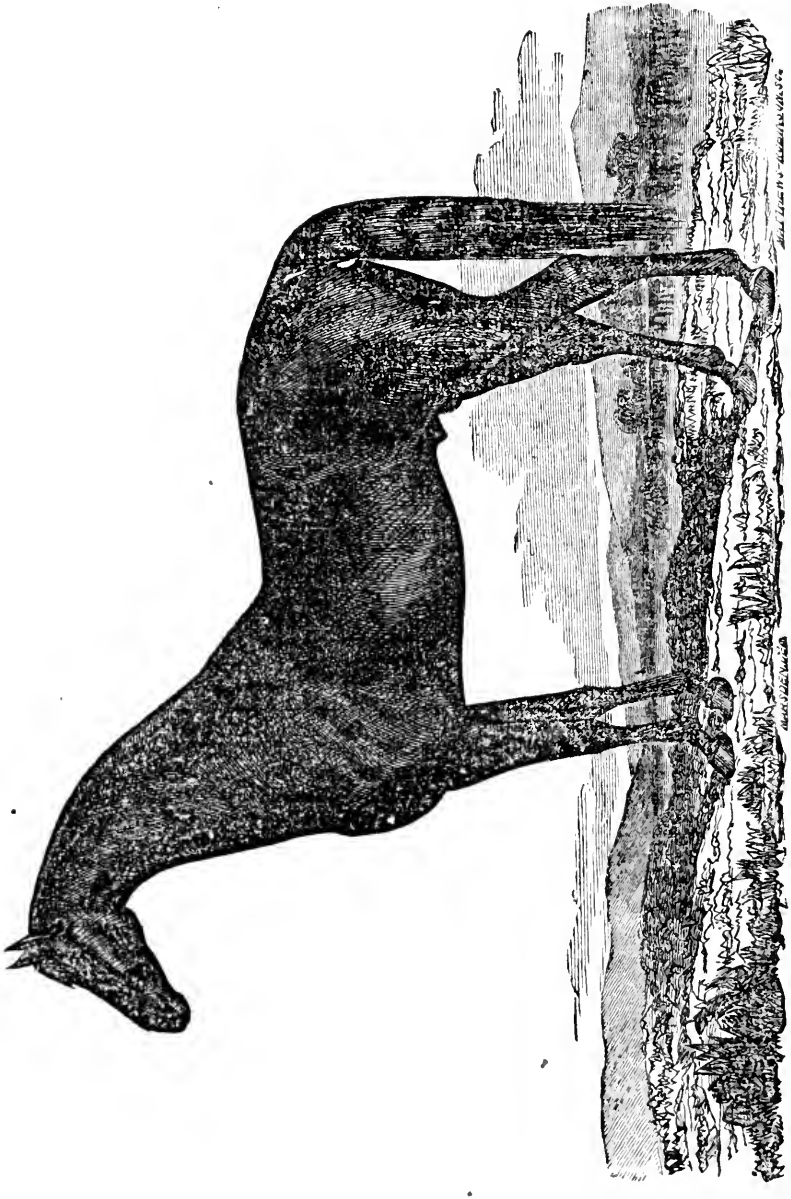
But her smooth-parted, golden hair,
The soft glance of her dove-like eyes,
Her modest mien, her reverent air,
No more upon my vision rise.

Cease, plaining heart! Her fearless trust
Would chide these murmurs of regret—
As, now, above her sleeping dust,
The sunshine wakes the violet.

Keep the sweet memory death hath left—
The fragrance of her influence dear,—
Though of the blossom else bereft,
Its holiest presence lingers near.

Spared earth's decay, through God's great ruth,
She shall again to thee be given,
Blooming with a perennial youth,
In the eternal fields of Heaven.

The spring-time of her loving faith,
Unchilled by doubt or hope's delay—
Her amaranthine wreath of death—
Makes of her memory endless May.



FIGARO, BY IMPORTED CONSTERNATION.

The above cut is a very faithful representation of the stallion, Figaro, bred and owned by Orin Trow, Hardwick, Mass. He is a horse of perfect symmetry, combined with immense power, graceful in action, a remarkable walker as well as beautiful and rapid trotter. His color is a dark dapple bay of unusual richness,—is sixteen hands high, and weighs over 1200 lbs. Of his sire, Consternation, it may be said, that his qualities as a stock horse achieved for him a national reputation.

His dam was "Dolly," by "Green Mountain Morgan" or "Hale horse," a mare of great size, power and endurance. At five years old she was driven seventy-eight miles in a day, without apparent fatigue and could easily have

accomplished a hundred. Her dam and grandam were mares of the same general type; therefore it will be seen that Figaro's qualities are hereditary, rather than accidental. His colts and fillies possess in a marked degree the characteristics of the thoroughbred, and while they are making elegant carriage horses and fine roadsters, they are also giving a very flattering promise for the turf. He is proving himself of incalcuable benefit to the breeders of New England.

MUTTON SHEEP.

An English correspondent of the *Country Gentleman*, after alluding to the fact that from six to eight thousand "hoggets,"—yearling sheep—are sold every Saturday at Norwich market, at from $12 to $14.50 per head, remarks that these sheep are nearly all what is called half bred, i. e., from some kind of dark-faced Down ewe, by a Lincoln, Leicester or Cotswold ram, and for early maturity and the profitable production of excellent mutton, are hard to beat. Alluding to an article he had seen by an American writer in which the Cotswold was recommended as the breed for our farmers to take up, he says:—

I am of opinion that the writer is a little mistaken in his deductions, for in addition to the fact, that by cross-breeding we attain not only early maturity, but a far greater disposition and aptitude to fatten than is found in any pure breed, the Cotswold, in common with every other white-faced, long-wooled sheep, carries a large amount of fat in proportion to its lean meat—the meat is coarse in the "grain." Whereas, in the South-Down, and every other dark-faced, short-wooled breed, these characteristics are exactly reversed. I venture to predict that if the great American people is to be "educated up" to a taste for mutton, it will be of the Down, or half-breed sort. Probably the best cross of all is that between the South-Down ewe and Leicester, Cotswold or other long-wooled ram.

SHORT-HORNS FOR BURLINGTON, VT.—Two weeks since we noticed the purchase of several fine animals by F. M. Van Sicklen and J. A. Shedd of this town. We see by the *Country Gentleman* that Mr. Shedd has purchased of Hon. A. B. Conger, Waldberg, N. Y., the following additional animals:—

Mazurka 8th and *Constance 3d*, both bred by the late R. A. Alexander, and got by his prize bull Albion; *Queen of Diamonds*, bred by Samuel Thorne, and got by 2d Grand Duke (12961,) out of imported Darlington 6th; *Lelia*, bred by the late F. M. Rotch, and got by imported Grand Duke of Oxford; also, *Constantia* and *Constantia 2d*, bred by himself, both out of Constantia 3d, the first got by Buttercup 2d, son of 2d Grand Duke, and the second by Udora's son of Grand Turk (12969).

From the New York Ledger.

OUT WEST.

BY ETHEL LYNN.

Joe Hilton sat in his easy chair,
Nothing he seemed to see,
Though a little woman's tiny hand
Lay resting on his knee.
Straight in the fire his glance was bent,
Unscorched by its sullen glow,
Till a woman's question broke his dream
With, "What are you thinking, Joe?"

Back from the border land he came,
Back from the prairie swell;
Back from the rustling fields of corn,
Back to his black-robed Nell.
"Thinking, my tiny, quiet wife?
Where I shall build my nest;
For when the maple flushes red,
We are going, dear, 'Out West.'

"Going where men can win a home,
Where the corn is glad to grow;
Where the reaper's cradle turns to gold,
And the winds untainted blow.
Going where gleams of silver shine
On the rugged mountain's crest,
And a farm awaits the master's hand—
Are you glad we are going west?"

Over the sombre dress she wore
Hot tears went rolling down,
Though she tried to wipe them off unseen,
Fearing Joe's troubled frown.
"Speak, Nelly, why do I see those tears?"
Softly she bent her head—
"Mother—the sea—and baby's grave!"
Were the only words she said.

Five years had passed, as years will go,
Dying as soon as born,
And Farmer Joe was passing rich,
In acres, flocks and corn.
And Nell? poor Nell! Joe told a friend,
In confidence, she was not well;
The friend had heard it long ago,
Had caught the echo of a knell.

All knew, save Joe, the prairie rose
Would bloom above her head;
He thought the spring would tint her cheek,
With its well remembered red;
He could not think, (how could a man?)
That heart-aches ever kill.
Nor know how fever craved a draught
From "the spring beyond the hill."

He knew at last, one quiet hour,
When over the treeless plain
The sun shot level shafts of light
Athwart the day just slain.
Poor Nell awoke from troubled sleep,
And talked in a wandering way,
Of the little brook, of the baby's grave,
And the flowers that bloomed in May.

Of the dim, old woods, so calm and cool,
Of the sea which she loved so well;
While Joe stood holding fast her hand,
With a sorrow no words could tell.
"Oh, tiny Nelly, oh darling one,
Come back, little one, to me;
I did not know, I could not tell,"
Too late—
She had found the sea.

SALES OF IMPROVED STOCK.—We learn by the *Country Gentleman* that Mr. Joseph A. Harwood, Littleton, Mass., has sold to Mr. C. C. Pierce, East Clarendon, Vt., *Cavalier*, 6526, a fine Short-horn, eighteen months old, bred by Mr. Harwood. He was got by Matadore, 5002, out of Yellow Rose, by Mamaluke, 3114.

BEET SUGAR.

THE subject of manufacturing sugar from beets has been much discussed of late, especially in the West; and some are prophesying that we shall manufacture this indispensable article from the beet, within a few years, as they do in France, where it has become a crop of national importance. From France, the making of sugar has extended into Germany. In both countries sugar is now made which is thought by many superior to cane sugar.

The sugar producing sections in Europe are said to be increasing in fertility and wealth. The tops and the pumice, after the extraction of the juice, are used for the feeding of cattle, which thrive on them, and the manure thus produced aids greatly in the cultivation.

There seems no good reason why we in New England cannot engage in sugar making from beets, as well as our brethren in the West. To be sure we cannot expect to see fields of fifty or one hundred acres of beets, as on the prairies of Illinois or Kansas. We can raise them only on small patches of one or a few acres; but a great many such small patches are equal to a large field. We do not keep immense herds of cattle, but we keep a great many small ones; and we have learned that one cheese factory answers for a neighborhood keeping from 500 to 1000 cows. Sugar making requires machinery and capital, and may be carried on much more economically on a large scale than on a small one. It would not pay for the cultivator of a few acres to set up the necessary mills, presses and refining apparatus. A farm as extensive as a Mexican ranche, or a Southern plantation would be needed for this. But a mill and the necessary apparatus might be used for a town, or for several towns, at which the beets might be sold at a fixed price per ton, to be paid either in money or sugar.

The white beet is generally cultivated for sugar making in Europe, and with good soil and cultivation about twenty tons per acre are obtained. They are sown in drills, and carefully cultivated through the season. The beet consists of fibres, enclosing cells which contain the juice. In order to completely press out this juice, these cells must be broken or torn open. Various methods have been tried to effect this object. The method now in common use is to subject the washed and cleaned beets to the action of cylinders, surrounded by rows of saw teeth, which reduce them to a fine pulp. This pulp is subjected to hydraulic presses. In this way 75 or 80 per cent. of the juice is obtained, which then undergoes the process of evaporation and refining. Lime is added, as in the evaporation of cane juice, to neutralize the acid, which would prevent granulation.

If one hundred farmers in any section of country should engage to furnish 20 tons each to a mill, this would amount to 2000 tons, and would seem to be a sufficient basis to begin upon. The mill might be the joint property of the beet raisers, or it might belong to one or several proprietors, like the cheese factories.

Beets are said to yield from five to eight per cent. of refined sugar. A good loamy soil, free from stones, and capable of deep culture is required for the successful culture of the beet. Probably it would be best to make it a part of a suitable rotation of crops.

But, sugar-making out of the question, beets ought to be more cultivated for stock than they are among us. No other root, except the flat turnip, is so easily cultivated or so little exhausting to the soil, and no other root is so little injured by keeping. They are good until the grass comes, and cattle, sheep, hogs and horses all eat them with a relish.

CHITTENDEN CO., VT., SHEARING.

The first annual show and shearing of the Chittenden county Sheep Breeders and Wool Grower's Association, took place at Shelburn, May 7 and 8. We learn from the Burlington, Vt., *Daily Times* that notwithstanding the first day was somewhat rainy and unpleasant, the display of Spanish merino ewes and lambs was very fine. L. S. Drew exhibited a dozen splendid lambs from the famous rams "Green Mountain" and "Kersager." The breed is celebrated and must prove a profitable investment to Mr. Drew. Among other exhibitors were Henry Thorp of Charlotte, H. N. Newell, Lee Tracy, E. S. Rowley and B. F. Van Vliet of Shelburn and S. H. Weston of Colchester. Mr. Tracy showed some very elegant lambs, not over six weeks old, which were bred from

"Red Leg," Col. E. S. Stowell's well-known buck.

Through the politeness of L. S. Drew, President of the association, and H. L. Newell, Secretary, our travelling agent, Mr. E. P. Wentworth, was furnished with beautiful specimens of fine wool from the sheep exhibited at this shearing, which he has forwarded to this office, where they may be seen by those interested in the improvement of our American wool. They vary from 2½ to nearly 3½ inches in length, and are fine and beautiful. We have also a sample of South American, or Mestiza, fine wool, about 2¼ inches long, from the celebrated "Altoy Flock," exhibited by Mr. H. W. Smith, of the Burlington Mill Company, who said it makes the best of cloth.

The Committee on Shearing, consisting of Geo. Barstow and Dr. Knox, made the following report:—

Classes.	Owners.	Weight of Fleece.	Days of Growth.	Weight of Carcass.
		lb s oz.		lbs.
Rams, 2 yrs. & over	Henry Thorp, .	22 6	364	123
" " "	Thorp & Newell	21	372	105
" " "	S. H. Weston, .	17 6	385	88
Ram Tegs	L. S. Drew, . .	16 3	437	72
" "	Henry Thorp, .	9 4	387	48
" "	L. S. Drew, . .	14 12	387	70
Ewes, 2 yrs. & over	B. F. Van Vleit,	12 5	362	69
" " "	H. N. Newell, .	16 8	372	53
" " "	H. N. Newell, .	13 12	372	56
" " "	H. N. Newell, .	11 8	372	59
" " "	L. S. Drew, . .	14 15	372	62
" " "	L. S. Drew, . .	15 9	372	58
" " "	S. H. Weston, .	12 12	367	52
" " "	S. H. Weston, .	12 1	365	43
Ewe Tegs	L. S. Drew, . .	10 15	437	52
" "	L. S. Drew, . .	11 8	437	49
" "	L. S Drew, . .	12 2	438	49
" "	B. F. VanVleit,	15 8	402	72
" "	B. F. VanVleit,	12 6	402	63
" "	B. F. VanVleit,	12 15	395	69
" "	S. H. Weston, .	12 12	367	48

The following premiums were awarded for greatest amount of wool according to time of growth; J. L. Barstow and J. M. Knox, committee:—

Ram of any Age—1st premium, Henry Thorp, 2d premium, Thorp and Newell.
Ram Lamb—1st and 2d, L. S. Drew.
Ewe of any Age—1st, H. N. Newell, 2d, L. S. Drew.
Ewe Lamb—1st and 2d, B. F. Van Vliet.

The Committee on Fleece, T. D. Chapman, Henry Giddings, E. S. Stowell, reported as follows:—

Rams, (full fleece)—best, Henry Thorp, 2d, Thorp and Newell.
Ram Tegs, (fleece)—best, Henry N. Newell, 2d, Lemuel S Drew.
Ewes, (full fleece)—best, Henry N. Newell, 2d, Lemuel S. Drew.
Ewe Tegs, (fleece)—best, Lemuel S. Drew, 2d, Henry Thorp.

On Shearing, the first, second and third premiums to A. Washburn, Milton; D. St. Peters, Charlotte, and Samuel Millham.

Among those present at the festival were Hon. John Gregory, of Northfield, President of the State Agricultural Society; Henry Hammond, of Middlebury; E. A. Smith of St. Albans, Col. Stowell of Cornwall, and other noted sheep fanciers.

CO-OPERATIVE FARMING.

A few years since Protective Union Stores were quite popular in New England. The same principle has been adopted to some extent in manufacturing, but we have no knowledge of its ever having been applied to farm management, except by such communities as the Shakers. We learn by a letter written to the New York Farmers' Club, by Mr. L. Smith, of Easton, Mass., that a "Planting Company" has been formed in that town. He says:—

We hire land and teams, buy manure, and employ faithful men to work the crops. The rent and outlays for each acre of land are divided into fifty shares at $1 or more per share. Each subscriber takes a sufficient number of shares to make up his family supplies of corn, small grain, and vegetables for one year. When the several crops have matured, the merchantable productions are divided into fifty parts and delivered to the stockholders; all straw and unsound productions are sold for cash, which are also divided. This simple method of doing business gives every one the privilege of becoming his own farmer to the amount of his investment, and the widow with her scanty income can obtain her supplies at cost. Our market is made before the crops are planted. This plan gives employment to many that would otherwise be lounging about or getting into mischief. It will tend to reduce our over stock of store-keepers and speculators, and will open the way to other co-operative movements in producing milk, butter, cheese, meat, sugar, wool, flax, and eventually all other productions that make up the wants of human life.

As "great trees from little acorns grow," who is wise enough to say that the above movement may not possibly grow into a great agricultural revolution. Machinery has already turned the farm into a shop, the agricultural college and the agricultural press is transforming it into a laboratory and a reading room, and now our good Easton friends are going to make a factory of it, with "shares" and "dividends," and "surpluses," and "stockholders" and "managers," and "operatives," but without "storekeepers or speculators."

The wisdom of making a market before their crops are planted, is certainly commendable, though it may remind some old farmers of the picture of the milkmaid, in their spelling books, who acted on a similar policy in respect to her chickens.

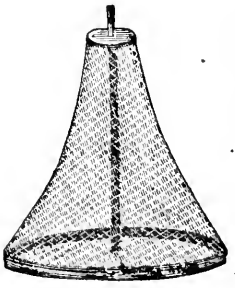
Whatever may be our opinion as to the probable success of this Planting Company—and we certainly wish it greater prosperity than we dare anticipate—we must regard it as a "straw" of no small significance. Evidently a "land breeze" is beginning to blow among the consumers of farm produce. The country population has congregated in cities and villages until every "green thing" in the land has been devoured, and bread and meat and vegetables are so dear that, to the vision of many a family, the figures in Prices Current are assuming the dim outlines of gaunt famine. Curses on "the speculators" have been tried, but they can hardly be relied upon to keep the wolf from the door. We fear the plan of our Easton friends "to hire teams, buy manure, and employ faithful men to work the crops," will prove like the hired reapers in Æsop's fable. That much, however, may be better than nothing. It admits the necessity of doing something, and this admission is the first step in the right direction. The next step is we think well indicated by the editor of the *Ohio Farmer*, whose advice to a similar community was, "off with your fashionable broadcloth, and on with a loose suit of stout and homely stuff, that will stand the weather and the wear; get you to the barnyard and to the field; lift up your voices among the oxen, and the horses, and the cows, and the sheep; talk bad grammar, and come in at night with soiled boots and hay-seed on your clothes; eat great slices of pork and baked beans; then go to bed and snore in your sleep, and wake up to thank God that you were not civilized to death in this progressive age. So you shall help to avert the impending Famine of Food."

CANKER WORMS.—About two years ago we published an account of the method by which some farmers in the eastern part of New Hampshire had saved their trees and secured good crops of apples, by destroying the canker worms after they had commenced feeding upon the foliage. After applying a belt of tar to the trunks, they commenced at the top of the tree by jarring the branches with long light poles or fishing rods. As the worms spun down on their gossamer threads, they were brushed off by side strokes with the rods. As soon as they reached the ground, they started at once and directly for the trunk and were soon fast in the tar.

We see by a statement in the Newton, Mass., *Journal*, that Marshall S. Rice of that town has been entirely successful with this process on some forty trees, by going over them twice, spending some fifteen minutes to each tree. He advises all who have neglected to prevent the ascent of the grub to try this process without fail, as he thinks the fruit of his forty trees paid well for about two days' work.

WATSON'S PLANT PROTECTOR.

The attention of those who raise tomatoes, squashes, cabbages or plants, which are liable to destruction by insects or cut worms, is directed to the invention shown in the accompanying cut, and just introdueed in this market. The supply being limited, those desiring to secure a supply must order early.



HORSE-RACING AT FAIRS.

Horce-racing has been popular in Kentucky much longer than in New England; and this fact, in our opinion, entitles the following remarks by the editor of the *Farmers' Home Journal*, published at Lexington, Ky., to the especial attention of the managers of our Agricultural Fairs:—

But there is another cause, which, in the opinion of many, has detracted from the usefulness of our fairs and the interest once manifested in them by a great portion of our people, and it is—the prominence given to speed rings to the neglect of other departments—and we respectfully invite the attention of the officers of associations to this matter. Stock raising is an important interest and the breeders of blooded stock are entitled to consideration and encouragement, for they contribute materially to increase the wealth of our State and give it a reputation abroad, but the point we desire to make is this: While they have horse shows, regular races and other opportunities for developing the fine qualities of their animals, it is not doing justice to other equally important interests, to award the most of the premiums and occupy most of the time with trials of speed. Our fairs were instituted for the purpose of promoting the agri-

cultural and mechanical interests of the State, and when this leading object is kept steadily in view, and when the exhibition is varied,—comprising in its different departments, fine stock, the products of the farm, orchard, dairy and loom, and the manufactures of the different trades,—the people will attend by thousands.

For the New England Farmer.

CORN FODDER FOR SOILING.

Of all the crops grown expressly for soiling, corn fodder stands pre-eminently at the head of the list; and considering its simple and easy culture, the almost certainty of a large yield with fair treatment, the avidity with which it is eaten by all kinds of stock, and its great value as forage, its importance can hardly be over estimated.

Simple and easy as its cultivation may be regarded, there is a wide difference in the results attainable. If color is an indication of the vigor of growth, what means the pale green, sickly yellow or whitish appearance of many fields of fodder? In a field of corn such signs of weakness would not be considered very promising for maturing a good yield of ears. But allowing the growth to be vigorous, there are other differences not so apparent to the eye. The stalk and leaves of corn, like those of other kinds of grain, and the grasses are merely to support and perfect the ear. During the early stages of growth, its cellular tissue is imperfectly developed, and the juices are thin and watery. As the stalks approach full development, the juices thicken and become richer in saccharine matter, the goodness of the stalk is absorbed rapidly by the ears, which if undisturbed would take up from the stalk nearly all that is available for nutrition. The stalk, then, has its greatest value for fodder while the ear is forming. In this respect corn resembles sugar cane. The sugar maker would never expect to produce a syrup that would yield a large percentage of sugar unless the cane had attained its full growth.

Now, if we select the Southern and Western varieties, and plant thickly, and cut the stalks when only partially grown, a large quantity of tender, succulent fodder is obtained, but there is too much bulk in proportion to its goodness; too much thin, watery juice for the nutritive matter it contains. When cattle receive any addition to their pasturage, it should be in a form that combines a suitable proportion of nutriment; if a weak, bulky fodder is given them, their stomachs are unduly distended, and the labor of the digestive organs is greatly increased. Excessive distension of the stomach weakens its force, and food received in this condition is only partially digested, and is worse than wasted or lost. Some farmers are well aware of these facts, and in order to deprive corn fodder of part of its bulk, cut it up some time before using. I know of a very conscientious milkman who finding this kind of fodder increased the quantity of milk at the expense of the quality, discontinued raising it.

Now it is plain if we plant a smaller variety of corn, and give each stalk room and time to attain a full development before it is cut, we obtain a more concentrated and nutritious fodder, and what is lost in bulk is gained in quality. Sweet corn is far preferable to the common yellow. One stalk of it fully grown is worth three or four of the large Southern varieties but half matured. Being richer in saccharine juices, it produces superior milk, promotes the growth of the animals, and at the same time keeps them in excellent condition. Horses eat it greedily, and when at moderate work will thrive upon it. By planting the early varieties early in the season, following with later kinds, an abundance of this most valuable help to the pasture can be furnished four months of the year. When hard frosts approach, it should be cut up, bundled and put into good sized stooks or carried directly to the barn and stored where it will not dry too rapidly and yet not heat and mould. In this way it may be kept tender and palatable several weeks longer than usual. When the stalks become too dry and hard, they should be passed through the cutter, then moistened with water and allowed to remain two or three days; or, what is better, if the weather is cold, put them into a tight box and steam by throwing hot water on them, then covering tightly. Where a liberal supply of this is provided during autumn and early winter it will prove a material saving of hay; and pumpkins, turnips, small potatoes and other roots, which are usually fed out early, can be reserved for later use. When this fodder is desired for winter feeding mainly, it should be planted early that it may be cured during the dry, pleasant weather of September.

Although a fair yield may be obtained in a favorable season by careless and imperfect cultivation, yet high culture is absolutely essential to the best success, as the fodder is needed most just when grass, from drought or other causes fails, and only high cultivation can carry a crop through in an unpropitious season. Good land, some of the best of the farm, should be selected for it, which should be ploughed and reploughed until thoroughly pulverized. It should be highly manured, partly broadcast and partly in the drills. It should be divided into equal lots for a succession of plantings. And if those lots designed to be planted first were ploughed and manured the previous autumn, it would hasten and improve the growth of the crop. Make the drills from two-and-a-half to three feet apart, and drop the kernels about one inch apart. The smaller varieties do not require to be planted as thickly as the larger and coarser, in order to make their stalks tender. As nearly all the cultivation can be done by horse power, the expense of the crop aside from manure is

small. The labor, "the great amount of labor," has always been the chief objection against raising crops for soiling. "It is quite enough," say some, "that we are compelled to stall-feed full six months in the year without continuing it during warm weather." But our pastures, in their present condition, are totally inadequate to meet the demands upon them. The increase of the population, the greater profits when land is devoted to other crops, and even the rise in the value of wood lands, combine to circumscribe and enhance the price of pasture land, so that in many localities, if obtained at all, it cannot be had at reasonable rates. How then can our farms be well stocked and our animals kept up to a profitable standard, if not by resorting to soiling? It should be borne in mind that every day the products of the dairy fail from want of sufficient food, money is lost; and that unless the stock show decided gain through all the warm months, and go into winter quarters without having drawn upon winter supplies, the profits of the year will be small. When the deficiency can, to a great degree, be supplied by corn fodder it is surprising it does not receive more attention. Upon the small farm, with its scanty pasturage, it would be of the greatest help; while upon large farms several acres can be used to advantage. The increasing demand for hay, and the high price it brings, presents a great temptation to sell a part of that crop. This could be safely done, and its place supplied by fodder and roots. By the same means milkmen and others who buy largely of grain, could materially lessen their expenses. Where fodder is fed out in the barn and the manure carefully saved, it is one of the best means for renovating a run down farm, or keeping a good one in high condition.

This estimate of the value of this crop may seem high to those who look upon it only in the form of hard, tough and almost indigestible stover, from which the ear or grain and the weather have extracted all the goodness; or upon that made from half matured stalks of some large and coarse variety, which is hard to be cured and worth very little when cured. But, as I have attempted to show, corn fodder is just what we make it. All its nutritive qualities may be sacrificed for the benefit of the ears, or the virtue of the ears may be retained in the stalk and leaves, and the whole form a palatable and nutritious food, fully equal to all we claim for it.

This is no new theory. We act upon the same principle in the treatment of other kinds of grain. If oats are cut while in the milk, before the heads are fully developed, the whole forms a nutritious fodder, equivalent, under many circumstances, to the grain and straw fed separately. And whenever the corn is to be consumed upon the farm, I see no reason why part of the crop should not be grown expressly for fodder. The labor of husking, storing the ears, shelling and grinding would certainly be saved, and it would be better for cattle to eat a simple, nutritious fodder than to receive it in two forms as commonly practiced; one being comparatively an innutritious stover, and the other a rich meal, which has the objection of being too hearty and heating when fed in any considerable quantity. The yield per acre by this method far exceeds that planted in hills. Thus by making an economical and judicious use of fodder, corn assumes a higher value and becomes one of the most important crops that can be raised, even here in the Eastern States.

Lawrence, Mass., May, 1868. N. S. T.

EXTRACTS AND REPLIES.

IMPORTED HORSE CONSTERNATION.

Mr. Sanford Howard, a few years ago, while editor of the *Boston Cultivator*, said in one of his editorials, that "Consternation is one of the few imported thoroughbred horses that has improved our stock of road and carriage horses." This he has done by his size, (being fifteen hands and three inches high, and weighing over 1200 lbs.,) his great style and symmetry, and his remarkably fine trotting action. Mr. Randall, in his edition of Youatt, says of him, he is a compact, and for a thoroughbred, very bony horse. His dam, "Curiosity," was a large, strong mare; and his sire, "Figaro," possessed the same characteristics. Consternation's sire, "Confederate," after being withdrawn from the turf, was kept by his breeder, Earl Fitz William, to breed carriage horses from, owing to his size, bone and symmetry. The size and bone of Consternation were not, therefore, accidental, or merely individual traits; they belong to his family, and were, consequently, far more likely to be transmitted to his descendants; and experience has shown that he almost invariably transmitted these properties to his descendants. The writer of this has seen perhaps fifty colts, from one to three years old, the get of Consternation, from common dams, and those possessing different proportions of blood. Every one of them has shown good size, and quite as much bone as it is common to see in the get of the ordinary coarse stallions of the country. Consternation was beautifully symmetrical in all his proportions, with a plumpness and roundness of outline, more like a perfect hunter, or exceedingly stylish carriage horse: but without a particle of coarseness, clodditness, or deviation from a true blood-like look. He was a horse of extraordinary mettle and activity; rapid in all his paces, singularly elastic and graceful in his movements. He could walk nearly five miles an hour, and was a beautiful and rapid trotter. With proper training he might have been made a fleet, if not a crack trotter.

Stallions of his get have been standing for several years in at least twelve different States of the Union, and his stock is gaining in public favor every year. One of the best of these was bred, and is still owned by Orin Trow, Esq., of Hardwick, Mass., who calls him "Figaro," in honor of Consternation's grandsire. By reference to Randall's Edition of Youatt, in which Consternation's pedigree, which perhaps you will not wish to print in full, is minutely given, it will be seen that he comes by a more direct and shorter line of descent, from the patriarchs of the English turf, than perhaps any stallion living; being only two removes from Waxy and Haphazard; three from Sir Peter, on the side of both sire and dam—three also from

Selim and Pot-8-oes; and only four on the side of both sire and dam, (and that too, on side of dam by a double strain) from the Great English Eclipse; four also from Highflyer; and only five from the Godolphin Arabian. Consteration was imported by T. C. Albott, and died at the stable of Chas. H Eldred, of Carrollton, Illinois, Oct., 1866.

New York, May 1, 1868. J. B. B.

REMARKS.—Another correspondent informs us that while visiting recently in Hardwick, he saw old Consternation's colt, "Figaro," and was very much pleased with his appearance. He describes him as of a rich dapple color, sixteen hands high, and weighing 1200 lbs. He also saw several of his colts, and says they are in high repute among the best judges of horses in that section, being valued at $300 to $1500 each. He speaks of one in particular, that he saw in Mr. Mixter's stable, eleven months old, fourteen hands and one inch and a half high, that weighed 800 lbs.; the best trained colt he ever saw of its age,—performing like a circus pony,—and a very picture of his sire, Figaro. He also mentions a pair of oxen that he saw at Mr. Mixter's, from the Wilmington, Vt., breed, that weighed 4070 lbs. last September. They have worked hard all winter, and are better trained than any pair of oxen he ever saw.

SINGLE EYES FROM POTATOES FOR SEED.

In the FARMER of May 6, your correspondent, H. Poor, suggests the plan of planting potatoes from eyes cut out singly, and asks for experiments from those who have tried it. About thirty-six years since, owing to the scarcity of potatoes in the locality where I then resided, I was compelled thus to experiment, or go without potatoes to eat. From less than six quarts of eyes, cut out about the size of cranberry beans, I raised over thirty-six bushels of good potatoes, and should, no doubt, have had more,—had I not seeded too heavy. They were planted on newly cleared land, without much of a burn, by upturning with a stout hoe, the earth some three inches deep and from seven to ten in diameter, throwing in from eight to twelve or more eyes to the hill, and then covered with the earth thus dug up, and what leaves, &c., I could scrape up about them. Did nothing more until harvesting. I have not planted whole potatoes of late, except occasionally by way of experiment. Would not use more than three or four eyes in a hill, even if more cost less. I prefer planting in drills. When potatoes are reasonably plenty I select my best of medium size, and cut them through and through, leaving from one to three eyes on a piece, thus planting the entire potato. Never plant from small unmatured seed. Potatoes being so scarce this season, I shall revert to my practice of 1832, and gouge out the eyes of all my good eating potatoes, which after such dissection will be used for cooking purposes. If any of my brother farmers are short of seed, let them try a few bushels. By this means we may plant our full breadth of land, and not cut ourselves short for table purposes. If you lose by it, *I shall*. My own faith, however, is larger than a grain of mustard seed. A SUBSCRIBER.

Marlboro', N. H., May 11, 1868.

PRESERVING TREES WHEN TRANSPLANTED.

Many persons leave on the entire top of a young tree after it has been removed from the nursery, when by removal it has lost a large portion of its roots, and perhaps by exposure to the winds and sun, the best of those which are left are dead and useless. Under such circumstances the balance between root and branch is completely destroyed, and if the tree lives it is almost miraculous. To maintain the proper balance between root and branch, shorten at the time of planting every limb by at least one-half of last year's growth, and when the leaves of full size, cut out entirely such limbs as will ever interfere with the growth of the others, thereby avoiding the necessity of removing large limbs afterwards, by which the danger of destroying the tree is increased. DOWE.

Ferrisbury, Vt., May 9, 1868.

BORERS.

I am putting out a young orchard, but the borer is the great pest in this vicinity. What shall I do to keep them from my trees? Will a quart of strong ashes placed immediately about the body of a small tree after it is set damage the tree?

Marlboro', N. H., May, 1868. H. T. W.

REMARKS.—As the beetle of the apple tree borer lays its eggs, ten in a litter, in June, July, or early in August, many fruit growers wash the trunks during those months for the purpose of making the bark distasteful to the beetle and to destroy the eggs after they are laid. For this purpose some wash the trees with a lye of wood ashes or potash, but this is liable to injure the trees, if too strong. Others use a wash of two quarts of soft soap and a quarter of a pound of sulphur to a pailful of water. But, after all, "eternal vigilance" and patient industry, are the best defence we know of. As the worms hatch in the fall they eat through the bark, marking their entrance by a tiny monument of their chips, and pass the winter immediately under the bark. With the point of a knife remove the bark and strangle the little white maggot in its cradle. Examine often during the fall and succeeding spring for the "chankings," and if a borer has escaped and entered the wood, harpoon him out with a flexible wire or bit of the "cold iron" from a hoop skirt. A small quantity of ashes placed about the trunk might do some good, and probably no harm, unless piled too high, but the beetle would be likely to "steal her nest" above the ashes.

CRIPPLED PIGS.

Instances of the singular malady among young hogs, alluded to in a late number of the FARMER, occasionally occur in this neighborhood. Mr. Perley Hill bought three pigs last spring from one litter, which he kept in rather a close pen. They all did well until they weighed about sixty pounds, when two of them lost the use of their hind legs. In attempting to walk, they would take a few steps, sway to one side and their bodies would rest behind upon the ground, the front being supported by the fore legs. They were removed from the pen, and put in a shed where the horse manure was thrown and kept several weeks, but did not improve in strength, though they gained somewhat in weight. But at the annual butchering the first part of winter they were killed, and two dressed less than 100 lbs. each. No unusual appearances could be seen about the meat. The third one did well, and has now a litter of pigs. Another pig from the same litter was similarly affected.

Now, what was the cause? Not high keeping, for Mr. Hill makes cheese from his thirty cows, and feeds his pigs clear whey and no corn. Breed-

ing in and in was probably not the cause, as the parents were only distantly related.

I had a pig last summer that was similarly paralyzed, but in a less degree.. I let it into the barnyard a few weeks where there was plenty of weeds. It would graze with its hind quarters resting on the ground, and moved about with difficulty, but fattened well. Some said I ought to rub the issues in the hind legs with a cob; but I think there was no trouble with the issues. Z. E. J.

Irasburg, Vt., May 5, 1868.

REMARKS. — Mr. H. C. Meriam, of Lowell, Mass., informs us that he has had shotes similarly affected. He withholds their feed till they have a good appetite, and then mixes with a pailful of swill, say, a teacupful of powdered charcoal, the same quantity of wood ashes, and two or three great spoonfuls of sulphur, which generally brings them out all right, in a short time. He also throws ashes and coal into the pens, for them to eat as they please.

POULTRY ACCOUNT.

I have seen many accounts in the FARMER by different individuals to show their *luck* in poultry raising, and have always read them with much interest. Last fall, I thought that I would see if what I have often heard, that hens never paid their keeping in winter, was true. As I was not at home all of the time I did not begin until the 24th of December. The hens are of mixed breeds and not very large. Below is an exact account of the cost of keeping, &c.

1867. DR.		
Dec. 24th, to 7 hens, at 50 cts. each . . .	$3 50	
Dec. 24th, to 6 late pullets, at 30 cts. each	1 80	
Dec. 24th, to 1 late rooster	40	
April 24th, to cost of keeping 4 mos . .	6 96	
April 7th, to 13 eggs for setting	27	
April 21st, to 3 hens at 50 cts. each . . .	1 50	
Total		$14 43
1868. CR.		
Jan. 24th, by 69 eggs laid month ending Jan. 24, at 3 cts. apiece	$2 07	
Feb. 24th, by 77 eggs laid month ending Feb. 24, at 2½ cts. apiece	1 93	
Mch. 24th, by 152 eggs laid month ending Mch. 24, at various prices	3 29	
April 24th, by 223 eggs laid month ending April 24, at 2½ cts apiece	4 65	
April 24th, by 16 hens at 50 cts. each . .	8 00	
April 24th, 1 rooster	50	
Total		$20 43
Net profit, 4 mos		$6 00

The food that they have had was barley and corn, with an occasional dish of shorts, &c. I shall continue to keep my account, and may perhaps send in another report. J.

Winchendon, Mass., April 25, 1868.

CURE FOR SORE TEATS ON COWS.

Take one third salt grease, two-thirds mutton tallow, with what sugar will dissolve; melt them over the fire, stirring thoroughly to mix. When cool it is ready for use. I have cured in two days where the cracks were so bad that it was almost impossible to milk. A SUBSCRIBER.

Strafford Springs, Vt., April 17, 1868.

GREEN WORMS ON ROSE BUSHES.

Will you or some one of your readers inform me through your paper, of anything that will kill the small green worms that have covered the rosebushes for two or three years past? My later varieties were nearly killed, looking as if a fire had run over them. They did not begin early enough, on mine, to destroy the buds of the early kinds. I have tried ashes, soot, gas-water, &c., but it will not kill them. A LADY.

Auburn, N. H., 1868.

REMARKS.—Try sulphur sprinkled on freely while the dew is on, or syringe with a weak solution of soft soap.

WORMS IN WALL PAPER.

In reply to an inquiry similar to that of our correspondent "R.," of Somerset, Mass., in the FARMER of April 25, an experienced paperer informs the editor of the *Utica Herald* that turpentine mingled in the paste at the time of papering, is a sure remedy against the depredations of all insects. Of course, in the cases alluded to by our correspondent, this would necessitate repapering the rooms. A mixture of pepper is also recommended by another correspondent in the department of "Household Economy."

CAN I KILL THE CREEPER?

Is there any known way to prevent the spreading of the roots of the "creeper?" I notice them running all over many gardens. I think them a great pest. D. H. S.

New Haven, Vt., Nov. 25, 1867.

REMARKS.—Yes. Cut off his head whenever he comes in sight. Persist in this one season, and you will be likely to exterminate him. He cannot live long without leaves and branches. Thank you for your good opinion of the FARMER. Try to make a thousand or two other people believe just as you do.

WHITE MAPLE SUGAR.

I have heard that sugar can be made from the common white maple. Will some experienced sugar-maker inform me whether it can be profitably done? J. T. LANDMAN.

South Londonderry, Vt., May, 1868.

REMOVING WILD BEES.

A correspondent inquires through the FARMER as to the best time to remove wild bees from a tree to a hive. If he desires to transfer the bees and comb to a movable comb hive, now is the best time to do it; but if he wants to put them into a box hive without the comb, about the first of June will be the right time. H. ALLEY.

Wenham, Mass., April 27, 1868.

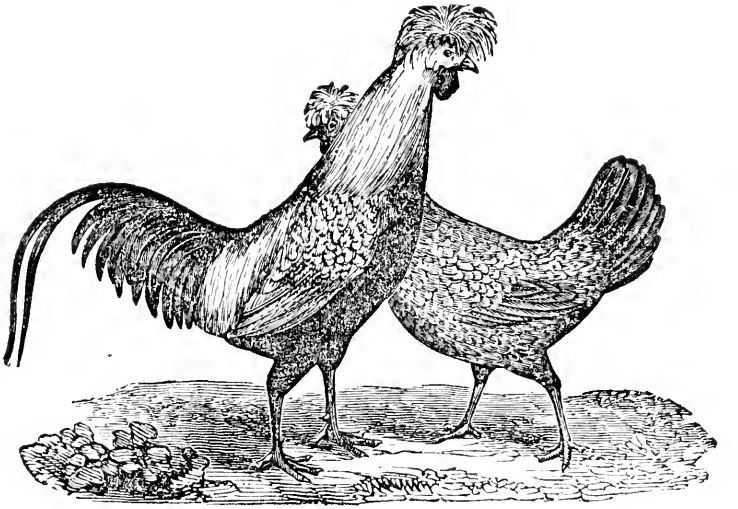
FOOD FOR A SITTING HEN.

Will you or some of your subscribers inform me what is the best food for a sitting hen? I raised sixty fowls last year, whose average weight was six pounds each. FELIX.

Middlebury, Vt., 1868.

REMARKS.—We think you have been very successful, and can tell us how to feed them better than we can tell you. We feed with Indian meal made into dough. Scalded meal is probably best, given quite moist. The sitting hen does not need meat or lime.

—Fruit trees are more truly ornamental than the most fanciful shrubs.



SILVER-SPANGLED POLAND.

These fowls, says Mr. Bement, are in all respects similar to the Golden-Spangled in shape and markings, except that white, black and gray are exchanged for ochre or yellow, and various shades of brown. He says they may certainly be ranked among the very choicest and most beautiful of fowls. They lay medium sized white eggs, much pointed at one end, in tolerable abundance, and when they sit, they acquit themselves respectably.

The newly-hatched chickens are very pretty, creamy-white, interspersed with slaty dun on the back, head and neck, marked with longitudinal stripes down the back, with black eyes, light lead-colored legs, and a swelling of down on the head, indicative of the future top-knot, which is exactly the color of an old-fashioned powdered wig; and, indeed, gives the chick the appearance of wearing one. The Polish fowls are better suited for limited enclosures and for keeping in a small way than for being reared in large numbers.

FRUIT GARDEN.

We think we have the best soil and climate for fruit culture in the world, yet probably get less returns for the money invested than any people on earth, simply because we do not fully appreciate *labor* as an essential element of success. The amount of practical skill and incessant care given to fruit culture in Europe before the innumerable fruit enemies are overcome, would astonish Americans. The writer of this has spent, every year, *months* of time when a boy, in simply training plums, apricots, cherries, pears, and peaches to walls built for their protection; in capturing moths, wasps and insects, during summer; in keeping birds from the buds; in pinching back and directing the course of summer shoots, and, in innumerable ways, watching the progress and maturity of fruits which would have "come to nothing" but for such care. It is curious to read the learned essays in the "secular" papers about the decline of fruit growing. "Elements are exhausted," "systems are wrong," "varieties run out," and so on. "The soil and climate once grew fruit well here, but it will do so no more." The truth is, in new localities insects and fungi, inimical to fruit, do not exist; cannot until their natural food first comes. After a few years they find out your orchards; and to succeed after that you must *fight them.* Insects and blights reproduce themselves, and we must gather them together and destroy them before they transcend their adolescent state. This is the only remedy. Washes, oils, preparations, &c., do much good; but much more may be done by *manual labor* than is generally supposed.

We may say, then, look sharp after insects. Last year we introduced petroleum as an insect destroyer. It is the most valuable discovery of modern times to the fruit-grower. In over-doses it is, like tobacco, sulphur and others, fatal to the life of the trees. We have

found that just enough to make a barely purple tinge on the water used for syringing is effectual in destroying most insects. If one dose does not do, try another the next day. Better use a light dose twice, than one heavy one, which kills plants and insects both.—*Gardener's Monthly.*

For the New England Farmer.

SPECIALTIES IN FARMING.

It is usual for agricultural writers to urge the importance to farmers of cultivating a variety of crops, and raising a variety of domestic animals, so that if one kind fails or does poorly, some other may yield so good returns as to compensate for this partial failure.

Doubtless such advice in the main is good; but, it seems to me, that specialties in farming are no less important than in other departments of industry. I mean by this, that if a farmer lives in a favorable section for orcharding, for instance, and has a taste for it, he should devote his attention, especially, to the raising of fruit, and show to all around him what is possible to be done in this direction by one who understands his business. Not that he should neglect to raise other crops; but while he does other things as well or even better than the majority, let no one look upon his farm without receiving the impression, *most forcibly*, that in the department of *orcharding*, he has few equals.

In like manner, if one chooses dairying as his favorite branch of agriculture, let it be his determination to so fully understand his business that he shall be able to produce the choicest article, and sell it at the largest profit, so that his neighbors shall be stimulated to try and do likewise.

Men, who thus devote their energies to the attainment of superior excellence in any one branch of agriculture, occupy the exalted position of teachers of their specialty. And not a few such men to-day have a world-wide reputation and influence. Who, for example, interested in fine wool raising, is not familiar with such names as Hammond, Sanford, Stowell, Wright, Rich, Randall, Atwood, Campbell, and a score of others, scarcely less noted as successful sheep breeders? Who can measure the influence of such men in raising the standard of excellence? No live Yankee will know it to be a fact that any of these leaders have produced upwards of eight pounds of *cleansed* wool from one sheep in a single year, and remain satisfied with a two-pound fleece. There will be a general strife, in sections where the Merino is kept, to approach as nearly as possible these high standards.

In this way are the leaders in any department of agriculture great public benefactors. What we need is more such men. In every community where any particular branch of agriculture rightfully takes the lead, there should be some bold leaders, capable of teaching the masses the possibilities of attainment in that department.

And there is every inducement for one to strive to be a leader and teacher in the special business of his choice. In no way can he hope to do so much good, or secure so good pay for his services. Look at the fortunes made by some of the above named gentlemen as the result of their efforts to produce the best. The best always commands a high price. Whether it be the best horse or hen, the best cow or sheep,—he who has it, and can prove his claim, has a fortune, and deserves one.

We hear much said about "*fancy*" animals and "*fancy*" prices, as applied to the choice ones of their class and the prices they command. The term is applied in reproach, and often very unjustly. Such animals are indeed "fancy" so far as suiting the fancy or taste of every sensible man. But they are *not* "fancy" in the sense of unreal, for they are most real —the genuine substance,—while the ordinary animals of the class are only the shadow of of what they should be.

Turning again to the sheep, for an illustration, who will call the one that shears eight pounds of *cleansed* wool a "*fancy*" sheep, and one shearing but two pounds a practical one,—a reality, a substance? And, as to price, while the inferior one is dear at *no* cost, the superior one is cheap at *any* cost; for, while the former is capable of making a rich man poor, the latter, if the product of his own genius, cannot fail to make a poor man rich.

But I cannot, within proper limits, develop this subject as I had intended when I commenced. I wished to dwell upon the common folly of attempting to raise a crop for which the climate and soil are entirely unsuited. How often this is done because the farmer makes it a principle not to buy anything he can raise. He raises his own wheat though it costs him twice as much as it would to buy the same. Such a course may be wise, but I fail to see it. A. B. PALMER.

Orfordville, N. H., April 7, 1868.

VARIED AGRICULTURAL INDUSTRY.

The following remarks from the report of Mr. Newton, the late Agricultural Commissioner, indicate a wise appreciation of the principles of political economy, so far as they relate to labor and especially to agricultural labor.

"Excessive increase of a single product tending to over supply and a reduction of price, and attended with heavy expenses for outward freights, and the purchase of all farm and family supplies, burdened with costs of carriage and a long line of consuming commissions, points unerringly the way to national poverty, and individual bankruptcy. A proper equilibrium of the products of in-

dustry, saving untold burdens of freightage, excessive profits and extortions of middlemen, insurance, breakage and manifold losses prevents reduction of prices from burdened markets, lightens damages from failures of single products, gives employment to all classes, conditions and capacities of labor, insures remunerating wages for workmen, renders possible necessary rotations, and the production of farm manures, and increases the wealth and intelligence of a State. The smaller products of a diversified industry are far more than an equivalent for a single result of organized labor, however absorbing or important. The cotton crop for example of Georgia in 1860 was 701,840 bales, yielding little more than $30,000,000, while the butter of New York in 1865, one of several products of the dairy, was estimated at $60,000,000, and yet the census gives to New York 370,914 farmers and farm laborers, and to Georgia 316,478; including white farmers and farm laborers and only the male slaves. Besides the other dairy products, milk, cream and cheese, and the multitude of smaller products of the farm, the principal crops make astounding aggregate—as in 1864, when the corn crop of New York was estimated at $38,000.000, the wheat at $25,000,000 the oats at $33,000,000, potatoes at $19.000,000 and hay at $90,000,000, including the minor cereals, products of gardens and orchards, the production of beef and mutton from pasturage, and a great variety of miscellaneous and exceptional products, the currency value of the agricultural productions of this one State in that year was far greater than the money returns of any cotton crop ever produced in the country."

BUTTER OR CHEESE?

In central New York there appears to have been for the last ten years such a mania in behalf of converting milk into cheese instead of butter that the latter has become quite ignored and high in price. The papers in that section have been filled with accounts of the different cheese factories and the prevailing prices from week to week. We have for some time been well assured in our own minds that the business was being run into the ground—that is, overdone—and so it proves to be. Cheese manufacturers and dairymen who supply the milk are both complaining that the ruling prices of cheese are getting to be too low, affording so little profit to the business as not to make it an object of sufficient importance to many of them engaged in it.

Thus, while butter is yearly commanding higher prices and milk and cream have advanced, affording good profits, cheese is falling, and we may add will continue to do so until butter-making and cheese-making occupy a compensating attitude toward each other. It is so whenever farmers or persons in an other line of business throw all their capital and energies into specialties.

If farmers will all rush into butter-making, butter will fall from an over-supply. So with cheese or with potatoes or grain of any kind. It has been so with wool-raising. When the rebellion broke out there was a great demand for woolen goods, prices for the raw material rose enormously, and the farmers of the West and East rushed into wool-growing, and the result is just the same. It will be so with the grape and wine business after a while. If a large number of city merchants, owing to the high price of coffee, tea, or any particular fabric, should make large importations and overstock the market, there would be but one result,—effect following cause.

This being so, we think that the suggestions which we have often made to the general farmer to follow a system of *mixed husbandry* is the best in the long run, the profits being far more certain and the risk a great deal less. —*Germantown Telegraph.*

HEIFERS CALVING IN JUNE.—A writer in the *Practical Farmer*, in speaking of the value of heifers that drop their first calves in June, says:

"A heifer having her first calf in the month of June, or when pasture is best, will make a far better milker than one that calves in the fall or winter. Such has been my experience, and yet in all the articles which I have read on the breeding of dairy stock, I have never seen it stated as the *sine qua non* of a first rate cow. But so well am I convinced of its importance, that I would give twice as much for a heifer of the same stock and age to calve in June, as for one that would calve in winter. The grass being then in the best condition to produce a full flow of milk, all the parts that tend to the secretion of milk are developed to their utmost capacity. The udder, the teats, the milk veins, become enlarged permanently —and the best cows I ever raised we had to commence milking several weeks before they calved, for fear of garget, as they would appear to be in pain from the fulness of their udders."

QUINCES.—A few years ago, this fruit was easily grown and large quantities found their way into the great cities, where they were sold at moderate prices; but latterly they have failed, and, like the apple, have ben scarce and high. The quince seems to flourish best on a rather stiff, moist soil, in somewhat sheltered locations. We have often seen trees or bushes loaded with fruit, growing beside brooks or around small ponds. It has long been a favorite fruit for preserving in sugar, and for marmalade, on account of its texture and peculiar and agreeable flavor. We know of no reason why the cultivation of this fruit

should be neglected; for there is always ready sale for it. The plants are easily grown from cuttings, and soon come into a bearing state. They may be planted six feet apart in the row, with rows ten feet apart. The trees are quite long-lived, and usually healthy and hardy. The worst enemy to the quince is the borer, which soon destroys the tree if allowed to work. The same plan may be adopted for the destruction of the borers in the quince as in the apple. Fruit-growers having a soil suitable for this fruit should certainly devote time and space to its cultivation; for, at the prices for which it has been selling, no fruit will pay a better profit.—*Am. Jour. Horticulture.*

PLOUGHING ORCHARDS.

I have a young orchard that I set out eleven years ago and cultivated it nine years and then laid it down to clover. This spring I ploughed it and found that the roots of the trees had literally filled the ground, so that by ploughing only about four inches deep, I ploughed off the roots by thousands, which I think must be a great injury to the trees. Now what am I to do? The fruit books and agricultural papers recommend cultivating orchards as a corn or potato field, but I am confident that it will ruin mine if I continue to plough the land. E. L.

Long Plain, Mass., May 13, 1868.

REMARKS.—The apparent superabundance of self-sustaining and re-producing power in both vegetables and animals is one of the most wonderful provisions in nature. Compared with the multitude of blossoms which fruit trees put forth every spring, how small is the crop that matures! Prof. Owen estimates the possible increase of a single aphis, or plant louse, in the ten generations of which it is capable during a single season, at the incomprehensible number of 1,000,000,000,000,000,000! In fact, naturalists tell us that "all organic beings, without exception, tend to increase at so high a ratio, that no district, no station, not even the whole surface of the land or the whole ocean would hold the progeny of a single pair after a certain number of generations." The productive power of a single thistle, mullein, or turnip is equally wonderful. Do not the roots of trees possess something of this exuberance of life? We trim their branches not only without injury, but with the most beneficial effects; may not the roots be "purged" without more fatal results? That too much may be removed from either top or root no one can doubt; but if all the roots of "E. L.'s" trees could be exposed to view perhaps he would see that the "thousands" which were broken by his four-inch furrow would bear but a small proportion to the whole; possibly no larger than that of an ordinary trimming to the whole amount of the branches. The question of the expediency of ploughing orchards is one on which men differ. They differ also as to manuring, trimming, &c. Trees in grass on our old farms seldom bear well. Top-dressing is advised by some. Others think we ought to take a hint from nature's process in the woods, and mulch our trees. Others still keep them under cultivation,—some using a plough, others the cultivator or harrow.

One of the most successful orchardists in New England, Capt. Geo. Pierce, of Arlington, Mass., near Boston, in reply to a question as to the secret of his success, said, "I prepare and *till my ground well*, keep off and destroy caterpillars, canker-worms, web-worms, prune my trees myself, &c.; in brief, I comply with all the conditions, so far as I know them, of a good apple crop, and I get one annually, while my neighbors, failing to do so, have become discouraged, and are, and have been, cutting down their trees." He uses coarse wild meadow hay for mulch under his trees, and raises squashes between the rows.

Ploughing or not ploughing is only one of the conditions of a good apple crop; and the good or bad effects of this operation depends on so many circumstances of soil and of subsequent and previous management, that we do not suppose that any one rule can be adopted for general practice. Suppose one orchard to be founded on a rock or some impervious subsoil, but a few inches below the surface; and another to be planted in deep mellow earth, like the western "openings," where a plough may be put in "to the beam" clear up to the trunk or stump of the scattering oaks. Now in ploughing these two orchards might not the effect be very different? In one case, an ordinary furrow might sever nearly every root, in the other case but few might be disturbed.

No one with "half an eye" for fruit trees can travel through the country without noticing the great difference between the appearance and fruitfulness of cultivated and uncultivated orchards. Indeed we have been forced to the conclusion that it is useless to set an orchard in grass land on the old farms of New England. The idea of the spontaneous production of apples must be abandoned. If we would raise fruit we must work for it,

as we work for a crop of corn or a crop of vegetables. Not that a tree should be cultivated just as we cultivate a hill of corn or a bed of beets, but the peculiarities of each must be considered and its wants supplied.

If our correspondent will plant corn, potatoes, squashes, or other hoed crops, with manure enough to secure a fair yield, we shall expect his trees will show by both fruit and foliage that they are not "ruined."

MORTALITY AMONG SHEEP.

A few weeks ago we alluded to the fact that many sheep and lambs had died this spring in Vermont from some "unknown disease." Dr. Henry Boynton of Woodstock, Vt., publishes an article upon the subject in the last *Mirror and Farmer*. He says that during the months of March and April the loss in some cases was as great as ten per cent., and in some of the best flocks as many have died this spring as are usually lost in ten to twenty-five years. The doctor says:—

"We believe the malady is confined mostly to yearling bucks, though there are cases of all ages and both sexes.

The most unaccountable feature about the disease is, that it seems quite as likely to attack animals that are apparently sound and in first-rate condition, as those that are poor and feeble. Two or three in our own flock, that have been cared for as well as sheep can be, have died within twenty-four hours after the first symptoms of derangement have been noticed. One yearling buck, which at night looked as though he was able to fight his way with any animal of equal pounds that could be produced, in the morning was dead. Several cases in our neighbors' flocks have occurred of a similar nature, death sudden and unaccountable, without any premonition or warning. But more generally the animal refuses his food, or seems too much exhausted to walk across the pen to get it. If noticed at this time, it may be coaxed to take a little food, but will soon go away by itself and lie down. It shows a disclination to move, or only mopes about the pen, hanging its head in a careless, sleepy manner.

The eyes become dull and heavy, giving out a glutinous secretion. The discharge from the nose becomes quite profuse, and forms a hard, gummy rim around the nostril. The breathing is rapid and labored, especially if the animal is made to move around, and the heart will beat from one hundred and thirty to one hundred and sixty times a minute. A careful look will show that the nose and lips have become blanched and bloodless, and are literally as white as snow. The inner side of the lips, the gums, the tongue, and in fact the whole inside of the mouth, will be found to have taken on the same ashy paleness. An examination of the skin of any part of the body will show the same blanched condition."

Various experiments were made by Dr. Boynton to see if any blood could be found near the surface of the body—such as slitting the ears, lancing deeply various parts of the body, "but not the slightest trace of blood could be found." Next, taking an animal that he was sure must die, and placing it in a favorable position he opened the arteries in the neck. The result was the escape of about four ounces of watery blood—it could not be called bloody water.

The *post-mortem* appearance of these cases is such as might be anticipated from the above facts. In cutting open a carcass, not blood enough is found to stain a knife-blade. Every organ in the body, brain, lungs, heart, liver, and kidneys is perfectly sound. The same is true of all the membranes. The mucuous membrane lining the nasal passages is free from any sign of irritation, and the tissue of lungs, liver, heart and kidneys is firm and sound.

No coagulum (clotted blood) is found in the heart or large arteries. A little half-coagulated blood is found in the large veins. All the watery blood that can be found by opening the heart and large arteries of an animal not ten minutes dead will not exceed four ounces. The lungs and heart, as well as the liver look exactly as though they had lain in a pail of cold water for twelve hours. In fine, the entire appearance of the whole carcass is just what it would be if the animal had been most carefully and thoroughly bled.

Here, then, is the pathology of the disease,—the blood turns to water and passes off, and the animal dies precisely as it would if gradually bled.

Now for the cause. That, we confess is beyond us. We hope some one more skilled in observing diseases of animals than ourself will give us a clue to this.

At this writing we have six yearling bucks with marked symptoms of this bloodless condition, and we are treating them with the muriated tincture of iron. The results we will give hereafter.

MASSACHUSETTS AG'L COLLEGE.

Beside the appropriation which we noticed recently of $35,000 for the erection of a dormitory building, by the trustees of the Massachusetts Agricultural College, at their meeting in Boston, May 11th, votes were passed appropriating a sum not exceeding $7000 for the erection of a boarding house, north of the building now used for that purpose; one thousand dollars for the purpose of grading and putting the grounds in order in the vicinity of the Botanical Museum and Plant Houses; and two thousand dollars for moving and fitting up the old barns on the place, with a cellar under one of them.

The salaries of Dr. C. A. Gessman, Professor of Chemistry, and of S. F. Miller, Professor of Mathematics and Physics are fixed at $2000 and house rent; term of service to commence with the academic year in September. Dr. Gessman is now connected with the salt works at Syracuse, and is spoken of as an accomplished chemist. Dr. Miller of Chicago, is a

practical surveyor and engineer as well as a scientific man.

The new dormitory is to be ninety-six by fifty feet, about the same size as the present one, but with greater architectural beauty. The old barns and tobacco sheds are to be removed near to the north line of the farm, and will be used for the stowage of crops until the more permanent buildings can be provided.

OBSTRUCTION IN A DRAIN TILE.

Our readers who are interested in the subject of drain tile will remember a statement by Mr. M. Pratt, of Concord, Mass., of a "slimy fungus mass" that he found in large quantities in some of his pipe, which he feared would eventually stop the flow of water. No allusion to accumulations of this kind could be found in any work on drainage at hand. A correspondent of *The Circular* describes a case in which a drain was effectually choked by such obstruction, although for a time it operated in a most satisfactory manner. But this spring while "crossing the field full of enthusiasm for commencing business on the rapidly drying soil," he was "utterly shocked at seeing the water rising in holes right over the main drain." He then went to work to find where and what was the cause of the overflow, of which he gives the following account:—

In the first hole that I made the water burst up. With the second, that I dug further down, I had the same luck. In the third hole, still further down, there was less water, and I succeeded in taking out a tile, when, to my utter dismay, I found it nearly full of a slimy, jelly-like mass of stuff, and there was every indication that a considerable length of tile was filled with it.

I then fell into a brown study, endeavoring to find the cause of this uncanny phenomenon. I soon discovered it. Two drains from the barn cellar terminated in this tile-drain; and although the dark liquid that flowed in them contained no solid material, it favored the growth of this fungoid jelly. I have observed the same vegetation growing on the stones of the open ditch where sink-water and sometimes soap-suds flows.

FATTENING SHEEP IN ENGLAND.

We recently copied from the *Country Gentleman* a statement by an English correspondent that yearling sheep were sold at $12 to $14.50 per head at his market for mutton, and that a cross of the Down with the Lincoln, Leicester or Cotswold was preferred for this purpose. From a subsequent communication we copy the following account of the management and mode of feeding which is there practiced to fit them for the market, and for the high prices they command. It will be remembered that English farmers use the word "corn" to express what we mean by the word "grain."

My plan is to let the lambs run through a hurdle away from their dams as early as possible; supply them with a few cabbages or turnip tops; at the same time let them have low troughs, in which we always keep fresh broad bran, and, if possible, a little sweet leafy clover hay, cut into chaff, and mixed with the bran. They will begin to eat this when very young, and it will then induce them to eat a few beans or peas, ground and mixed with the bran; but I do not find they care much for the corn until they get several weeks old. I have begun to give some of my oldest lambs a few beans, the last day or two, but they do not care to eat them, and I think the bran and chaff is quite as good for them. I like them to have the most corn when they begin to eat a large quantity of *young green food* or *mangel wurzel*, and I generally begin to reduce the corn when on good sound fresh green feed, which they usually are on before they are weaned. After they are weaned, I give them a little more for the first week or two, unless they are on very good feed, such as cinque-foil, or a variety of seeds; I like, if possible, to keep some mangel wurzel for them after they are weaned.

I very rarely give my ewes any corn, either before or after lambing, (except a few old broken-mouthed crone ewes,) but if very short of turnips, I sometimes give the ewes with twins a few oats, especially if I have not much hay or chaff, and when oats are cheap, which they certainly are not now.

I generally take off all the corn from my ewe lambs a short time after they are weaned, but continue it with the ram lambs, and some or all the wethers; after the rams and wethers begin rape or turnips in the autumn, I begin to increase their corn and dry food, until they have a pint of corn and cake each per day, which I think is not too much, especially as they are kept on the turnip land all the winter, and some of my land is heavy, bad feeding ground.

I always try to avoid letting any of my sheep or lambs have any sudden change of food; and I have no doubt a variety of food is best when it can be obtained, and, in summer, with good water to go to as they like.

SALT IN COMPOST.—I once tried an experiment in planting corn. I had long been using barn manure, ashes and plaster, mixed in equal quantities, in the hill. I read somewhere that salt was a good fertilizer to add to the compost. I thought I would try part of a field. To twenty bushels of compost I added 1½ bushels of cattle salt, well mixed in. The result was, as far as I used the salt mixture, the seed all failed to germinate. I planted it over; the same result followed. I planted the third time by the side of the hill, so that the corn did not come in contact with the manure, and it all came up this last time first-rate, —the seed each time being from the same corn. In the instance of the planting where the same manure was used without salt, corn came up first best. My advice is to use no salt in the hill for corn. But a small quantity, mixed with

plaster, is a good top-dressing for corn, and will prevent in a measure the destroying effects of the cutworm.—*Cor. Co. Gent.*

THE CULTURE OF DWARF PEARS.

In addition to trenching and underdraining, one or both, mulching will be required. This moderates the effects of climate, rendering the soil cooler and moister in summer, and warmer in winter and at the same time keeps down the weeds.

In the spring transfer the surplus mulching from the strawberry beds to the pear orchard. In the fall spread manure on the surface. The rains and frosts will carry its solvent parts to the roots. Common barn yard manure does very well, but ashes, lime, fish brine, urine, soap suds and any waste do better, I think. According to my observation, barn-yard manure produces wood growth and foliage, while lime, ashes and the manurial salts, I have mentioned, tend to harden the wood and make fruit buds.

PRUNING. When planting out, cut back the top so as to establish an equilibrium between the roots and branches. During the growth, prune for symmetry, and when limbs interlace and rub; but so long as the tree is healthy avoid the use of the knife and shears. Remember that bleeding, blistering, vomiting and purging have gone out of use in the treatment of diseases in man and animals, so also the old barbaric style of cutting and slashing is going into disuse among intelligent fruit growers.—*Country Gentleman.*

HEAVY SHEEP.—Mr. John Snell of Edmonton, Canada, furnishes the *Country Gentleman* with the following result of weighing some of his sheep. He thinks the weights of his yearling rams the highest that have ever been reached in Canada at this season:—

Six yearling rams, Cotswold and Leicester, averaged 276 lbs.—the lightest being 251 lbs., the heaviest 285 lbs., or an aggregate of 1656 lbs. Six two-year-old sheep averaged 341 lbs., the lightest being 314 lbs, and the heaviest 368 lbs.—total for the six, 2040 lbs. I sheared from a yearling Leicester ram 20 lbs. of wool, from a yearling Cotswold ram 22 lbs., and from a two-year-old Cotswold ram 21 lbs.

—Mr. J. Harris says, in the *American Agriculturist*, that "clover is unquestionably the great renovating crop of American agriculture. A crop of clover, equal to two tons of hay when ploughed under, will furnish more ammonia to the soil than twenty loads of straw-made manure, drawn out fresh and wet in the spring, or than twelve tons of our ordinary barn yard manure." He, however, thinks it nearly as well to make the clover into hay, feed it out, and carefully save the manure,—that is, there will be little loss in the value of the fertilizer, and may be profit from the feeding.

AGRICULTURAL ITEMS.

—If a redbreast comes into your garden, does he come there a robin?

—Excellent sugar, it is said, can be made from the sap of the white birch.

—The best strawberry plants are said to come from the third and fourth set of runners. The first and second are to be cut off.

—This spring, a cherry tree near Boston, blossomed May 11. In 1775, the same tree blossmed April 19.

—In relation to the destruction of caterpillars and other insects, don't forget the old adage, "a stitch in time saves nine."

—It is said that valerian or nervine, if planted near infested vines, attracts insects so that they may easily be destroyed.

—The *Rural World* recommends giving stock, especially those confined to stables, a sod of earth a foot square once a week, or what they will eat up clean.

—It is the province of agricultural papers to repeat knowledge, rather than to give new. People forget, and must be reminded. New facts, worth recording, are few and far between.

—The *Ohio Farmer* says that within the last ninety days, one auctioneer in Mahoning county had sold at various times 239 cows at an average price of $59 38 per head.

—The amount of wool imported from July 1, 1867, to November 1, was 9,410,926 pounds. Value, $1,478,953. Within the same time woolens were imported to the value of $17,185,305.

—It is one of the singular facts that does not often occur, that potatoes are worth more than corn, cabbages are worth more than wheat, and a barrel of onions will purchase a barrel of flour.

—The *Gardener's Monthly* recommends enriching the soil for cabbages, by making a hole with a dibble for the plant, fill the holes with manure water, and after it has soaked away into the earth set the plants as usual.

—The editor of a French agricultural paper suggests that the school boys should be sent out in the fields twice a week, to hunt after the insects injurious to the crops. It is estimated that 600 schools, attended by 30,000 pupils, can destroy 6,000,000 insects every fortnight.

—An experienced horticulturist recommends that iron shavings, scrap-iron, and the scales and dust from blacksmiths' shops, be dug in around pear trees, and also that the bodies be repeatedly washed with a solution of sulphate of iron for the purpose of destroying fungi.

—In an article cautioning farmers not to plough land when wet, a correspondent of the *Western Rural* says he once planted corn on a field a part of which was ploughed before and a part immediately after a rain. "As soon as the corn was up,

we could see the place, to a row, where the wet and dry work was done. The corn on the wet land was yellow, did not grow as fast as the rest, and at harvest time, the workmen (though not aware of the reason,) noticed the difference as soon as they came to it—that which was worked wet yielding one-third less.

—Ohio has not as yet located the agricultural college, for the endowment of which the Congressional grant of 630,000 acres of land was accepted by her legislature. Several sections are about to present proposals for its location.

—For chapped hands and for the removal of pitch or the grim of hard work, and to keep them clean and soft, Mr. J. Weston says, in the *Mirror and Farmer*, that he has never found anything equal to raw linseed oil, a bottle of which he always keeps near his sink.

—A field badly infested by wire worms was summer fallowed one season by Judge Owen, of Herkimer, N. Y., ploughing it three times, and the worms were effectually starved out. Alderman Mechi, of England, finds six bushels of salt per acre a sure cure.

—If a farmer in Wisconsin plants a row of trees along the road, he is exempt from working on the road; whoever hurts one of these little ones is fined $5; and the State Horticultural Society offers a premium of $100 for the best ten acres of forest trees, and $50 for the second best.

—A hen has the capacity of laying six hundred eggs—and no more. Usually they lay a few the first year; from three hundred and twenty to three hundred and seventy in the next three years; and the rest from the fifth to the ninth year inclusive. The true economy, therefore, it will be seen, is not to keep hens after their fourth year.

—A correspondent of the *Rural New Yorker* says, a neighbor of his saved a fine litter of pigs from a ravenous sow by the following plan. He took the pigs away and gave the mother a pint of whiskey, which made her drunk, and while in that condition he carefully replaced the pigs, and she was afterwards as good a mother as was necessary. Queer remedy.

—H. A. Sheldon, of Middlebury, Vt., informs the New York Farmers' Club that he succeeded in raising a large crop of plums last year, by applying to his trees, with a small hand forcing pump, water that had stood in an emptied gas-tar barrel "until it was dark colored as coffee, and pungent as creosote." He repeated it once in three days, but did not find a plum stung after the first application.

—To those who have worn down their teeth masticating tough beef, the *Western Rural* says that carbonate of soda will be found a remedy for the evil. Cut the steaks the day before using into slices about two inches thick. Rub over them a small quantity of soda. Wash the next morning and cut into suitable thickness, and cook to taste. The same process will answer for fowls, legs of mutton, &c.

—If everybody should farm right, and raise large crops, we should hardly find a market for them. But there is no danger. Our productions do not keep pace with our population. Farming is not popular. And those who stick to the land, and bend all their energies to increase its productiveness, have every prospect of abundant success. Good farming will pay.

—The New York commission to investigate the causes of abortion among the dairy cows, visited 1,577 farms and received in all 4,259 reports, from ten States, expending $6,417.27, and yet, with the best attainable talent, and all this information, the cause was not ascertained. This may be worth thinking about by those who expect an editor to know exactly the cause and reasons for anything unusual or injurious.

EXTRACTS AND REPLIES.

HORSE FOR GENERAL UTILITY.

Some of our agricultural societies have offered premiums for the "best stock horse of general utility." Will some one give us a description of the breed or animal which answers to that description? The breeders in Vermont, New Hampshire, Maine anp Massachusetts, should have an idea of all the styles of horses in demand, that they may act intelligently in their selection of horses to breed from, and a full description of a horse for all work, or of "general utility" would interest many readers of the FARMER, as well as one

OLD SUBSCRIBER.

Plymouth, May 18, 1868.

REMARKS.—The idea which is expressed by the terms quoted by our correspondent, might also perhaps be conveyed by another word—*medium*. The wealthy land-holders of England can keep a breed of race horses that do nothing but race, a breed of hunters that are used only for hunting, a breed of heavy horses that are good only for the dray or draft; breeds also for the coach, the farm, &c. But all this is not possible with the one-horse farmers of New England. We require a blending of the various qualities of these breeds into one animal, that may well be characterized as a "horse of general utility," a "horse of all work" or a "medium horse." We require an animal of fair weight, fair strength, fair speed, hardy and gentle. When put before the best carriage he must step off briskly, if not loftily; when hitched to a plough, cultivator or mowing machine, he must fill his collar; and when put into a team with oxen he must beat time in harmony with their slower motions. Such are a few of the points of the "horse of general utility;" and perhaps the Morgans and Messengers of New England fill the bill as well as any races in the country.

POVERTY AND IGNORANCE OF FARMERS.

I cannot consent that farming, as a profession, should be put down in the manner that your correspondent Billy Styx, has attempted to do it.

In the form of a question, he puts the affirmation, that "farmers, as a class, are a poor ignorant superstitious set."

On a well conducted farm a man need not be poor. I know farmers, even down here in this cold north-eastern extremity of the Union, who have more or less government bonds or other securities —in some cases amounting to thousands of dollars.

Nor is there greater necessity of their being ignorant. All through the winter they have the privileges of good schools, and the opportunity of more or less leisure, and if they are ignorant it is their own fault. There are farmers here whose sons are fitted for college, and whose daughters are women of refined manners and good education, and I deny friend "Billy's" assertion that farmers "have not time to learn, and are an ignorant set." He further says the "boys have to work early and late in mud and mire and in much 'that is not so sweet by half,' doing the work of scavengers, and all for nothing." That there are times in the year when farmers' boys have to work early and late I admit, but as a farmer's boy, raised in Maine, among Billy Styx's "poor, ignorant and superstitious set," I know that this is not generally so here, and I do not believe it is so elsewhere.

Again friend Billy says "the farm hand seldom gets twenty-five dollars a month, while in the shop forty is not uncommon." Now, dear Billy, I have myself labored on a farm in your own State, at $30 per month and board from March to December, and taught school from December to March. But let us look at the contemptible $25 per month and board through the year. At the end of a twelve-month, it amounts to $300. With the $40 per month, that looks to Billy as such a "big bight," the wages for the year amount to $430, but after deducting $4.50 per week for board—certainly low figures—there are only $246 left, against $300 for the farm hand, and this on the assumption of no lost time, which is more probable in the shop than on the farm.

I admit that the farmer has or should have a good deal of manure to handle, but does that justify Billy's use of the word "scavenger," which is defined by Webster's Unabridged, a copy of which lies at my elbow, as a "person whose employment is to clean the streets of a city, by scraping or sweeping and carrying off the filth!" Is that a fair word to use as characteristic of the work of farmers' boys in the country? Are the breeding and training of the intelligent horse, the sturdy ox, the noble cow or the golden-fleeced sheep the occupation of a scavenger? Does the management of the mowing-machine, the harvester, the plough, or the cultivator, suggest the idea of scraping up the filth of the streets of a city? Now, Billy, please don't be quite so severe, but have a little mercy on us. C. W. H.

Wiscasset, Me., May, 1868.

Remarks.—J. Burrows of Cedar Rapids, Iowa, writes to the New York Farmers' Club as follows: "Fifteen years of my life was passed in the "classic atmosphere" of a printing office, and before the war I published a paper. I have lived much in towns and cities, and know something of culture and refinement. I maintain that there is no better place in the world for a gentleman than on a farm. All the appliances of culture a gentleman need desire are within his reach. There is no such thing as being "forced into associations and companionship" *outside of one's own home;* and there is no labor connected with a farm which can in any degree degrade or demoralize a man of culture and refinement, *providing he owns the land he tills.* Now, I will hazard this assertion: Take fifty farmers, at random, out of any farming community in this State, and fifty men, at random, out of any village or city in the State of New York, and, upon careful examination, the fifty farmers will be found superior in intelligence, culture, true refinement, and above all, morality. The ambition to be a gentleman, with no knowledge of the true meaning of the term, is taking from the farm those who should make our best farmers, and it is leading thousands of young men to their ruin in our towns and cities."

"Green Mountain," of Milton, Vt., furnishes us with strictures on Billy Styx's communication very similar to those of "C. W. H." He appears to be rather indifferent as to the charge of poverty, but says, as one "farmer's son, though I may not be as bright as some, I do hate dreadfully to be called ignorant and superstitious." Still he is so little affected by Billy's tirade that he closes his first letter to the printers with the remark, "I intend to stick to the farm for a while longer, any way." Suppose, for the sake of the argument, that by doing so the whole Billy Styx family should persist in classing you with the poor, the ignorant and the superstitious, will it not be still true that the wealth which stings like an adder is worse than poverty; that the knowledge which some acquire is more undesirable than ignorance; and that the incredulity which doubts that the path of virtue is the path of safety is more to be dreaded than superstition? We leave this train of thought for the present, and conclude these remarks with the following words of wisdom from a living American writer, whose admonition should be carefully considered by those who are losing faith in old-fashioned honesty, industry, and economy, and are watching for some "easy situation." He says:—

The darkest day in any man's earthly career is that wherein he first fancies that there is some easier way of gaining a dollar than by squarely earning it. No matter whether he acquired it by beggary, by theft, or any fashion of gambling, that man is fearfully demoralized who, looking at the dollar in his palm, says, "That come easier than if I had earned it by honest labor." He has lost the clew to his way through this moral labyrinth and must henceforth wander as chance may dictate. To his distorted apprehension, the universe has become a gambling table, and life a succession of ventures on the red or on the black. His prospects of winning thereat, in the long run are miserable enough.

RED WATER.

Having a cow sick with red water, I beg to state symptoms and remedy for the good of the community at large. Not expecting the cow to calve for a fortnight or three weeks, she was tied up in a warm stable at night with my other cows as usual, and calved in the stalls. It was a fortnight before she cleansed, and then it did not appear to have been done naturally, but rather to have dried up and fell away. She grew so poor and thin that she was little better than a skeleton, though her appetite did not fail her except one day, and she milked well for a sick cow. She was seven years old the 28th of April last. She appeared to suffer much pain, and often set her back up as if she wanted to make water, and appeared to strain very much.

Her horns were quite cold all the time. I put her in a loose box without tying her up, and kept her in for several days. Fed out corn stalks and hay with a few mangolds and swedes and six ears of corn twice a day. I gave her about *two* tablespoonsful of saltpetre in *three* warm bran mashes in two days. I also gave her boiled oats same day, with about a small tablespoonful of pulverized rosin in bran mash in the morning, and one large teaspoonful of spirits of sweet nitre in bran mash at noon and night. She had a good brushing down every day with a regular hand horse washing brush. The cow always calves standing up. It was a cold rainy night when she calved. The day she refused her food I slit her ear which bled profusely, and I think did her a deal of good. I always find rosin to assist my cows in cleansing, and attribute the sickness of this cow to her confined position when she calved. She is of a most irritable temper. Her calf was strong and healthy and now living. I never let the calves suck but two days, which is a great saving of time and trouble. JOHN WHATMORE.

Bridgnorth Farm, Dunleith, Ill., May 8, 1868.

FARMERS' WIVES.

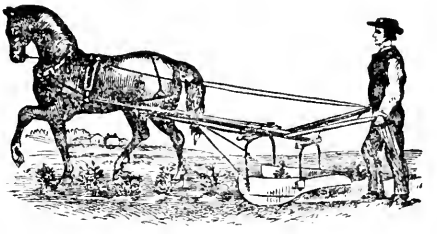
I am one of the many housekeepers who have been much interested by the articles in the FARMER on domestic duties and economy. Some of these writers, I think, are rather free with their "advice to housekeepers" of my sex, and somewhat reserved in their hints and suggestions to the men and boys. Some men not only thoughtlessly neglect to assist and encourage their wives and daughters in the labor necessary to make "home pleasant" and attractive, but actually thwart and discourage such efforts, and by example, if not by precept, encourage in the minds of the boys the notion that care for, or interest in, woman's work is derogatory to the dignity of manhood! Is not such an education of the masculine element as faulty as the training of girls of which "Mattie" and others have so justly complained?

For seventeen years I have endeavored to discharge the duties of a farmer's wife. I have usually done "my own work" with the help of my children, of which I have seven. I have two daughters which attend school, and who, though young, assist me when not at their studies, and I intend that instruction in the duties of housekeeping shall accompany their school lessons. As I am not only cook and chambermaid, but nurse and seamstress for the family, I intend that they shall have at least a "smattering" of each of these branches. Since our marriage, I have made many of my husband's garments, and for my oldest boy, fifteen years of age, we have not bought a single suit. I have been encouraged in my labors by the example of a wealthy woman of my acquaintance who had four daughters whom she carefully trained to the performance of all kinds of housework, including making and mending garments, especially those which were cast off,—even to their old stockings,—all of which must be neatly repaired before they were given away. In insisting on this she very sensibly admonished her daughters that though they might then be above the *necessity* of such work, they might not always remain so. Wealthy people may do this without losing caste, but how is it with those of us who are obliged to pursue this course to make a living? I do not ask, how it ought to be,—but as my daughters see it,—and, I must confess, as I have observed it,—what is its effect on our "respectability," or "standing" in society? Is not another class of "accomplishments" at a premium even in agricultural communities? Is not a white hand, especially if it is supposed to hold a few greenbacks, preferred to one a little browned by efforts to save the same greenbacks and to acquire that knowledge and those habits which will enable them to become helpmeets and co-workers with their partners in life?

AN OLD FASHIONED WOMAN.

Lexington, Mass., 1868.

EXCELSIOR HORSE HOE.



This implement, known also as the Chandler Hoe, is well and favorably known in Maine, where it originated, and is becoming popular in other States. It may be so arranged as to furrow, cover, cultivate or hoe the crop, and used with one or two horses, or oxen, as may be desired. Its first cost is not excessive, and it is said to do its work in a thorough and satisfactory manner. It is manufactured by Dunham & Currier, Bangor, Me., and we have noticed it for sale at the leading agricultural warehouses in this city.

RAISING CUCUMBERS AND MAKING PICKLES.

Some two or three years since I saw a communication in the FARMER relative to the raising of cucumbers for pickles, and as I am unable to find the paper will you please find the article above alluded to, and insert it again? I wish to know what kind of land is most suitable; what kind of fertilizer is best adapted to them; what is the best mode of pickling; and for what they generally sell in the Boston market. Should you answer this you will greatly oblige a subscriber. S.

Mansfield, Mass., May 25, 1868.

REMARKS.—We have never raised cucumbers or made pickles for the market, and cannot answer the above questions as fully as we could wish. In his *Gardening for Profit*, Mr. Henderson recommends sod or stubble land, which should be ploughed in early fall, and turned over twice or thrice in the spring before planting. The ground is marked out as for corn, four feet each way, and a good shovelful of well rotted manure dug in at the angle of marking, which forms the hill; the seed is sown, about a dozen in each hill, from the 20th of June to the middle of July. The average price of late years has been about $1.50 per 1000 in New York, without pickling we suppose. An average yield is stated at 150,000 per acre. A Cambridge market gardener once told us that as much as five cords of manure should be used per acre. The "Striped Bug" is a great annoyance, and must be closely attended to. Plaster of Paris is usually employed, as a preventive.

We do not know the process adopted by market gardeners for making pickles, but believe that they are generally preserved in brine. Cut the cucumber from the vine so as not to tear the end. Some families then scald them with boiling water, others

merely wash in cold water, and lay them in the cask into which a layer of salt has been previously deposited, so that when successive layers of cucumber and salt are made, the former will be embedded in salt, the moisture which covers them tending to dissolve the salt and convert it to brine. To finish the pickling process they must be put into vinegar. Having removed the cucumbers from the salt, some say they should be soaked eight or nine days, in fresh water, changed once a day, and then putting them in a clean cask pour hot vinegar, not too strong, over them. To make them sharp, the first vinegar may be turned off and saved for a second batch, and stronger vinegar applied. But we have no great confidence in these directions, which we glean from our back numbers. Pickle-making, like bread-making, must be learned by practice; and first attempts at any new business generally result in finding out what one really needs to learn. The price of cucumbers has greatly fluctuated within a few past years in Boston—the business being profitable some years, and unprofitable in others. We believe that those who raise them in this section generally make some arrangement beforehand with the city market men.

RAISING TREES FOR SEED.

I wish for some information on the subject of raising the soft and hard Maple from the seed; also the Spruce and Fir. Where can I obtain the seed of the two latter? Will the seed of both kinds of the maple grow if allowed to dry? Some say they will not. When should they be planted?

AARON P. FLETCHER.

Hudson, St. Croix Co., Wis., May 16, 1868.

REMARKS.—A little volume, entitled "Forest Tree Culturist," written by A. S. Fuller, and published by G. E. & F. W. Woodward, New York city, should be among the volumes in your Hudson library for the benefit of yourself and others who wish to plant trees, as it furnishes just the information needed in relation to their cultivation. As we remarked in an article upon the subject, a few weeks ago, the time of ripening of the seeds of different trees is quite various. The Elm and the Red and Silver Maple ripen their seeds in this section in June; the Sugar Maple in August and September, the White Pine in August, and the Pitch Pine some time during the winter. The Spruce we believe ripens its seed in the fall. The time for gathering varies of course with the time of ripening. As a general rule, the best time for planting is soon after the seed is mature. Some kind of seeds retain their vitality for a long time, and others for a short period only. The size of the seed is no indication of its vitality; the largest may perish much sooner than the very smallest. A seed will retain its vitality so long as the various substances composing it, such as starch, oils, &c., can be preserved from decomposition. Owing to the nature of most evergreen seeds they are poor keepers. So are the seeds of the soft Maples, which retain their vitality for only a few weeks, as their thin porous covering soon decays. If sown as soon as ripe in June, they will often make a growth of one to three feet by the time the Sugar Maple seed is ripe in autumn. Our city seedsmen sometimes have certain kinds of forest tree seeds, but we believe none of them pretend to keep an assortment. Your best course would probably be to write to some postmaster or friend who resides in a section where the seed wanted is produced, who would probably make arrangements to secure a supply, on your giving them reasonable notice. Messrs. Joseph Breck & Son of this city may be able to furnish a small amount of Spruce seed next fall. But most probably you can obtain the kinds you want much nearer home. A letter to Mr. Fuller, 245 Broadway, the author of the book above referred, (with a stamp for reply) would undoubtedly be cheerfully answered.

We regard the subject of your inquiries as a very important one to the farmers of the West, and believe forest trees may be more easily and cheaply raised than is generally supposed. Mr. Fuller thinks the cost of seed, preparing the soil, hoeing, weeding, &c., for the first season need not exceed $2 per 1000.

CARE OF HORSES.

The spring is a most trying time for teams, but those that have been worked steadily through the winter are best able to stand the increase of heat and length of days.

I have driven horses at the plough and harrow and seen them growing poorer and weaker each day. They were worked from 7 o'clock in the morning until noon, then after a rest of an hour to eat, were worked from one o'clock till 8 P. M., without rest,—being left standing in the field while a hasty supper was eaten by the driver.

Ten hours a day is long enough to work a team; and if a farmer cannot do his work in that time he should get another team. He should have harnesses well fitted, and not use the same collar on a twelve-hundred-pound horse, that he uses on an eight-hundred-pound colt.

Galls are the result of three causes,—friction, pressure and heat. Friction of tugs or traces, as the horse turns to the right or left, causes galls upon the legs, while other straps gall other parts. The back-pad and the collar cause galls by pressure and heat. When a team stops to rest a moment in a sultry day the collar should be lifted from the shoulder, to cool it.

If the horse becomes galled, there are various liniments and solutions that will speedily cure the sore, if the cause that produced it is removed. Among the remedies are alcohol and saltpetre, white lead, tincture of arnica, salt and vinegar. A bit of alum added to either of these mixtures might be beneficial. But it is better to prevent than to cure. When a horse comes in from work, a free use of a sponge and luke-warm water about the shoulders, legs and feet will add to his comfort, and in addition to good feed will tend to increase his usefulness. Z. E. J.

Irasburg, Vt., May 16, 1868.

SCIENTIFIC AND EXPERIMENTAL FARMING.

As you invite contributions from your various patrons, allow me to say, after taking your Monthly for about half a year, that I think it is conducted on a liberal scale, and that it contains much valuable matter for all who are engaged in tilling the soil. Farming, however, has not arrived at

perfection. Though long strides have been taken in this direction, we have not yet reached that mile-stone beyond which there is nothing more to learn. The various processes of farming, and everything connected with the production of crops are undoubtedly susceptible of scientific, philosophical explanation; but until we attain such knowledge, the results of carefully observed experiments must be our guide. I suppose that it is an accepted principle, that the laws of nature are immutable; and that the substances which compose the material world are mutable. Hence, everything in nature is undergoing change; is either in a state of progression or of decay. So then we have no criterion to fix data.

This is probably the reason why your correspondents differ in their experiments and observations upon the same subjects. From apparently the same experiments they arrive at diametrically opposite conclusions, which tend, rather, to confound than to instruct. It would be better if communicators would give more practical tests and closer analysis of subjects, and more carefully reason from cause to effect. Surely the giving of opinion from ephemeral causes without anything to predicate one, is merely hypothetical.

G. W. DAVIS.

West Newfield, Me., March 15, 1868.

REMARKS.—It should be remembered by those who regret the unsatisfactory results of agricultural experiments, that farmers are not the only ones who experience contradictory results in their efforts to find an answer to old Pilate's question, What is truth? The experiments of scientific men are probably little more uniform in their results, than those which are tried by farmers. How often are the results of the most carefully conducted experiments of the best educated and most scientific physicians not only unsatisfactory but "diametrically opposite." Nor are the investigations of men of the other learned professions much more harmonious, as we infer from the different "schools" or sects, or theories which exist among them.

RED WATER IN COWS.—THE NEW ENGLAND FARMER.

About the first of April one of my cows was attacked with "bloody water." Being a young man, I knew of no remedy for this dangerous disease. But as good luck would have it, I had been thinking about taking the NEW ENGLAND FARMER, and had borrowed a few numbers of one of my neighbors for the double purpose of obtaining your terms and address, and for the pleasure of reading the valuable articles which I well knew they contained. In that of Jan. 21, a correspondent asks what he shall do for bloody water in cows. You gave him the following directions:—"Take one pound of Epsom Salts and one-half ounce of ginger, pour one quart of boiling water over them, stirring till dissolved, then when cold add one-half ounce of carbonate of ammonia; give this, and if that does not move her bowels, give one-quarter of the dose once in eight hours until it has the desired effect." This was one of the first articles which caught my eye; and when, a few days after, I found one of my cows was thus affected, this remedy was remembered, and referring to it. I followed the directions, and in less than five days my cow was perfectly well, and we all think she now looks better than we ever saw her before. I have since inquired of many of my neighbors, to see if they could give me any remedy for this disease, but found that none of them of whom I inquired were able to do so; and I am convinced that the cow would have soon died had it not been for the timely information thus obtained. I have since subscribed for the FARMER and am cheered each week by its welcome visits.

L. O. W.

Proctorsville, Vt., May 14, 1868.

CRUELTY TO THE BIRDS.

In the FARMER, last year, a writer recommended, for the purpose of preventing birds pulling corn, to "string some kernels on horse hair or thread, and when the corn is coming up throw this on the field. The birds will pick it up and swallow it. The thread or hair will stick in their throats, and in trying to get it out, they will scratch out their eyes." This is cruel. The end to be gained does not justify such barbarous means. If any one after accomplishing this feat, of making a bird swallow a horse hair, should witness its struggles to be relieved from it, should see it scratch out its eyes, witness its agony, and then be compelled constantly to witness its lingering distress while dying by the slow process of s arvation, if possessed of one particle of humanity, I think he would never again attempt a like operation.

Derry, N. H., May, 1868. E. B.

TAR FOR SICK SHEEP.

I started to winter thirty-four sheep, for the purpose of raising lambs for market. Towards spring they began to lose flesh, had a dull sleepy look, with a foul, bloody discharge from the nose. They grew weak and in a short time some died. I lost four of my best sheep in this way, and three others were apparently about to die, when I thought I would try to save the rest of my flock, if possible. I therefore got some good clean tar, and made each sheep eat some of it, and also put some on their noses. They soon began to look brighter, and appeared better, and I did not lose any more. I fed tar once a week by putting it in their mouths, so that they had to eat it. I told one man who had lost about 60 sheep of my remedy and he tried it and said it saved him more than twenty-five sheep and he thought if he had used it before, he might have saved nearly all. I also feed a little sulphur with salt.

J. A. L.

Barre, Vt., May 31, 1868.

COW CORN.

Much has been written, and much has been said in favor of raising corn fodder. As a consequence almost every farmer raises it. Perhaps this is very well. But, for cows that give milk, I am satisfied from experience, that it is inferior to weeds from the corn field, second crop, or good hay. Some get the impression that corn fodder is good for milch cows in this way:—when the pastures fail they give them corn fodder and find the quantity of milk somewhat increased; but they do not compare it with anything else. If they would give them corn fodder one week, and second crop the next, they would find a difference. Many other articles, such as squash vines, pea and bean haulm, if they have not been severely injured by frost, or by standing too long in the field, are readily eaten by cows, at a time when they need, but do not always get, extra feeding; and I think it better to save them for this purpose than for composting in the barn-yard, as I have seen recommended.

Derry, N. H., May, 1868. E. B.

SALTING CHEESE.

About a year ago I saw an article in the FARMER (Monthly p. 368, 381,) about strong cheese, in which you seemed at a loss to account for the great difference in flavor. From own experience and that of one of my neighbors who has long

kept a dairy, I think the secret lies simply in salting,—either too much or too little, or that of poor quality is used. My neighbor says that he lost twenty-five dollars in one year, by using fine salt, such as is put up in small boxes. A short time ago I saw a statement to the effect that ordinary fine box salt would not keep butter sweet for any length of time. If it will not preserve butter neither will it keep cheese sweet. M. P.

West Westminster, Vt., May 8, 1868.

TOMATOES *vs.* THE BORER.

I saw in your last paper, an inquiry by some one as to what he should do to keep borers out of his trees. Two years ago, in looking over my trees in the fall, I found borers in all of them but one. Noticing a tomato plant by the side of that tree, I thought that perhaps the smell of the plant might be the reason. Last year I tried it, and found none, where I had tomato plants. Speaking to a neighbor about it, he said he was never troubled with borers, but he had always had tomatoes by the side of the trees. I shall try it this year, setting the plant as near the trunk of the tree as possible. Give it a trial, all of you who are troubled with borers. B.

East Randolph, Mass., May 26, 1868.

For the New England Farmer.

OPEN AND TIGHT BARNS.

Having read the discussion in the FARMER on the subject of open and tight barns, I will give you my experience, with the remark that while I consider theory on this, as on other subjects, very good, I think practice a little better.

In 1840 I built a common barn for the times, finishing with unseasoned boards, put on singly. Consequently, I had plenty of side ventilators, as the cracks were neither small nor few. I soon learned that the hay must be well cured before being put in, or it would heat, mould, and sometimes spoil in the centre of the mows, while near the walls of the barn the hay was bright and good. I also learned that in leaving the barn doors open during the hay season, as many farmers did, the hay next the floor, especially near the door, looked like hay which had taken the storm and been badly washed. From old farmers I furthermore learned that hay intended for the stack must be thoroughly cured, even more so than for the barn.

In 1850 I built another barn, and acting upon the knowledge gained so far, I made the walls tight as common double boarding would make them. And now for the result. I have not during the sixteen years I have used this barn, had a particle of mouldy or burnt hay, except it was wet by storms and put in before dry. I cart my hay much greener than formerly. I do not hesitate to cart English hay that is sufficiently ripe, as soon as I can after it is cut, provided there is no dew or wet on it when mowed. My hay is relished by the stock better than that which is all dried up. If the grass is very green, or stout clover, I would prefer to let it stand in the cock over night, but think that too much drying injures the hay.

A mixture of herdsgrass, just in the blow, and western clover, the blows half turned, which yielded two and a half tons per acre, actual weight, was cut in the forenoon and carted in the afternoon of same day into the last built barn, and came out nice and bright in the spring. For an experiment, I spread some of this hay upon the beams of the barn, turning it occasionally for two weeks, to ascertain the shrinkage when thoroughly dried under cover, and found it to be seven hundred pounds to the acre, or two hundred and eighty pounds per ton.

With the knowledge thus gained, I conclude that the less the air circulates through the mows, or the less exposed the hay is to the weather, the better for the hay, and the less is it liable to heat; that by closing all cracks or avenues for the wind and storms what heat there may be in the hay is equally disseminated through the entire mass without injury to the hay; but that if the heat be forced from the outside surface to the centre, the outside hay will be bright while the centre will be more or less injured,—sometimes burnt and mouldy. With this experience I shall continue to store hay in barns made tight as practicable, notwithstanding there may be much theory not based upon practice, to the contrary.

I have also learned that cattle thrive best, in winter, when kept at a temperature little above the freezing point; but that if kept so close and warm as to sweat, or become moist, they will not eat. I prefer to have the stable a little cold, rather than too warm. If too cold, however, food does not seem to make them thrive, although they may eat enough to satisfy the most skeptical; especially if short of hay. A very little trouble will regulate the temperature of a stable, and is well paid for in the satisfaction one enjoys in the comfort and thrift of his animals. A.

Washington County, Vt., 1868.

REMARKS.—For its usefulness the NEW ENGLAND FARMER is largely indebted to such practical articles of its correspondents as the foregoing.

For the New England Farmer.

ITEMS OF A FARMER'S EXPERIENCE.

FEEDING YOUNG PIGS.—I once bought six pigs of neighbor Flint, taking them at an early age, because we had an abundance of skim milk to feed them with. In the course of a fortnight, first one and then another sickened. The prominent symptoms were, loss of appetite, staggering with a backward motion and falling on the haunches, and finally inability to rise at all. The first two that were attacked died in a few days. One of the others seemed near death, and all were more or less affected. At my request Mr. Flint examined them, and thought the trouble was a costiveness caused

by their being fed exclusively on *skim milk*. He recommended giving them *thorough-wort tea*. I did so at once, by means of a spoon, administering it three or four times in the course of the afternoon. They took it as readily as a young child would its usual food. In a few hours they all began to improve, and the next day were considered fully recovered, and thenceforth went on eating and drinking, and thriving, as all good piggies ought to. Being afterward supplied with a variety of food, they never again showed symptoms of any disease.

Probably if these pigs, on being taken from the mother, had for a time been fed with milk warm from the cow, instead of that which had been deprived of its cream, there would have been no sickness among them. I happen to know, from familiar experience, that a free use of skim milk as a beverage, has a tendency to produce costiveness in the genus *Homo*,—and am disposed to infer that it will have a similar effect in the genus *Sus*.

BUTTER-MAKING IN WINTER.—Some years ago, while making butter from the milk of eight cows, though in summer the butter would come in from fifteen to thirty minutes, it was found that, as winter approached, the time required for churning gradually increased, till, about the middle of November, the cream refused to part with its butter even after five or six hours' churning, though kept at the temperature of about 60° Fahrenheit. After that time we could get the butter only by scalding the milk before it was put in the pans. We then came to the conclusion that butter could not be made in winter without scalding the milk. But a little further experience has shown us that we came to this decision too hastily. We have, through the past winter, made good butter from a young cow (got by an Ayrshire bull, out of a half-Jersey cow.) with but little more trouble than it formerly cost in summer. This shows us, what probably older butter makers knew before, that there is as much difference in cows "as there is in other folks." We knew before that the cream of some cows would yield its butter in summer much quicker than that of others, but we had not gone so far as to learn, that, while from some the butter will not in winter come at all without the process of scalding, that of others will come readily if kept at the right temperature.

I suppose the old farmers are wise enough already, and can take care of themselves. But let me suggest to those young ones who may be about to buy cows for a butter dairy, that they will do well to select with great care, and test them individually with reference to this point of difference in time required to produce butter from their milk. If one cow in the herd gives milk whose cream is slow to yield butter, it would be better to put her to a different use at once.

WOODPECKERS.—It is pleasant to feel that we belong to a superior race; and I do not intend to discontinue boasting a little, occasionally, of the wonderful capacities and varied powers of man. But I think we may often find, in observing the habits of the *inferior* animals, as we are fond of calling them, that they often display a keenness of observation, a tact, a certainty of coming to what they aim at, that it would be difficult for most of the superior order to equal in the same line. For an example in a small way: I cut down a black oak, forty or fifty feet high. In trimming it up near the top, it was found that a woodpecker had recently tapped it, making a hole to the centre. On a careful examination, it could be seen where the bark had previously been punctured by some insect for the purpose of depositing its egg. On splitting open the wood, which was about three inches in diameter, the course of the grub could be traced from the surface to the centre, and then downward, following the pith, for five or six inches. Precisely at the lower end of this passage, the woodpecker had struck, pierced to the depth of an inch and a half through the solid green wood, and taken out the grub. Now I doubt whether even one of our best trained musicians, whose ears will detect a variation of a quarter of a tone in music, could have succeeded so well in this case. If he could, by rapping a few times on a green tree, not only make sure that a grub had bored a passage along the heart of the wood, (remember, this passage is filled again by the chips as the grub works along.) but decide correctly on the precise spot occupied by the grub,—well, if he could do that, it is my candid opinion that he would be entitled to the credit of having a very good ear. M. P.

Concord, Mass., May, 1868.

BOTS AND WORMS IN HORSES.

In his new work, "The American Farmers' Horse Book," Dr. Stewart claims that the bot is hereditary with the horse, and is born into the world with him; the colt, at the moment of foaling, having a little parasite in his stomach, in as perfect a state as the horse of six years. The author goes on to state that the bot is found attached to the cuticular or insensible coating in the upper portion of the stomach —not by his head as is popularly supposed, but hanging by his tail. For a mouth he has a little orifice, no larger than the point of a cambric needle, with which he feeds upon the food in the stomach, after it has been softened down into chyme. This tiny mouth he can close against any substance which offends his dainty taste; and being protected by a scaly or bony covering, upon which no acid, caustic or poison, will operate, he is much safer from the action of any hurtful element than the horse into whose stomach he is introduced. There is no evidence, says Mr. Stewart, that, in his normal condition, the bot ever injures

the horse's health in the least degree. The bot is pronounced to be an entirely different insect from the grub or worm, with which he has no relationship whatever. The latter is the offspring of the gad fly, and is undoubtedly an intruder. It is a species of light yellow worm, which passes away from the horse in the excrements during the months of July and August, and becomes imbedded in the earth where the chrysalis is formed, whence in time is hatched the fly. The eggs of the fly are deposited upon the horse's skin, are bitten off and find their way into the horse's stomach. Here the worm is developed in time, and thus the species continues to be propagated. Unlike the bot, the grub never attaches itself to the coating of the stomach, but lives among the particles of food, the tough fibrous portions of which it decomposes and in both stomach and bowels undoubtedly performs the same office for the horse that worms do in the child. When multiplied in great numbers the grub may occasion much uneasiness and irritation, but never causes death or even serious disease.

As to the popular belief that the bot causes the death of the horse by eating through the stomach, Mr. Stewart says:—Although the stomach is often found "completely riddled by the bot," as the popular expression is, there is good reason to believe that the work is done entirely after the horse is struck by death." One or two facts will go far to prove the truth of a proposition which to many will appear so extraordinary.

The cuticular coating of the stomach to which the bot fastens himself by means of two little bearded hooks, is nearly if not wholly insensible, having no more feeling apparently than the animal's hoofs. When the horse is in health it is hard, rigid, impenetrable, and the bot, if ever so much disposed to do so, would attack it in vain; but when death seizes him this coating becomes relaxed and soft and begins rapidly to decompose. Then only it is that the bot can or ever does work his way through it. Another fact still more strongly corroborative of the above proposition, is this: that of any number of horses killed while in perfect health, and opened an hour or two afterward, there will be found not one whose stomach is not "riddled by the bot." Dissection has revealed the existence of this condition in hundreds of instances of sudden death from accident.

Dr. John Franklin, of Sumner county, Tennessee, relates the case of a horse instantly killed by the falling of a large timber, whose carcass he opened within a few hours after death, with the especial object of testing the theory that the bot forces a passage through the walls of the stomach in all cases when the disease is not of such a nature as to stupefy him. As he expected the insects in considerable numbers had already cut their way out. The bot does not attack the stomach for the purpose of preying upon it or of injuring the animal, but simply to seek escape from certain death himself. The same disease that is killing the horse threatens his destruction also. An instinct similar to that which prompts vermin of nearly all kinds to leave a dead or dying carcass, teaches him that his old habitation is no longer a safe one and hence his desperate endeavors to get away. He has been found working up to the esophagus, passing through the small intestines and even cutting through between the ribs almost to the skin itself. If possible he would escape from the horse entirely."

These views are so different from those usually held by horsemen that we give them for the benefit of those interested in the care and management of horses. If they be true, the practice of drugging the horse with medicines for the purpose of stupefying or arresting the supposed action of bots is useless and injurious.—*Utica Herald.*

FLOWERING TREES.

In trees with rosaceous flowers, nature exhibits some of the fairest ornaments of northern climes; and these are the only trees that produce a pulpy fruit. Such are all the trees of our orchards—the cherry, the peach, the apple and the pear; also the mountain ash and its allied species, down to the mespilus and the hawthorn. These trees are suggestive rather of the farm and its pleasant appurtenances than of rude nature; but so closely allied to nature is the farm, when under the direction of its unsophisticated owner, and unbedizened by taste, that its accompaniments seem to be a rightful part of Nature's domain. The simplicity of the rustic farm coincides with the fresh glowing charms of nature; and a row of apple trees, overshadowing the wayside, forms an arbor in which the rural deities might revel as in their own sylvan solitudes; and Nature herself wears a more charming appearance when to her own rude costume she adds a wreath twined by the fingers of Pomona.

The blossoms of the rosaceous trees are invariably white, or crimson, or the different shades of these two colors combined. Those of the cherry and the plum are constantly white; those of the peach and the almond, crimson; those of the pear and the mountain ash are also white; and those of the apple, when half expanded, are crimson, changing to white or blush color as they expand. The colors of the hawthorns vary with their species, which are numerous. As I have already intimated, Nature is not lavish of those forms and hues which are the ingredients of pure visual or objective beauty. She displays them very sparingly under ordinary circumstances, that we may not be wearied by their stimulating influence, and thereby lose our susceptibility to the impressions of homely objects. But at certain times, and during very short periods, she seems to exert all her powers to

fascinate the senses. It is in these moods that she wreathes the trees with flowers for a short time in the spring, and, just before the dusky shades of autumn have settled upon the earth, illuminates the forests with colors as beautiful as they are evanescent.

Another group of flowering trees—found rarely in northern climes—is represented by the magnolia and the tulip tree. These trees have obtained a great deal of celebrity on account of their blossoms, which are chiefly remarkable for their extraordinary size and their powerful fragrance. The magnolia, with its dark evergreen foliage, is a valuable gift of nature to the inhabitants of the arid plains and valleys of the South; and its flowers make a magnificent appearance at certain seasons. The tulip tree has many of the same characteristics; it attains in favorable situations an extraordinary size, and is an admirable ornament for dressed grounds, where its lofty stature, its symmetrical form, its smooth branches, and its polished foliage, are in "excellent keeping" with the graded lawn, the fanciful flower beds, the serpentine walks, and other pseudo-natural affectations.—*Atlantic Monthly for June.*

HIVING BEES.

When bees are allowed to swarm naturally, everything should be in readiness before the swarming season arrives, so that when swarms come off there may be no confusion or difficulty in hiving. Hives should be kept cool, and if old, they should be well cleaned. If a swarm is seen issuing from a hive, do not get in a "flurry," but keep cool, and nineteen times out of twenty they will cluster all right. As soon as they have settled, prepare to hive them.

First.—Bring a dish of cold water, and with the hand or a whisk of grass, sprinkle the cluster well. This will make them perfectly quiet and easy to handle. Bring out a table, or if that is not convenient, spread a cloth or boards upon the ground, and if they are to be hived into a common box or straw hive, set it upon the table or place prepared for it, raise up one side an inch or more, and put under a stone or chip to hold it. Then shake your bees into a pan, basket, pail, or any dish that will hold them, and turn them down near the hive, and they will at once commence to enter. If it is desirable to have them enter faster than they are naturally inclined to do, take a wing and gently wing them in. As soon as all or nearly all are in, the hive should be carried to its stand, and well shaded if the sun is shining. New hives or newly painted hives should be shaded for several days, as bees cannot stay in an over-heated hive. If the bees cluster upon a limb, from which it would be difficult to shake them, the limb may be cut off with a saw and laid near the hive; the bees will soon leave and enter. Sometimes bees will cluster upon the body of a tree, when it is more difficult to get them off without irritating them. They should be well sprinkled, and very carefully brushed off with a wing or quill feather into a dish, and carried to the hive as before stated. An inexperienced person, or novice, should in this case wear a bee-protector. It will give them courage, and they will move more carefully.

Swarms should never be allowed to stand where they are hived until evening, as is the practice with some, but should be moved at once to their stand, as some of the bees will go into the field to work in ten minutes after they are hived; and if left until evening large numbers will have commenced to work, and having marked the spot will return there the next day, and not finding the hive, will wander about, and many will be lost. Second swarms are generally far more irritable than first or top swarms; hence, these are far more likely to sting; but cold water will soon quiet them, and they may then be hived with safety. —*Canada Farmer.*

THE SWEET POTATO.

The land for this potato should be deeply ploughed, well harrowed, and thoroughly pulverized. It should then be made into ridges about thirty inches wide, and twelve inches high, and about four feet apart in the rows. The tops of the ridges should be levelled. A hole should be made with a trowel large and deep enough to receive the plant, which must be started in a hot bed or otherwise; fine, mellow earth should be rattled in about the roots till the hole is filled within about an inch of the surface. Should the weather be dry, a small portion of water is poured in among the roots of each plant, and then allowed to soak, then more earth put in to fill up the hole. As soon as the plants begin to grow, they may be hoed and cleaned until the vines begin to grow. The ridges should be kept clear of weeds, and the surface loosened by the hoe. Should the vines be inclined to strike or root at the joints, they should be carefully lifted and laid on the top of the ridges. This leaves the soil well exposed to the sun. Sweet potatoes should be dug before the frost. The Brazilians and Nansemonds are thought to be the most productive.—*Rural West.*

—Wool buyers say that farmers might as reasonably expect to sell cobs for the same price as corn, as grease and dirt for the same price as wool. And they probably think that saying hits somebody pretty hard. At the West we believe corn is sold with and without the cob on which it grows, and when wool buyers understand their business as well as corn buyers do theirs, we think none but those incompetent to buy wool on its merits, will think there is anything very smart in such flings at wool growers.

SALT IN FATTENING CATTLE.

There is no doubt that the use of salt increases the appetite of animals, and enables them to digest more food, and consequently to take on more fat. There ought to be more accurate knowledge on this subject, especially among those who are stall-feeding stock.

The following is the substance of an account of experiments by Theodore Von Launer in the use of salt, which we find in Von Weekherlin's *View of Food.*

The last winter he made an experiment for determining the influence of increasing doses of salt on the appetite of horned cattle in the case of two lean oxen of 1740 lbs., live weight.

For two weeks these oxen received twice a week, in the evening, per head, one and one-half ounces of salt, with which both oxen consumed daily, thirty-four lbs. of choice hay, on an average.

After this, the two oxen received the above mentioned portion of salt daily, for ten days, in which, on an average, they both together ate forty and one-fourth lbs. of best hay. With the same daily portion of salt, the two oxen consumed in the next nine days, an average of forty-six and one-half lbs., of best hay; and with the same daily portion of salt, their daily consumption in eleven days more amounted to fifty-one and one-half lbs., best hay.

Afterwards the two oxen, for eighteen days, received daily, twice a day, the usual quantity of salt, and their consumption of fodder rose on the average daily, to fifty-five and three-fourths lbs. of hay.

Then they received the usual quantity of salt daily, three times in the day, and their daily average consumption of hay fell to fifty-one lbs.

This portion of salt then appeared to be too large, and they were given again the usual portion of salt once a day, on which their daily consumption of hay, as before with the same quantity, reached fifty-one and one-half lbs.

The daily consumption of thirty-four lbs. rose, therefore, with the daily dose of salt to fifty-one lbs., and with twice a day a portion of salt, to fifty-five and three-fourths lbs.; while by its being given three times a day, it sunk to fifty-one lbs., for the two oxen.

From this exhibit it is evident how important is the furnishing a proper dose of salt to horned cattle, especially when coarse hard hay or much straw is foddered to them.

The writer does not state whether the drink which the oxen took was increased in like proportion. But another German farmer, in the same work gives an account of an experiment in giving salt to ten fattening wethers, and none to ten others, which were fattening with them, at the same time. Those which had the salt drank during the experiment, the time of which is not stated, 533 measures of water, while those which had no salt drank only 256.

When cattle are feeding upon dry hay, it is desirable that they should drink freely, as the hay is thereby softened, and its nutriment more completely extracted. This is especially true of cows giving milk, which, as is well known, will drink more than dry stock, because a large portion of the fluid received, is taken up by the milk-forming organs. The daily use of a proper dose of salt, would probably promote in them an appetite for drink. as well as for hay, and thus increase the supply of milk. But too large a dose, it seems, will diminish the appetite. The proper dose must be determined, in the case of each animal, by experience, for different animals will doubtless require different quantities.

An overdose of salt generally irritates the coats of the intestines, and proves cathartic, both in men and animals.

CLOVER SEED.

We think there is less clover seed raised in this State, and indeed in New England, than formerly. We are in the habit of depending upon imported seed. At the present price of the seed it may be made a profitable crop, and there is no reason why our farmers should not raise at least what they need for their own use. As we hope to see clover more extensively cultivated, not only for its value as fodder, but as a means of improving the soil, we think it important that the domestic supply should be abundant, as it would then be more freely used.

Clover, rightly managed, is a profitable crop. The first crop should be cut early, and if properly secured there is no better hay, especially for milch cows and sheep. This crop should be cut about the first of July, or by

the time one-half the blossoms are open. Then there will be a good second crop, but if we wait till the seed is formed in the first crop the second crop will be greatly diminished. Deferring to cut the first crop ten days may nearly spoil the second. It is on the second crop we must depend for the seed. With a good catch and proper care, there will be from two and one-half to five bushels of seed to the acre, worth now six dollars per bushel.

The second crop should not be allowed to stand till it is over-ripe, as then much of the seed will be lost in harvesting. Now, let us look at the result. One and a half tons at the first crop, worth say $24. The second worth $10, and three bushels of seed worth $18, the whole amounting to $52. What crop do we raise of equal value for the same labor?

In Pennsylvania, where they raise a good deal of clover seed, it is not uncommon to feed the clover fields till the fore part of June, and then let it go to seed. In this way, it is said, they often get five bushels of seed. They then plow up in the fall, and sow wheat. Plaster in most parts of the country is found to be one of the surest means of bringing a good clover crop. We are in the habit of sowing red top and herdsgrass with clover, with the intention of letting it remain as a meadow three or four years. This makes the very best of hay. When we would get a crop of clover seed, we should sow the seed with grain, and not feed off in the fall; then after taking the first and second crop of clover, we may plow and reseed in the fall with herdsgrass and redtop, if we wish to mow it for a few years, top-dressing as may be needed.

CULTIVATION OF CORN.

The *Western Rural*, published at Chicago, has had much to say in its late issues upon this subject. This is as it should be, as corn is *the crop* of the great West. We are glad to see the modes of culture, the importance of manuring, the use of fertilizers and other topics thoroughly discussed. The editor is urging the cultivation of less land and doing it more thoroughly than in times past. This is the only way of arresting the process of exhausting the soil, which is going on so rapidly, and is beginning to tell upon corn, and has to an alarming degree upon wheat. In the last number he states some facts which are interesting to Eastern no less than to Western farmers. He says:—

"Several experiments have been made to ascertain the proper depth at which to plant corn, and by one of them it was ascertained that when it was planted three inches deep, it came up and grew well until it was three or four inches high, and then stopped for a fortnight, while the corn in the same field, which was planted at a less depth, grew rapidly. On examination it was found that a joint had formed about one inch and a half above the kernel, and that the roots had sprouted out from that joint, leaving all below to perish. While the process of changing roots was going on, the plants ceased to grow above ground, but in about a fortnight recovered their vigor, and they were about that length of time later in maturing the grain than the seeds that were planted shallower.

A series of experiments showed that corn planted at the following depths came up as described:—

No. 1	planted at a depth of	1	inch	came up in	8 days.
" 2	" "	1½	"	"	9½ "
" 3	" "	2	"	"	10 "
" 4	" "	2½	"	"	11½ "
" 5	" "	3	"	"	12 "
" 6	" "	3½	"	"	13 "
" 7	" "	4	"	"	13½ "
" 8	" "	4½	"	"	— "
" 9	" "	5	"	"	— "
" 10	" "	5½	"	"	17½ "
" 11	" "	6	"	"	— "

Nos. 8, 9 and 11 were dug up after twenty-two days, when it was found that No. 8 had an inch more to grow to reach the surface.

Nos. 9 and 11 were three inches beneath the surface. No. 10 came up in seventeen days, but withered after six days' growth. The more shallow the seed was covered the more rapidly the sprout made its appearance, and the stronger was the stalk. It is hoped that many more careful experiments will be made this year with regard to the merits of deep and shallow planting.

WOOLEN RESOLUTIONS.

This is a great country for "resolutions." They are manufactured by congresses, legislatures, conventions, associations and divers other "bodies." Webster passes the word along with only eight definitions and one "pictorial illustration," while Worcester enumerates no less than ten distinct meanings! But are either of these lexicographers equal to the task they have undertaken? Can it be done by pen or pencil? A bull of the Vatican and a resolve of the American may be felt, but can hardly be described. A Turkish firman, a Russian ukase, and a royal decree have settled many knotty questions and removed many ugly difficulties, but a universal solvent has been found only in the modern "resolution."

To buy each lot of wool in the country as each lot of grain, and cattle, and butter, and other kinds of agricultural produce are bought, —on its own merits,—involves no little work and the exercise of no little skill. Grain is harvested and hay is made by machinery, and

so is cloth. Why may not wool be bought in the same way? A machine for buying wool, like that for other purposes, should be simple. The less wheels and springs and levers the better. This bright idea, however, was a little too bright to be realized by ordinary machinists, and our wool manufacturers and wool dealers, being thrown upon their own resources, at once exercised their genius in the production of a "series of resolutions" with which they hoped to accomplish the same purpose.

The following which we have before published, are the "plan and specification" of such an invention by the North-west Woolen Manufacturers' Association, in general council assembled, some months since, at Chicago:—

1. Merchantable wool shall be standard for price, and must be well washed, free from tags and all filth, and tied with only what twine is sufficient to hold the fleeces together.
2. On all unwashed fleeces, fleeces stuffed with tags, murrain wool or any other foreign substance, black fleeces and all washed buck fleeces, a deduction of one-third shall be made.
3. On unwashed buck fleeces, a deduction of one-half shall be required.

Now, that looks as though it might work, and save a great deal of labor and much bother; and so perhaps it would, if the inventors had secured letters patent on the exclusive right to pass resolutions, as well as to use the "one-third" pulley. Neglecting to do this, we fear their invention will be of little practical utility, as the door is left wide open for the introduction of opposition machines.

The Washington County, N. Y., Sheep Breeders' and Wool Growers' Association, taking advantage of this fatal omission, on the part of the manufacturers, have adopted the following resolutions,—which on the principle of Knickerbocker's justice, who weighed the account books of the parties to a suit he was trying, entitles them to the verdict:—

Whereas, Commission merchants and wool dealers in market have, heretofore, for their own convenience and profit, adopted a rule to shrink all unwashed wool one-third, without regard to its intrinsic value or condition; and

Whereas, The wool buyers in various sections of the country, who are agents of wool dealers, and under their influence and suggestions have formed associations and passed resolutions adopting this unjust and oppressive rule, and pledged themselves to make their purchases in accordance therewith; therefore:

Resolved, That the sheep breeders and wool growers of the country are compelled and in duty bound to take summary steps to protect themselves against this associated combination, and prevent the universal adoption of a rule so unjust and oppressive to their interests.

Resolved, That the article of wool, like all other farm products, should be sold on its merits, the condition of the article governing its price; and while it may be both convenient and profitable for the wool dealer to adopt the one-third rule to protect him from the ignorance and blunders of inexperienced agents, it would be more just to both parties to employ agents who understand their business.

Resolved, That it is the duty of the State Wool Growers' Associations, and all the county associations in this and other States, to adopt resolutions and recommend all wool growers to resist, and, if necessary, to decline dealing with all agents who insist upon this rule.

BUTTER THAT WILL KEEP.—We have seen the statement that "a dairy made in Broome County, N. Y., was sold in St. Croix, in 1839 to the Governor, for 75 cents per lb. In 1840 the same dairy was sold in New Bedford, Mass., and went on a whaling voyage. *I saw some of it after the expiration of nearly four years, as sweet and in as good condition as when made.* The same dairy has since been sold in New Orleans, in Natchez, and Mobile, and there has never been any complaint as to its quality. I shipped some butter made in that county to Canton, in 1846, which opened as fresh as when made, and was so good that shippers have each year since applied to me for butter for cabin stores. I broke up the firkins, and procured small white oak kegs, containing from fifteen so twenty-five pounds each, repacking the butter. These kegs were put into large hogsheads and filled in the interstices with rock salt, and placed in the hold of the vessel. The small kegs were used merely with reference to the convenience of retailing at Canton."

"Orange County butter" is now understood to have reference to the mode of manufacturing, rather than to the locality where made. In making this butter the milk is churned and rock salt is used.

HEATING NAILS.

Every one who has used them knows that cut nails are brittle and easily broken (some brands more than others), but when heated to a red heat and then cooled slowly, become soft, and will generally clinch as well as wrought nails. Jacob Abbott thus explains the matter in a story which he tells in *Our Schoolday Visitor*:—"Common nails, being cut out from a plate of iron by means of shears working with prodigious force, have the substance of the iron so compressed that they are somewhat brittle, and the points are very apt to break off if we attempt to clinch them. But these common nails can be softened by heating them red hot in any common fire and letting them cool slowly. The iron of the nails, which is compressed and made hard by the action of the machine in which it is manufactured, is swelled out again by the heat of the fire and restored to its natural condition."

THE GRASS.

The grass, the grass, the beautiful grass,
That brightens this land of ours,
Oh, why do we rudely let it pass,
And only praise the flowers?
The blossoms of spring small joys would bring,
And the summer bloom look sad,
Were the earth not green, and the distant scene
In its emerald robe not clad
Then sing the grass, the beautiful grass,
That brightens this land of ours;
For there is not a blade by nature made
Less perfect than the flowers.

The grass, the grass, the feathery grass,
That waves in the summer wind,
That stays when the flowers all fade and pass,
Like a dear old friend, behind;
That clothes the hills, and the valley fills,
When the trees are stripped and bare;
Oh, the land would be like a wintry sea
Did the grass not linger there;
Then sing the grass, the bonny green grass,
That to all such a charm can lend;
For 'tis staunch and true the whole year through,
And to all a faithful friend.

The grass, the grass, the bountiful grass,
Oh, well may the gift endure,
That never was meant for creed or class,
But grows for both rich and poor;
Long may the land be great and grand
Where the emerald turf is spread;
May the bright green grass, when from earth we pass,
Lie lightly o'er each head.
Then sing the grass, the bountiful grass,
That stays like a dear old friend;
For, whatever our fates, it kindly waits,
And it serves us to the end.

For the New England Farmer.

SEEDING LAND.

The following abstract of the discussion by the Irasburg, Vt., Farmers' Club of the subject of the proper quantity of grain and grass seed per acre, and the best manner of putting it in, is furnished for our columns by the Secretary, Z. E. Jameson, Esq.

J. B. Fassett said he had raised but little wheat, but usually sowed one bushels and three pecks per acre. Of oats some sow two and some ten bushels per acre. He tried a piece by sowing three bushels per acre over the whole, then on one side of the dead furrow he sowed as much more—equal to six bushels per acre. The part double seeded was thicker at first, but at harvesting he could see no difference, and thought there was none between the two sides. He now sows from three to five bushels. In planting potatoes this year, ten bushels cut fine did not suffice for an acre, with hills two by three feet apart. He has a piece in grass on which he sowed sixteen quarts timothy, and three pounds clover per acre, and he is satisfied with the appearance of the grass. He thinks too much clover is often sown as it is a short lived crop,—the second and third yield being small. He had a piece so stout one year, that it took three men half a day to mow an acre; the next year there was not ten cwt. per acre. He sows his grass seed when he does his grain, and harrows it the same. When grass seed is only bushed in it may come up, but if we have a dry season it will wither; but cover it deeper and it will stand drought as well as grain. Grain should be harrowed thoroughly, so as to cover it deeply. In planting corn he takes pains to have the rows very straight,—not varying over three inches from a line in twenty-five rods. Thus planted it looks better and is more convenient to cultivate and hoe. He cuts stakes just as long as he wants the distance between the rows, and sets them in line for the first row. Then, as he plants, he goes straight toward his stakes, and as he comes to one he pulls it up, and sticks it in again just its length from where it first stood, so that when he gets through with one row his stakes are all in line for another row. He covers deep and scatters the kernels so that the stalks will be a few inches apart. If the roots are close together, the stalks lean apart and break down.

E. P. Church would put more seed upon rich land than upon poor. Thick seeding will cause the straw to be finer, and the grain will ripen earlier and evener. A poor soil cannot nourish a large crop. On dry ground more seed is necessary, as some is so near the surface that it fails to grow. He would harrow thoroughly, though it required more time. He used sixteen bushels of common potatoes in planting an acre with hills two by three feet.

N. H. Stiles said a neighbor sowed ten bushels of oats on an acre, with the expectation of one hundred bushels, but had a poor crop, the straw being fine and the heads short. Another man sowed seventy rods with oats that had been injured by heating, and probably not more than half a bushel grew. It was on new land and the yield was sixty-two bushels.

G. B. Brewster spoke of the importance of the proper preparation of the soil. His corn ground was ploughed last fall, but this spring he couldn't do a thing with a common harrow. He then took a cultivator that he uses in hoeing corn and hops and went over the piece till it was mellow.

J. B. Fassett sows grass seed with those kinds of grain that occupy the least ground, or better still with no grain. It is quite a loss to sow costly seed on land that is not sufficiently enriched and properly prepared to produce a crop. We ought to raise our seed.

Wm. L. Jameson agreed with Mr. F. that we should raise our own seed. By buying seed he got a bad weed upon his farm. Clover lasts well with him; has a piece in clover four years. He believes in heavy seeding. The man who cleared up Mr. Fassett's pasture sowed half a bushel of clover and timothy seed, and the result was an excellent pasture turf. He prefers to sow grass seed with barley, rye, or wheat, rather than with oats or India wheat, although he had had a good catch with the last grain.

Z. E. Jameson suggested the danger of going to extremes in the amount of seeding, and asked if one reason of the rank growth of grass around stones and logs might not be

found in the more ample room which the roots found under these stones and logs for expansion. An old field will produce fine grass because the plants have not room to grow large. If we spill grass seed upon the ground we expect fine straw and a feeble growth, and he thought that more hay is sometimes produced per acre from thin than from too heavy seeding. Farmers are generally of the opinion that the poaching of meadows by cattle is injurious, but one man told him this spring that he should expect his hay crop to be improved if the whole surface were covered with tracks not more than a hand's breadth apart.

E. P. Church said thick seeding makes short grass. His best piece last year was a thin growth. The amount of produce depends on the fertility of the ground.

J. B. Fasset inquired if two fine stalks are not better than one coarse one. His pasture had been referred to. It is the best pasture he ever saw; being all clover and timothy, with no foul grass. If you want good grass you must sow the seed. I sow half a bushel, but perhaps one bushel would be better.

G. B. Brewster thought coarse hay was poor stuff. When ripe, cattle won't eat it, as it is like clear wood. Put on more seed. One bushel, a mixture of clover and timothy, is little enough. Don't put it too deep. One-eighth of an inch on rich soil is deep enough. It will then branch out on top of the ground; but if buried an inch it comes up a feeble stalk. Grass in well-manured land will live, but in poor soil it will die.

One of the members of the club has several acres of low meadow, that is covered over with a pretty firm turf that produces a flat grass about eighteen inches high. He wishes to get it into English grass. How can it be done? The turf is so full of roots that it would be very hard to plough, and in some places it is so mucky that the team would mire?

Remarks.—It will be noticed that in the above discussion none of the gentlemen except Mr. Fassett state the proportions of clover and timothy seed which they use. Are we to infer that they all recommend three pounds of clover with sixteen quarts of timothy?

The question of the member of the club who wishes to reclaim a wild meadow we hope will be answered by some one who has had practical experience in this work. We have tried it on a small scale in two ways. First by covering the whole surface with earth from the adjoining banks, to which compost was applied with the grass seed. This is apt to form a hard, tough sod, difficult to plough, and in other respects rather unsatisfactory in its operation. Our other plan was to dig ditches through the land sufficiently large and near enough together to cover the land with a good layer of muck, &c., thrown from the ditches. Then fill the ditches with stone, if handy, or gravel sand or earth, to within eight or ten inches of the surface, and finish off by filling up with the surface soil or muck. This raises the surface of the whole field, furnishes drains and operates well. How can such land be reclaimed with less labor?

COMBINATION OF WOOL BUYERS.

The absurdities of fashion and the force of habit are often cited as illustrations of the weakness of human reason. Precedents in legal proceedings and custom in commercial transactions must be observed, though the reasons for their establishment and the justice of their operation may in some cases be more than questionable. When coal is bought by the quantity, the dealers expect 2240 pounds for a ton; but when these same dealers distribute it to their customers a ton weighs only 2000 pounds. The advantages which accrue to the dealers from such "laws of trade" are very obvious, and are perhaps sufficient to entitle the efforts of wool buyers to establish and confirm their one-third shrinkage rule to more serious consideration than we have been disposed to believe they deserved.

We, therefore, ask the attention of our readers to the following remarks by Dr. Randall, suggested by a late article of ours upon this subject, a portion of which he copies into the *Rural New Yorker*, and then says:—

Our contemporary seems to suppose that the resolutions of the Woolen Manufacturers' Association of the Northwest, at Chicago, last February, and those passed at the New York State Convention of Buyers, at Rochester, last year, comprise all the public and combined action taken by the dealers to enforce their shrinkage rules. This is an error. The Ohio State Buyers' Association passed similar resolves last year, and has recently, in a State Convention, reaffirmed them. Various other State and local Associations have taken the same action,—but we have not preserved records of their places and times of meeting. The movement is general in the principal wool growing States,—nor has it been confined to mere words—"puffs of empty air," as the New England Farmer elsewhere terms them. It is notorious that buyers, in all parts of the country, are attempting practically to carry out these "rules," and that they are rapidly becoming more fixed and peremptory in this—*alleging them to be the established*

regulations of the trade. We have made extensive recent inquiries on the subject, and regret to say that, in our opinion, there is no doubt that a large proportion, if not even a majority of growers, though protesting against the injustice of these arbitrary exactions, actually submitted to them in selling the clip of 1867.

Let our friend of the NEW ENGLAND FARMER make inquiries among the wool brokers and dealers at home, in Boston, and ascertain what proportion of *them* recognize and act on the one-third shrinkage rule, in their transactions in *domestic* wool. We suspect that he will find that nearly all of them practice the rule, and that they took the lead of the country dealers in the matter. As long ago as December, 1865, at the National Convention of Wool Growers and Manufacturers at Syracuse, Mr. Geo. W. Bond, one of the most eminent and well informed wool brokers in Boston, or in the United States, declared that "he understood that (the one-third shrinkage) rule commonly prevailed among the buyers and sellers of American unwashed wool—so much so, that in the absence of a contract, the rule would be understood to prevail as a matter of course." And how tenaciously Boston dealers are disposed to cling to the rule, and resent its infraction among themselves, may be inferred from the following fact. We recommended a Boston house, to which, on the supposition that it sold wool "on its merits," we had advised some lots of wool to be sent in 1867, to *advertise* that it would so sell in all cases; stating that by so doing it might confidently anticipate large consignments from the interior of New York. In reply, it solicited a favorable notice from us, (which it did not receive,) but declined to comply with our suggestion, on the ground that it might thus "incur the enmity of (wool) merchants!"

In view of the above facts, we confess it is impossible for us to regard the general combination among buyers and dealers—every day acquiring a more systematic organization, and every day adding new force and solidity to its rules by custom—as an evil which cannot longer be safely submitted to, or safely permitted to take its own course. Our writings on sheep husbandry, for the last twenty years, will show whether we ever have been either an alarmist or an agitator on this class of subjects. We have ever believed that the triumphs of peace, if attainable, are cheaper and better than those of war; and, as a general thing, we have believed them more attainable. We regard an internecine conflict between the different branches of the same general interest as especially deplorable. But when one branch of such an interest persists in disregarding common sense and common justice in its dealings with another branch, and, mistaking patience and moderation for approaching submission, arrogantly assumes that its will is the settled law in the premises—what remedy remains to the injured party but outspoken, energetic and *organized* resistance?

Some persons seem to suppose that inasmuch as "it takes two to make a bargain"—inasmuch as the buyer cannot enforce his rules on the seller without the consent of the latter—it is safe to leave the matter entirely to individual action. The history of the last two or three years teaches a different lesson. The buyers' rules have steadily spread wider in their field of operation and been more and more successfully enforced. What else could be expected, when they were supported and acted upon by a powerful and organized body of men, and met with no organized opposition? Was there not, ostensibly, even some ground for the pretence that they were "established laws of trade" when buyers' association after buyers' association substantially proclaimed them such, and the growers' associations generally remained silent on the subject? Was it to be anticipated that the scattered sellers—especially the small sellers, who in the aggregate grow most wool—would make an obstinate resistance, when they were not encouraged by their associations to do so, when they saw their neighbors giving way to the exaction, and when they were doubtless led to apprehend that they would lose the sale of their clips if they stood out? But if the same men learn that their neighbors and the wool growers of the country will stand by them; if they learn that their brethren, as a class, appeal to them to join, as a matter of duty and principle, in protecting the common rights—none but weak-kneed and milk-and-water men, or those who *must* sell on the first chance, from pecuniary necessity, will abandon the common cause.

We have spoken of growers' associations, in previous years, remaining silent on this topic. There has been at least one exception. The New York State Association—after inviting the State Buyers' Association to join in the deliberation—held a meeting on the subject of the "buyers' rules" at its Annual Fair at Auburn, in May, 1867. Not more than one member of the Buyers' Association attended. One manufacturer was present. After a full discussion, resolutions were unanimously passed setting forth the glaring injustice of "the rules," and of some other buyers' customs. But no recommendation was made in favor of a general and united defensive movement. It was then hoped that such steps would not be necessary. Many believed that the buyers' resolves, in their public meetings, were "puffs of empty air"—mere expressions of their *wishes*—and that such absurd and unjust regulations would not be insisted on in practice, at least by country buyers. And for reasons heretofore given by us, a confident expectation was entertained that the National Association of Wool Manufacturers would soon repudiate the obnoxious rules, and thus bring them into disrepute both among city and country dealers. Detesting anything savoring of

combination in the affairs of trade, unless rendered absolutely necessary in self-defence, the New York Growers' Association judged, and we believe wisely judged, that it was not expedient to resort even to defensive combination until the necessity should become palpable, imperative and apparent to all.

Another season has rolled by. The "sober thought" has brought no change in the action of the buyers. They are again fulminating and reiterating resolutions in favor of their odious and insulting rules. A majority of the individual clips of 1867 were, as already said, sold under those rules. And we learn from undoubted sources that a most decided effort will be made to enforce them universally in buying up the clip of 1868. We most sincerely believe, then, that the struggle cannot be safely put off longer. We believe that if the clip of 1868 is sold under "the rules," subsequent resistance will be rendered ten times as difficult, if not altogether unavailing We believe that such would be the deliberate and unanimous conclusion of every State growers' association if they were convened to obtain an expression on the subject. But the meetings of most of them will not be held before most of the new clip will probably be sold.

But individual growers *can* take the remedy into their own hands. They are called upon by every consideration of interest and of manhood to do so. Let every one remember that his own submission to the buyers' rules—even if he has not half a dozen fleeces to be affected by them—is an abandonment of the rights and interests of his class and is directly giving aid and comfort to those who are, in this matter, the enemies of his class.

CUTTING GRASS IN JUNE.

In answer to inquiries in reference to cutting hay in June, I would say that clover and herdsgrass do retain their vitality when cut thus early. I have continued the practice ten or twelve years, and find it a success. I commence haying about the 10th of June, and finish by the 25th, if I can, and then the second crop is ready to cut the last of July or first of August. If the weather is favorable, a third crop can be cut in September, and then a crop grows sufficiently to cover the grass roots, which serves as a coat of manure.

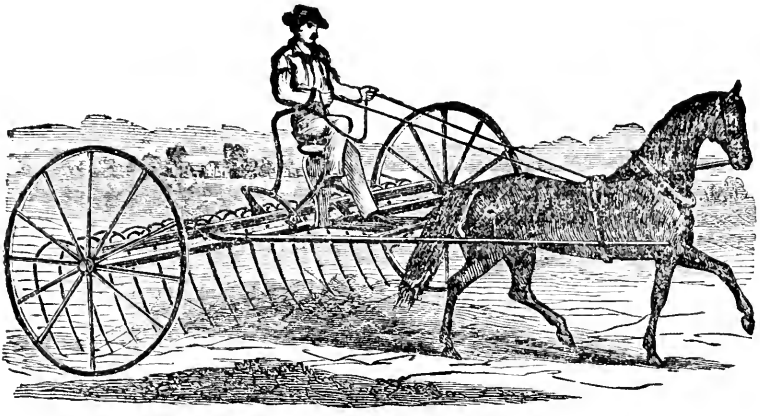
The great error in farmers is in letting their cattle go on their mowing ground for fall feed, and continuing to feed them until they are put up to hay for winter. In that way the grass roots are left so bare that the winter kills half of them; and that *is* not all,—the continued travel of the animals treading down the ground, is as great an injury as the feeding. For instance, take a road where the farmers cart their manure across the grass ground, and they find but a short crop in the road, while it is stout grass each side.

The practice of farmers from my boyhood up, is to stock their ground with grain. That practice with me is abandoned. I spread on a coat of manure after plowing, and harrow it in; then sow on five pecks of clover and herdsgrass, equal parts, per acre, and harrow it in well; then pick up the stones, if any, and cart them off, and roll it down, which gives a smooth bottom to mow. I plough and harrow in the manure in the fall if I can, which gives a chance to get the seed in earlier in spring. You can then cut about the 15th of July two tons of hay per acre, which will include some weeds, but the weeds are nice hay if cut at this time; and the first of September it cuts two tons more without any weeds, which is a nicer crop than the first.

Grass cut in this way dispenses with all meal and roots, as I will show on two ordinary cows, and quite undersized, which came in in February last, and have been fed on hay three times a day only, and nothing else, kept in a warm stable that does not freeze, and watered twice a day. They consume 20 lbs. of hay per day each, which makes it cost (at $20 per ton,) 20 cents a day each to feed them; and in return they make one and a half pounds of butter each, per day, which has been worth 50 cents per lb., and now 40c., which makes 60c per day for 20c. worth of hay to feed them. I will now state the growth of a pair of steers I sold two weeks ago. Their weight was 2610 lbs. at 24 months old, and they sold at $8 per cwt., live weight, which amounted to $208.80. I sold them on Tuesday, at 3 o'clock, P. M., and I was to keep them until Thursday. The buyer them came for them, and we weighed them again at 10 o'clock, and they stood 2630 —a gain of 20 lbs. in less than two days, which makes the growth five pounds each per day. This, Messrs. Editors, shows your readers the effects of cutting hay early. The steers have been fed same as the cows.—*A. Scott, Craftsbury, Vt., May* 17.—*Country Gentleman.*

REMARKS.—Our cattle market reporter noticed the sale of these steers in his report of the market for April 29. They were regarded by both butchers and drovers as a very well fatted pair of steers for their age; but as they were fatted without grain, our reporter was a little curious to know how they dressed. He has since made inquiry of the purchaser, Mr. Holmes, of the Cape, as to their "proof," and has been informed by him that they dressed first rate,—even better than was anticipated from their outside appearance.

A ROCK MAPLE was recently cut on the pasture of N. K. Abbott of West Concord, N. H., whose circumference, where chopped, was 14 feet 9 inches. It was at least 100 feet high, and had been tapped for sugaring 106 years.



WHITTEMORE'S SELF-LOCKING RAKE.

In the invention and construction of this rake, which was patented February 4, 1868, the proprietors have endeavored to remedy the imperfections and to avoid the objections which the operation of other horse rakes have suggested. By the simple but effective device of a "Lock Lever," the teeth can be held to the ground in heavy work, or raised just above the surface, so as to avoid scratching up manure or dirt while operating as an efficient gleaner. Among its other advantages are "clearers," which facilitate the emptying the rake and keep the windrow compact; its simplicity of construction and consequent ease of repair,—each tooth, being independent, can be replaced by another, if broken, in five minutes; its ease of operation,—being the easiest working rake in the market; its easy spring seat, which is secured to the axle so as to relieve the horse of the weight of the driver. It is furnished either with iron or steel teeth, and is manufactured by Whittemore, Belcher & Co., at Chicopee Falls, Mass., and is for sale by them at 34 Merchants' Row, Boston.

PLOUGHING UP OLD ORCHARDS.

A question frequently arises as to the best course to be pursued with an old neglected orchard, which has become covered with a dense sod of grass, and this often of an inferior character, and full of disagreeable weeds. Orchards that have been widely planted, and which have gaps from the decay of trees, especially when these have been trimmed up with high stems, and long naked branches, do not cast sufficient shade upon the ground to prevent the growth of grass and weeds. These intruders occupy the surface soil to the disadvantage of the roots of the fruit trees, and we may wonderfully improve the health of such orchards by ploughing the ground, and at the same time severely pruning the branches and cleaning the bark of these old trees. These good results may be continued by shallow culture of the soil, with suitable applications of manure where needed. By giving a dose of lime, or marl and ashes, new life, growth and productiveness will astonish and delight the orchardist, and reward him for his labor and his outlay. It may be urged as an objection to breaking up the sod, that the most careful ploughman will unavoidably damage some of the roots that approach the surface; but this is an injury that must be submitted to; and after all, it is not such a serious affair, and is overbalanced by the advantages of renewing the productiveness of the exhausted orchard. *Dr. Warder's American Pomology.*

TRANSFERRING BEES.—H. B. K. Kinmundy, Ill., wants to know the best or readiest way to transfer bees from old box hives to new and improved ones. We know of no better way than that recommended by Langstroth in his treatise on the honey bee. When a colony is to be transferred, a box sufficiently large to hold the swarm is provided and placed on the top of the hive to be vacated, with an aperture for the admission of the bees into it. This done, the entrance holes of the old hive are closed and the sides rapped upon smartly with a stick. This continued for a while will cause the bees to escape up through an opening in the hive to the extra box, where they

can be secured for the time being. When they are out, sufficient store and brood comb for the colony may be cut from the old hive and fastened in the new one in such a manner as to keep it in place till the bees can have time to attach it permanently to the movable frames. This done, the new hive is placed in the position on the stand occupied by the old one, and the bees in the box turned down in front of it to seek their new home. This they will generally do without much remonstrance, and the work of accumulation and propagation will go on as though the processes had suffered no interruption by the transference from one domicil to another.—*Rural New Yorker.*

EXTRACTS AND REPLIES.

ASHES, SOOT, AND SALT FOR STOCK.

I have often thought I would give you a line of my experience with farm stock,—working horses in particular. My first care is to feed my horses as regularly as possible, and then have them worked with moderation. Twice or three times a week I give them salt; nearly always using a small portion of ashes, soot or lime with the salt. While I have done this I have no recollection of ever being troubled with bots or other sickness among my horses. But in other years, when this was neglected, from absence or otherwise, I have been troubled with sick horses, and have had some die. Once or twice a month I give a similar mixture to my cows and oxen.

When warm weather commences in the spring, I mix a teaspoonful or more of sulphur, and the same of saltpetre with the salt for each of my young cattle, and they generally shed their old coats, start their new ones and begin to fatten earlier than my neighbors' stock not so treated. Ashes or soot with salt I also think is good for sheep and hogs.

As far as my observation has extended, the man that is careful of his stock, or in his farming, or in any other avocation, is almost certain to succeed, while the careless fail.

I have always thought that a good agricultural paper was one of the best helps to the farmer. A single idea found there is often of more value to him than the price of the paper a whole year.

West Virginia, June, 1868. J. H. R.

Remarks.—The above hints were written by a gentleman who was born and has always lived south of Mason and Dixon's line. We solicit a continuation of our correspondent's practical suggestions.

SALTING COWS.

In the Monthly Farmer for October last, page 465, in a discussion on the subject of the dairy at a convention in Elgin, Ill., Mr. J. M. Treadwell is reported to have said that he "salts cows every five days in summer; after salting, the milk increases from two to five gallons; cows will not eat salt much oftener than once in four days." One may perform a particular act daily, semi-weekly or weekly with some degree of regularity; but to shave one's face, wind up the clock, salt the cows, or anything the "like o' that," once in *five* days, with any degree of regularity would require, I should think, an extraordinary memory. So far as my observation extends, cows will almost always eat a little salt every day, if they can get it. Civilized men eat salt, in some shape, at almost every meal. It is said that prisoners deprived of salt cannot remain healthy. Is it not better, then, to offer cows salt every day, or, what is perhaps still better, give them access to it whenever they choose, and let them follow their own instincts? It is said that some who sell milk mix salt with the food which they give their cows, in larger quantities than they would naturally eat, for the sake of increasing the quantity of milk. This I regard as an immorality, being a violation of law, both natural and moral. The milk must be of a poorer quality, and the cows less healthy. What Mr. Treadwell means by saying that "after salting, the milk increases from two to five gallons, I do not know. That he should get five gallons instead of two seems incredible. Substituting *per cent.* for *gallons*, the meaning would seem less extravagant. In either case, if salting once in five days would produce any increase of milk, I think that salting every day would produce a still greater increase.

Derry, N. H., May, 1868. E. B.

Remarks.—Mr. Treadwell was speaking of the management of his whole herd, and of his manner of treating the milk from all his cows, and we understood the gain of two to five gallons was on the whole daily produce. The number of cows kept by him was not stated, but from the fact that he had been in the business of sending milk to Chicago for ten years, and from our knowledge of the grand scale on which Western farmers conduct operations, we presume that his number of cows was pretty large.

WINDMILLS FOR PUMPING WATER.

Can you, Mr. Editor, or some of your correspondents give us a plan for pumping water for a stock of cattle, and for the use of the family in the house, by the aid of a cheap windmill. Many wells might perhaps be exhausted, as the wind blows a great share of the time enough to turn a small windmill, but why not have a pipe to return the surplus water to the well. It appears to me that if something of the kind could be got up at small expense it would save a great deal of labor.

Would it do to build a cistern under ground in land that is elevated above the buildings, and convey it in pipes to the house and barn?

Northboro', Mass., Feb. 3, 1868. C. Eames.

TO SAVE LABOR IN HOEING POTATOES.

Last year I planted two acres of potatoes, the hills three feet apart each way, the rows at right angles so I could run the cultivator two ways. I used a shovel plough which hilled them up just right, and in one day went over the piece both ways; then after a few days went through in one direction only. That was all the labor I expended upon them between planting and digging. The result was a crop of 300 bushels. This year I have planted the same ground in the same way, and do not intend to hoe them, and expect a better crop, as I put on plaster last year and manure this. I also kept a cosset sheep in my potato field, and I believe it is true that sheep will not eat growing potatoes. I shall keep two or three sheep among them this year to crop any weeds that grow.

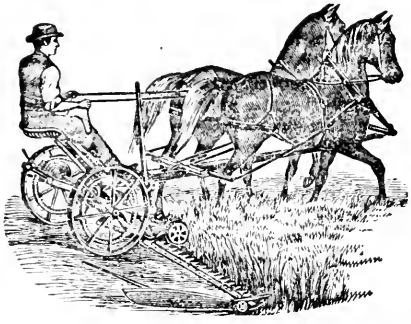
KEEPING DIFFERENT BREEDS OF SHEEP TOGETHER.

An item has gone the round that English sheep would not thrive when kept among Spanish Merinoes. I have kept full blood Cotswold, South Down and Spanish Merino lambs together all winter, and they have all done well. They ate grain out of the same dish, and drank together without the least apparent reluctance. The Cots-

wold kept fat all winter. I do not know the exact weight of the different animals, but I judge the Cotswold to be three times as heavy as the merino, and twice as heavy as the South Down. A writer in the *Stock Journal* says cows will not eat after sheep. That's bosh. They clean out sheep racks with the greatest eagerness, and pick up hay that has been trampled by sheep, and graze in the same pastures. Z. E. JAMESON.

Irasburg, Vt., June 1, 1868.

WOOD'S GOLD PRIZE MOWER.



American farmers have reason to be proud of the honor achieved by the agricultural implements exhibited and tested at the late World's Fair, at Paris, because their liberal patronage of our mechanics created that necessity which was the mother of all these inventions. The above cut represents the mowing machine which took the Grand Gold Medal, and the Decoration of the Imperial Cross of the Legion of Honor, on that occasion, as well as First Premiums at the State Fairs of Vermont and New Hampshire, and numerous county Fairs. It is manufactured only at Hoosick Falls, N. Y., where we understand over one hundred are made per day. This machine is for sale by Whittemore, Belcher & Co., Boston.

FARMER'S GIRLS.

I was glad to see that "One of the Boys" had confidence enough to write a few lines in answer to the complaint about boys leaving the farm, and that you had the fairness to publish them. Cannot he, or some one of the other boys, say a word for the girls, who are about as much censured in this respect as themselves? Our school books tell us that effects are the results of causes. What then are the causes of this general dissatisfaction of the young people? Girls as well as boys are pleased with a sense of responsibility. This is thrown upon us in school. We are required to demonstrate problems, to write compositions, and to give a reason for every operation we perform. In old times the dignity of responsibility was felt by the girls who were required to spin a given number of skeins per day, and then perhaps to weave a web of her own. But now household duties are so narrowed down that some mothers find little for their daughters to do on their own hook, and fret and complain because they *help* them so little. If we go to the factory, we have tasks of our own—the charge of one or more looms, or some other department,—and are responsible for our work; if we teach school, the committee speak of it as Miss So-and-so's school. But how is it with those of us who are blamed for not staying at home to *help* mother? Have we the responsibility necessary to excite ambition? Whether these thoughts of one of the girls are worth the notice of editors or mothers is not for me to decide, and I therefore bid you good evening.

New Hampshire, May, 1868. ANNIE.

REMARKS.—"Man never is but always to be blest" can be truthfully said, we suppose, of girls and boys as well as of "man;" of city as well as of country people; of the trades and professions as well as of farmers. Is it wise, therefore, dear Annie, to blame the farm, the farm-house, or any of our outward circumstances for the "aching voids," or the restless discontents, which spring from within? Do you expect *ever* to be contented?

TIME AND MODE OF HAY MAKING.

The readers of the FARMER cannot well overlook your editorial, May 30th, on the subject of "Early making the hay." The subject is well elaborated, and carries with it the most convincing facts. That too much grass stands till it is overripe and becomes tough, wiry and woody, every farmer that feeds his stock will admit. The teeth and stomach of the animals are severely tested; the nourishing, fattening properties are lost, and the milk pail fails to show a "good mess."

The shortest possible time for curing hay is the rule on this island. Unless the grass is very green and heavy, or a very poor "hay day," by plying the tedder freely hay is generally "barned" the day it is cut, unless it may have been mowed the evening previous. Farmers here say it is far better, sweeter and more tender when thus hayed, and that hay is generally dried too much, and that farmers have too much fear of must.

Your correspondent, Asa G. Sheldon, in a communication in the Monthly FARMER, for 1867, page 417, favors late cutting and more thorough drying, and suggests imperfectly cured hay as a cause of abortion in cows; but I think that farmers generally are now satisfied that much has been lost by letting the grass get too ripe, and by exposing it to too much drying after it is cut, and I cannot but thank the NEW ENGLAND FARMER for this instructive article, and feel that every farmer who reads it will be instructed, and will adopt and accept the general principles as sound in every particular. It will cost no time to test it, nor money to try the experiment suggested.

Brooklyn, L. I., June 3, 1868. HENRY POOR.

GREEN CURRANT WORM.

Will you please inform me, through the columns of your paper, in the "Extracts and Replies," a remedy for those small green worms that infest currant bushes. They will completely strip the bush in a short time. NICKERBOCKER.

Orwell, Vt., June 2, 1868.

REMARKS.—Having great faith in manual labor, our first recommendation is hand picking. Turn over the leaves and destroy the eggs. But if too late for that, dust the plants and worms with white hellebore, which is somewhat costly and may be reduced by the addition of flour, well mixed, or try equal parts of plaster, wood ashes and lime, which is said to be effectual, and much cheaper.

COARSE WOOL SHEEP AND LAMBS.

As I have occasionally seen lamb stories in the FARMER, permit me to say that I have a little flock of ten coarse wool sheep followed by eighteen lambs. One of my sheep has three lambs, which at three weeks old, and before going to grass or

having any feed except what they obtained from their dam, weighed respectively 13½, 15½ and 16 pounds,—in all 45 pounds. A. J. MORSE.
Fayetteville, Vt., June, 1868.

AGRICULTURAL ITEMS.

—"One year's seeding
Makes seven years' weeding."

—A correspondent of the *Country Gentleman* says the Germans are rapidly settling in Illinois, and he predicts that in twenty years they will have full possession of the central part of that State.

—A correspondent of the *Country Gentleman* obtained an abundant crop of plums from some trees in which portions of the offal of a pig were hung, while the fruit on trees in a henyard were all destroyed.

—In England and France, dried fern leaves are used very extensively for packing fresh fruit, grapes especially; they seeming to possess to an unusual degree the property of preserving vegetable and even animal substances for a long time.

—It is said that a handful of oil meal in a hill of corn, will occupy the cut worms, till the kernel is decayed, and no longer liable to be injured by them. As a manure it is worth about as much as guano, so that where cut worms abound, it will pay to use it freely.

—Grafton and Coos counties, N. H., have at least forty starch mills, twenty mills in each county. Each of these mills turns out fifty tons of prime starch annually, worth $150 per ton. Five hundred thousand bushels of potatoes are annually manufactured into 2000 tons of starch, which is sold for the round sum of $300,000.

—A correspondent of the *Valley Farmer* saw iron ox-bows at use at the navy-yard in Philadelphia, found the teamsters approved of them, went home and for eight years used none but iron. He used a three-fourths inch rod of round iron with screws on the ends with a nut three by two inches. With a one-and-a-half inch hole required by wood bows, the yoke is much more weakened than by those of only three-fourths inch for iron.

—A correspondent of the *Western Rural* says that when he perceives his horses inclined to rub their manes and tails he feeds them a little oil-meal, say from one to two quarts a day for a week or ten days, and at the same time makes a good brine, as warm as he can bear his hand in it, and washes the scaly substances out of the mane and tail, and mixes about a tablespoonful of lard to a teaspoonful of powder, and rubs it in well about the roots of the mane and tail.

—The *Ohio Farmer* objects to plugging maple trees as recommended by our correspondent "W. V. H.," and says: By leaving the hole open the sap of the tree forms a cambium or jelly on the wound which becomes a new bark and under this protection new wood is formed and in a healthy tree the hole gradually closes up; whereas, if a wooden plug is driven in the sap keeps the plug moist, no bark can form on the lips of the wound and the hole is more likely to rot than to heal up.

—A correspondent of the *Prairie Farmer* says that the past winter has been unusually severe on grape vines in Iowa. It is estimated that fully one-half of the vines in the county of Benton, are dead. He ascribes this to shallow planting, by which the buds start prematurely in the spring and are destroyed by frost. His own vines, with the crown about one foot below the surface, have escaped injury. He is not sure that this plan would answer in other climates and in heavier soils.

—C. L. Hoyt, President of the Potter County, Pa., Agricultural Society, and probably a pretty sharp man generally, writes to the *Rural New Yorker* that he will warrant the following to be an infallible cure for hoof rot in any flock of sheep in America:

Perseverance	500 lbs.
Jack knife	100 "
Blue vitriol (pulverized)	3 "
Spirits turpentine	½ pint.

Apply the latter to keep away the flies.

—Mr. Vanmeter, of Salem, New Jersey, says, "Most of our farms along the Delaware river and inland creeks, have meadows. Some of these meadows are classed as number one for grazing purposes. The portions called inferior are noted for producing herdsgrass. The cattle will not eat the hay; it is thrown after threshing into the barn yard for manure; but the seed is in great demand, worth at the present time $1.50 per bushel. Some farmers the past season have received from $1000 to $3000 for the seed, according to the number of acres in meadow." Here is proof of the importance of cutting herdsgrass early for hay. If allowed to ripen its seed, it is nearly worthless for hay.

—A German horticulturist recommends the following method to cover a steep bank with grass. For each square rod to be planted, take half a pound of lawn grass seed, and mix it intimately and thoroughly with about six cubic feet of good dry garden earth and loam. This is placed in a tub, and to it liquid manure, diluted with about two-thirds of water, is added, and well stirred in, so as to bring the whole to the consistency of mortar. The slope is to be cleaned off and made perfectly smooth, and then well watered, after which the paste just mentioned is to be applied with a trowel, and made as even and thin as possible. Should it crack by exposure to the air, it is to be again watered and smoothed up, day by day, until the grass makes its appearance, which will be in eight to fourteen days, and the whole declivity will soon be covered by a close carpet of green.

A SELF-REGULATING WINDMILL, called the "Sancho Panza," was recently exhibited at New York, which attracted considerable attention.

Ladies' Department.

DOMESTIC ECONOMY;

OR,

HOW TO MAKE HOME PLEASANT.

BY ANNE G. HALE.

[NOTE.—The desire to impart such information as should save the young house-keeper much perplexity and hard and unpleasant labor, to show her how to economise her time and her resources, and to help her to introduce among ordinary household duties such occupations as should furnish both her and her children with subjects for high thought and profitable conversation, was the motive which first led to the preparation of these articles on Domestic Economy. And it has been, and still will be, the aim of the author to lighten, to cheer, and to ennoble the life of the housewife and mother. This statement seems called for because she finds that in her anxiety to meet all the wants of the most inexperienced she has touched upon so many points that her motives have been misunderstood, and by some readers she has been credited with the very opposite of her aims and intentions.]

CHAPTER XII.

WOMAN'S WORK AMONG GARDEN FLOWERS.

It may be necessary to devote the larger portion of your land to vegetables, hence I have spoken of those first, but even if that is the case, you can manage to have a few flowers; when fruit trees and vegetables are arranged with taste there is always room somewhere to set two or three bulbs, or to plant half a dozen seeds, that will lend a good deal of beauty to the kitchen garden. Still, on many accounts, it is better to spare a little spot for their especial use, and you can lay out your ground so that it shall be in the centre; there you will be sure that tender plants are well sheltered by the stronger and coarser growth of the trees and vegetables. To this, a walk from the house should lead, bordered by ornamental trees and flowering shrubs, or the hardier flowers of low growth and such bulbs as need to be taken up in the fall. But the best plan is to set apart a plot for flowers alone; and this should be where a good view of it can be had from the windows of the house. It is also pleasant to give others the benefit of its beauty and fragrance; so let it be as near the street as you can. A great annoyance to housekeepers is the dust that rises from open ground, which, when there is the least air stirring, rushes directly in at the doors and windows; because of this, the mould immediately surrounding a house should be turfed. In this may be set trees, vines and shrubs, and such bulbs as seldom need removal; the turf upon their roots should be laid back every spring while a dressing is applied to the soil, and then replaced. Thus treated, this land and that of small front yards gives a much better appearance to the house, as well as saves the owner more trouble, than the usual fashion of devoting it to the culture of such plants as require a bare soil.

If your flower garden needs a screen from the street, or the northern or easterly winds, see that you have a good fence, upon or against which vines and tall shrubs may be made to lean; or else set a hedge. For this, the hawthorn, with its beautiful white or red blossoms, is desirable; but it grows slowly and requires a dry soil. The buckthorn will flourish almost anywhere, and grows rapidly. If these are raised from seed, sow them in the autumn; but getting young plants from some nursery is a more satisfactory way of starting it. Set plants for hedges in May; after the second year, trim and head them every August. The lilac makes a good hedge if allowed to throw up suckers. This, as well as the buckthorn, needs much trimming and frequent "heading in" to form a thick screen. The arbor vitæ, raised from cuttings, makes an excellent hedge, neat and durable. I once saw a beautiful hedge planted by Nature's hand, but kept in order by man. There were plants of various form and foliage, blooming each in its season,—the shad-bush, bird-cherry, elder, wild-rose, blackberry, raspberry, hardhack, meadow-sweet, golden-rod, and aster. Such hedges cost nothing, require very little care—only to be kept tidy—and are an ornament to any ground; it is a pity that they are so often destroyed.

The boys of the family will like to help make the beds and walks, and to keep the walks in order. It is a good plan to give older children beds to cultivate for themselves; they thus have a particular interest in the general concerns of the garden. Assist them in the choice of flowers, and in their arrangement. Some children find a great deal of amusement in planting seeds in fanciful figures, and letters and words, and will work hard in order to keep the device looking well. If they have a taste that way, indulge them in it; and point out to them the wonderful varieties of foliage and form; teach them to notice the delicate shadings and textures. By these means they will acquire habits of attention and observation,—their taste for the beautiful will be developed and cultivated; and they will very soon learn to find more enjoyment in gardening than in rough sports, or in lounging; the most heedless will grow thoughtful, and those of coarse and wild manners become refined and gentle.

The form and size of your flower beds depend in a great measure upon the shape of your plot, but circular or oval beds or rings, with a few of an oblong, or a crescent shape, to give variety, are most easily laid out by women, and have a good effect if rightly filled. Directions for making these have been given. They should be edged either with turf or low, close-growing plants or strips of

board. The dwarf box is the most common and the best edging, and being an evergreen gives a lively appearance to the garden when no flowers are in bloom. It is raised from cuttings or division of the root. Set them about four inches apart, trim them the next year, and every year, in June; they should never be higher than four or five inches. When they are too thick take up the plants and divide them. The dwarf pink, if kept neatly in its place, and covered with dead leaves in the winter is quite pretty for this purpose. Also the thrift and the chamomile. The walks of a flower garden should be three feet wide, at least, and kept dry, clean, and solid, in all weathers. If of gravel, a little added every spring and well rolled, they will generally be in good condition. Fine cinders sifted from coal ashes make a very good walk. Still, a much better plan is to have all the space between flower beds turfed, and the grass often cut and rolled; this velvety greenness will give a more vivid aspect to the view, and bring out in strong relief the colors of the flowers.

Set plants of tallest growth and most showy foliage and blossoming at the farthest point of view; as a general rule they should never be in such quantity among less conspicuous objects as to attract all the attention. In arranging flowers in groups place the largest and tallest in the centre, those of light and waving foliage for the outline of the group, those of heavier and prim habit within, and dispose all beds and groups with reference to the general effect—none should hide or overpower others. Also, in designing these groups or beds see that care be taken to bring together only those colors that contrast well, either with themselves when arranged in "ribbon" form, or, when of one color, with that of the adjacent groups. Never set or plant flowers in beds or rows promiscuously as to colors or forms—there must be harmony in both to give pleasure to the eye. For annuals, the "ribbon" style is very pretty: the seeds are sown, or the young plants set, in circles, one within another, so that when in bloom the bed presents a red, a white, a blue, and a yellow ring. An elegant contrast is afforded by white and red alone, purple and yellow, blue and white, or each of these in one large mass of color, when the beds are surrounded by greenery—are set in the turf of a lawn, and kept distinct. You should also provide for a succession of flowers in your beds, so that when one set have lost their beauty there shall be others just ready to show their colors. The prevailing hue of spring blossoms is white; of summer, red; of autumn, yellow; and in your choice see that you have enough of other tints to harmonize well with them; yellow is so "overpowering," as some persons say, you should never admit much of it into a garden, or into a bouquet.

Set shrubs in cloudy, damp weather; early in October is the best time, but May will answer with all except those of the earliest blooming. Give them plenty of room and a good deal of loose soil about their roots; water them then, and, unless it rains, every day for a week. Every three years they should taken up, their roots divided and reset. Bulbous and tuberous plants, if raised from seed, should be planted in pots or boxes as soon as the seed is ripe, and these boxes kept dry in a warm, dry cellar through the winter. Set the boxes out of doors the next summer, the following winter in the cellar again; in spring they may be placed in the garden and will probably bloom. Lilies, most irises, crocuses, tulips, and some kinds of narcissi, may remain in the soil through the winter—also snowdrops and some hyacinths. The gladiolus, tigridia, and dahlia, all need to be taken up in the fall. The bulbs should be dried; the dahlia tubers washed first, and then spread in boxes, or on shelves, in the cellar, where they will not freeze nor yet be very dry; if heaped together they will be liable to decay. In April throw sand or soil into the boxes sufficient to cover the tubers, and keep the boxes in a warm room, or out-of-doors, in the sun, during the daytime, till they sprout. Then divide the tubers, set in very rich soil, one foot deep, two feet apart; place a tall stake at each root, to which tie the plant when a foot high; water frequently with a liquid preparation of hen-guano and charcoal-dust. Keep tigridia bulbs in sawdust through the winter,—dahlias also keep well in sawdust,—where they will not freeze. Set them in May in rich soil, two inches deep, one foot apart. The old-fashioned and more hardy kinds of the gladiolus are left in the ground by some persons and covered with dead leaves. The choice varieties must be taken up before the frost comes. Dry them, and keep them in a warm, dry cellar. They need a sandy loam enriched with leaf mould. Set them in this late in the spring—after all your other bulbs are taken care of—between two and three inches deep, a foot apart; at the same time give each bulb a rod or slender stick, and tie the stalk to this as it gets high enough. Choice irises should have a similar soil and be cared for through the winter in the same way; also choice tulips and hyacinths.

To have annual flowers early, make a bed of light, rich earth in a sheltered, sunny situation, in October, and in this plant your seeds—each sort having a wooden label set with it. Cover the bed with boards until April; then remove the cover,—at night spread a mat over them until there is no danger from frost. Transplant them to your beds when they have their second leaves. If you have a hot bed for vegetables prepare one also for flowers, but use a cloth screen or cover rather than a sash. A good way is to fill flat boxes about three or four inches deep with well-mixed sand and loam, and raise them in this in the house. In March, warm the soil, in the stove oven, and then plant your seeds. Keep the boxes where it is light and warm till they are up, then give them sunshine. Accustom them gradually to the out-of-door

air by setting out the box at noon every fair day after the middle of April. Always take a damp, cloudy day to transplant, and shade the young plants for several days by spreading newspapers or cloth screens or baskets over them during the greatest heat. To sow seeds: level and press the soil of the bed with the back of the spade, a shingle, an old flatiron, anything of light weight and smooth face; mix fine seeds with sand and then scatter them upon this surface; sift a very little loam and sand mixed over them, and if the weather is dry and windy keep them covered with papers, kept in place by large stones, or with cloth screens, for some days,—don't sow on a windy day. The larger seeds may be covered a third of an inch deep, with the sand and loam; such as petunias, portulacas, poppies, need no cover. Wherever seed is planted set a label. When the plants have their second leaves thin them out—be sure to allow them room enough; when full grown no plant should touch its neighbor.

A rustic seat, an arbor, or a summer house, are attractive objects in a garden. Very elegant and expensive ones are too often seen. Simpler structures are generally more appropriate, (any man or large boy can make some sort of a substantial frame from strips of board, laths, or the branches of trees,) which when ingeniously covered by training vines over them are very handsome. These should not obtrude upon the sight, yet not be hidden entirely from view, and will afford delightful retreats for those who enjoy the quiet contemplation of Nature.

A rockery, for the growth of such plants as love the shade and need little soil, is in its way very beautiful. If you can spare three or four square yards of land in a sequestered spot, —or, you can make it so by setting trees in its vicinity,—collect there all the rocks and large stones that cultivation throws out of your ground; and procure others from the roads and pastures, of all sizes and shapes, from the biggest and roughest rocks to pebbles. Dispose them in hillocks, mounds, or grottoes—any way to look picturesque—with soil around and upon them, some half hidden, others lying nearly bare. And in the interstices and crevices set ferns and mosses and young junipers; pines, or hemlocks; roots of the partridge berry, winter-green, ground-ivy, violets, anemones, hepaticas, houstania, saxifrage, straw-bells, columbines, the trailing arbutus, wild geraniums, trefoils, crowfoots—any, or all of these wild flowers; and then among them, in pots hidden by moss, or in some richer, deeper portion of the soil, verbenas, of various colors—to be taken into the house before winter; also ivies and nummularia, the same.

This little picture of forest life you and your children can make upon three or four yards of ground, but ten or twelve will of course be better, and such work is a source of endless delight.

Now for our flowers. The list however must be short and our notice of them brief. Among shrubs you will first look for Roses. These we can have of all colors except blue; and of numberless kinds, from the tiny Burgundy, only a foot high, with blossom scarcely an inch in diameter, to the Queen of the Prairies climbing to the chimney-top of a cottage with its heavy clusters of flowers each over six inches in circumference; but don't forget the sweet-briar, with its deliciously fragrant foliage, if it a wilding; nor yet its aristocratic cousin, the moss-rose, the loveliest of all. Roses need a deep, rich soil, but dry; they do better when not exposed to the full heat of the sun, and they want a plenty of room. They are increased by layers, or division of the root. Start them in the autumn. The more tender kinds need a covering of mats or straw tied about them through the winter.

Of early spring shrubs we have the wild *Rhodora canadensis*, with its crimson flowers before the leaves, in May. Take it, with the bog earth upon its roots, from the meadows, in the autumn. Then come the Rhododendron of the gardens, with its pink shaded blossoms,—it needs a light, rich soil, rather moist, and flourishes best in sheltered situations; the double-flowering cherry and peach,—these are trees, but exceedingly beautiful for the flower-garden, as also the Siberian crab-apple; the *Cydonia Japonica*—the Japan quince—with its glowing scarlet flowers; the *Diervilla rosea*—generally called Wiegela; the *Amygdalus nana*—Dwarf Flowering Almond—covered with tiny pink blossoms like roses. Then the *Philadelphus grandiflorus*—Mock Orange—and its sister, *P. coronarius* —the Syringa; *Viburnum opulus*—the Snow ball, or Guelder Rose;—these with white flowers. *Kerria Japonica*, or *Corchorus*, yellow flowers; *Ribes aureum*—Missouri Currant, yellow also. *Syringa Persica*—the Persian Lilac—and *S. vulgaris*—the common Lilac—white and purple; *Peonia moutan* —the tree Peony—red, purple or lilac, and *P. papaveracea*—the Poppy-flowered Tree Peony—white flowers. Then *Lonicera Tartarica*—Tartarian Honeysuckle—pink and white; *Deutzia scabra*—white; *Althea* or Tree Hibiscus—white, pink, and purple; the Jasmine with its white, yellow and purple stars. All are easily raised from cuttings or layers in good garden soil. Like roses, they should be divided and new soil given them every three years. The *Euonymus Americanus*, Burning Bush, or Strawberry Tree—with red berries, *Symphoricarpus racemosus*, the Snowberry—white berries, from seed, layers, or suckers,—the same cultivation.

Of Lilies: earliest in the spring, *Convallaria majalis*, Lily of the Valley needing a shady, damp situation; latest, in the autumn, *Funkia sub-cordata*, the white Day Lily, *F. ovata*, blue Day Lily. In June the yellow and the copper-colored. But far above all others, stands the white lily of summer, *Lilium Candidum*; in beauty and fragrance, the chief. These need a sandy soil well mixed with leaf mould. Raise lilies from bulbs, set early in Sep-

tember, three or four together, three or four inches deep. It is a good plan to cover them for the winter with stable litter or decayed leaves. Of wild lilies, *L. Canadense* and *L. Philadelphicum*, summer lilies; treat as the others, bringing them in autumn from the pastures. *L. Speciosum*—The Japan Lily, is very elegant. It is said to be hardy as our common lilies.

Of herbaceous perennials: *Peonia officinalis*,—the common peony, *Dielytra spectabalis* (called by some *Dicentra*), *Polygonatum multiflorum*—Solomon's Seal; all the varieties of *Lychnis*, with elegant red, or white flowers; *Phlox*, early and late; *Polyanthus*, the *Lobelias*, the *Spireas*, *Dianthus;* Pinks—Sweet William, *Campanula*—the Bell-flowers, *Althea*—the Hollyhocks, *Mathiola*, Stocks, gilliflowers, *Digitalis*—Fox glove, *Delphinus*—Larkspurs, *Achillea*—Rose yarrow, *Antirrhinum*—Snapdragon, *Trollius*—Globe Flower—English Butter cup, *Ranunculus*—Double butter cup, *Lunaria*—Honesty-flower, *Tradescantia*—the Spiderwort, *Aconitum*—Monk's-hood, *Aquilegia*—columbine; and Violets and Pansies. These will all flourish in good light soil. When raised from seed they seldom bloom till the second year. They may be propagated by cuttings, or dividing the roots.

Of annuals: Sweet Alyssum, *Amaranthus*—Prince's Feather, and Love-lies bleeding, *Celosia*—Cock's-comb; Asters, *Callistephus*—China and German Asters, *Centaurea*, Bachelor's Button, *Clarkia*, *Coreopsis*, *Datura*, *Escholtzia*, *Hibiscus*—Rose Mallow, *Iberis*—Candy tuft, *Impatiens*—Balsam, *Lavatera*, *Lupin*, *Mimosa*, *Mirabilis*—Four o'clock—Marvel of Peru, *Nigella*—Love-in-a-mist—Jack in the Bush, *Portulaca*, *Petunia*, *Reseda Odorata*—Mignonette, *Scabiosa*—Mourning Bride, *Silene*—Catchfly, *Calendula*—Pot Marigold, *Tagetes*—French Marigold, and African do, *Papaver*—Poppy, and *Zinnia*—Old maids. Annuals for winter boquets: *Briza*—Quaking Grass, *Gomphrena*—Globe Amaranth, *Helichrysum*—Golden Eternal, *Helipterum*—Dwarf Everlasting Flower, *Rhodanthe* and *Acroclinium*. These last need to be gathered when in full bloom and hung up loosely in the shade to dry. The seeds of the Globe Amaranth should be removed from their downy covering—pick it off with a pin carefully, or soak them a day before planting; mix them with sand for sowing.

Though most of these are exotics they flourish well in our climate, and are generally known; their seeds or roots may be obtained at any of the seed-stores. After your first planting raise what you need for the future. Tie a label to the first three or four good blossoms of the strongest plants, see that no injury befalls them, and as soon as the seed is dry let the children make little paper bags to put it in, and keep these in a cool, dry place till time for sowing.

Double flowers are apt to return to their original single form; this may be prevented in compound flowers,—as the marigolds, zinnias and asters,—by saving only the seeds from the outer rows of the calyx—those perfected by the florets of the ray, (the border of the blossom) Grafted roses are also liable to lose their borrowed beauties; and bulbs—tulips, especially—often produce flowers which vary both in form and color from those of whose roots they are off-sets. This is sometimes owing to too cold, too rich or too moist a soil; very damp, rich mould gives luxuriant foliage at the expense of flowers; the brightest hued blossoms spring from a sandy soil in a hot open atmosphere.

A few words may as well be said in this connection as any where, in regard to rose and poppy leaves. Don't waste any of these,—even after the flowers have been used in vases, the petals are worth saving; but a better way is to gather them just before they are ready to separate from the calyx, early in the morning—while the dew is on them—and then spread them on clean cloths or papers in the shade to dry. Poppy leaves are of great use in medicine; rose leaves, not only in medicine, but in cookery,—house-keepers should never be without them.

By referring to the chapters on House Plants, published several months since, it will be seen that many of those are occupants of the garden, and add much to its beauty during the summer. There are many handsome annuals which may be planted for winter growth in the parlor,—sometimes they are changed to perennials by so doing. Among these are the morning-glory and the nasturtium for vines; the larkspurs, candy-tuft, asters, coreopsis, and zinnias for house-shrubs. There are also many wild flowers, besides those already mentioned, which deserve a place in the garden,—some of them in the parlor, too,—and persons who live in the country may not only find much enjoyment in transplanting them to their grounds and developing and enhancing their individual qualities by culture, but by such service very probably bring valuable plants to notice, and thus contribute the best of aid to the science of floriculture;—don't forget that many of our finest plants were once insignificant wild flowers, and do all that you can to improve and increase Flora's treasures,—for her beautiful gifts, scattered through the world, have a wonderful power in civilizing and uplifting mankind.

For the New England Farmer.

VERBENAS ---QUERY.

I frequently see inquiries in the FARMER about plants; and I cultivate a few, usually with good success. I have a beautiful white verbena, which assumes a very sickly appearance lately. The foliage is covered with a mildew—leaves look white—and a petunia beside it seems to have caught the same infection. Now what can be the cause? I have tried several remedies, but still it grows worse. Now as we think the FARMER, or its editors, know most everything, will you please

tell the cause and remedy, and much oblige a careful reader of your valuable paper for twelve years?

Acworth, N. H., May, 1868. H. W. C.

REMARKS.—Without seeing your plant it would be rather difficult to answer the question. The verbena is generally considered a difficult plant to keep in good health through the winter. It is very apt to be troubled with insects or mildew, and die off. Breck, in his "Book of Fowers" says:—

"The verbena is kept with difficulty through the winter, except in the green-house or in warm rooms; unless kept growing, it will perish. It cannot therefore be kept even in a dry cellar, and it is not hardy enough to stand the winter. Most of the varieties are easily raised from cuttings, and can be purchased at so small a price from florists, that it is by far the more economical to buy a few dozen in the spring than attempt to keep them through the winter.

We think the great trouble with your plant is that it has been kept in the house too long. Set it it out in your garden, and it may recover. ED.

HOUSEHOLD ECONOMY.

CONTRIBUTED FOR THE NEW ENGLAND FARMER.

MR. EDITOR:—I have read the receipts in your paper, but do not recollect that any describe the Vermont mode of making milk emptyings bread. Perhaps the receipt may be acceptable to some of the readers of the FARMER.

Emptyings.

Take a cup of warm sweet milk, add one cup boiling hot water, a little salt, flour enough to make a thin batter, and set the mixture in a warm place to rise, two table spoons of flour added after the lapse of two hours will help it to rise.

The Bread.

When the emptyings have risen, warm four quarts sweet milk, stir in the emptyings, and one-half spoon of soda, with flour enough for a stiff batter, let it rise an hour, then mould and put in tins, and rise twenty minutes, bake in a hot oven.

PERCIE BARTON.

Vermont, April, 1868.

Preserving Wall Paper.

I saw in your last issue an inquiry of some one from Somerset, Mass., "how can wall paper be preserved from the ravages of the worm," &c. This is a thing that can be remedied. I have tried it with entire success. Make your paste as usual, and then mix in a little *pepper*, and there will be no more damage in that way.

MRS. OSMER HALE.

Glastenbury, Conn., April 27, 1868.

For the New England Farmer.

THE LILAC.

BY ANNE G. HALE.

Breeze, ever buoyant, in garden of beauty
Sporting with sunbeams and showers,—
Drinking the dews of the lily bell's chalice,
Stealing the breath of the flowers,
Cease thy wild wanderings, come to my casement!
See! I fling open the pane!
Long have I listened to hear at the lattice
The sound of thy pinions again.

Not the sweet perfume the violet lends thee,
Crushed by thy gentlest caress,
Nor all the odors unnumbered, untested,
Summer's gay sisterhood bless,
Can to my craving heart yield such a pleasure,—
Peace, consolation, can bring,
As the rich fragrance, unlaunched on my senses,
Waiting thy frolicsome wing.

Lightly uplifting the lilac's frail thyrses,
Drooping with fulness of life,
Bring me the odors she holds in her keeping—
Odors with vanished hopes rife.
Verdant the leaflets she spreads to the sunshine,
Fair the sweet blossoms she rears;
How the dim past as I gaze on her beauty
In its old glory appears!

Years counted up by their burdens of sorrow,
Flee from sad memory's grasp;
Once more, again, in the shade of the lilac,
Hands long departed I clasp;
Voices with those of the angels now blending,
Hear I to-day as of yore,
Singing, as then, all their songs of affection
Where the sweet lilac droops o'er.

Music more holy than anthems that echo
Through the cathedral's dim aisles,
Seem the glad greetings recalled by that vision,
Dearer than Heaven their smiles,
Haste, for the flowerets are fading and dying,
Waft me one sigh ere they fall!
Sacred 'twill be as the perfume of chaplets
Hiding the gloom of the pall.

THE NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

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WORK FOR AUGUST.

HAYING is now completed, except on the wet meadows. The crop of upland hay has been abundant and the most important means of carrying the stock through another winter is thus secured. The fodder corn to keep up the flow of milk, is now coming into use, and those who have provided a good supply of this, will find the advantage of it. This is much better than feeding off the second growth of the mowing lots. The grass in the pastures, even, if not short, is less succulent and juicy, and will yield less milk than it did in June, and there is no better substitute, nor one more easily obtained than corn; the use of which for fodder is extending, even in the West, where we see by our exchanges that the cultivation of it is recommended.

The grain is mostly secured, and the crops generally throughout the country have been bountiful. But the farmer's work is not done, for as he works not only for the present, but for the future, he must not only secure the harvests of the present year, but be preparing for years to come. Much of the work of this month and the next must have reference to the future.

This is the best month for ditching the low lands, as they are now comparatively free from water, and for laying drains where they are needed; also for throwing out a supply of muck for compost during the coming winter,—thus managing so as to kill two birds with one stone. Use the muck from the ditches for the compost heap, and thus avoid the old ditch banks, that used in former times to disfigure the meadows.

The hay of the wet meadows has been less valued of late years, especially by the milk farmers than formerly, and consequently the meadows have been neglected. But such hay is valuable, if cut in season, for young stock, and for dry stock, and as a resource when English hay is short. By proper ditching, much of it may be greatly improved in quality. No prudent farmer will neglect his meadow lands.

But whether the muck is obtained from ditches or not, see that a good supply is thrown out, and placed in such a position as to be easy of access at all seasons. There is nothing that will add so much, and at so cheap a rate, to the compost heap—and that is so valuable to our old and sandy soils.

Nature has made wonderful provision for the wants of man, which he will gradually learn to

avail himself of. She has stored up in the earth the carbon extracted from the atmosphere by vegetation in ages before man existed on earth, that he may now have a supply of fuel; and she is collecting the carbon extracted in more modern times, in the shape of peat and muck, that he may have the means of increasing and continuing the fertility of the soil, to supply the demands of an increasing population.

August is the best time to cut the bushes in the pastures, and many of our old pastures sadly need the bush scythe.

Weeds continue to grow, and the turnips and beets and carrots and late potatoes must not be neglected. The cultivator and hoe must be kept moving. Weeds allowed to go to seed will not only injure the present crop, but make work for next year.

Preparation must also be made this month for fall seeding to grass. We like to get in the seed about the last of the month, that it may get well rooted before the ground freezes. Plough the sod eight or nine inches deep, dress with compost, and harrow it in thoroughly, then sow the seed, and harrow again, and roll, and you will not fail to get a good catch. This practice is becoming very general, and when done *seasonably* and *thoroughly*, is found to be the best way.

Most of the operations to which we have referred above, have reference to the future. The farmer must be a man of forecast. To-day is all he can call his own, and to-day he must work for to-morrow, for next year, for all coming time,—and for eternity, too.

WOOL BUYERS' RULES.

After the National Wool Growers' Association abandoned the idea of holding an Exposition or Fair of sheep, wools and woolen goods, the idea was taken up by a society known as the Northwest Woolen Manufacturers' Association, which met some months since in Chicago, and they invited wool growers of that section to join with them in this Fair which is to be held in Chicago next August. But the adoption of certain rules for buying wool, generally known as the one-third shrinkage rules, by this association last spring, which were regarded by farmers as unjust and improper, so offended the wool growers that they have indignantly refused to co-operate with this association in the proposed exhibition.

We now learn by the *Prairie Farmer* that the Executive Committee, of which the President of the Association is Chairman, instead of calling a convention to rescind the obnoxious rules, has caused the following resolution to be sent to each member with a request that it be returned with a yea or nay vote:—

Resolved, That the rules adopted at the convention, in February, 1868, governing the members of this Association, in buying wool, are hereby rescinded, and members left free to purchase wool on its own merits.

Little doubt is entertained as to the result. And the *Prairie Farmer* thinks that two weeks will be sufficient to enable the President to announce the repeal of the buyers' rules, and adds "When the certain news of it arrives, we can rejoice and bury the hatchet, and prepare to smoke the pipe of peace at the Chicago exhibition next month."

For the New England Farmer.

TOO MUCH OF A GOOD THING.

At first thought few persons perhaps will see the necessity of this caution, so far as improvements in breeding and cultivation are concerned; still it may be that a more careful consideration of a few facts may show that here, as elsewhere, there may be "too much of a good thing."

Every farmer is urged from every consideration and by all classes of men in almost every position in society, to push on his so-called "improvements;" to strive for higher developments, and still greater production of stock, fruits, and vegetables, as if there was no limit to such improvement, development and increase. That there is such a limit we are compelled to admit, from the irrefragable experiences of the past score of years.

Very few men can be found on whose judgment we incline to rely, who will assume the position that the developments of the so-called good points and qualities of our horses, neat stock, sheep, swine, and even poultry, may not be carried to excess,—may not be pushed over that line. If we are to credit the statements that come to us from across the water, their trained turf horses are not as long-lived as formerly, and are more difficult of further marked improvements.

Who does not know that all our so-called improvements will surely revert to their former condition unless prevented by constant vigilance and skill! This law of nature,—for a law it is,—will assert its power as such, as soon as we slacken our efforts to perpetuate our "improvements."

Our large portly Durhams, beautiful intelligent Devons, mild, silky, creamy Aldernies,

and the almost invaluable Ayrshires, will inevitably deteriorate, and, much sooner too than most are aware of, will return to their normal state.

The fatal diseases that have already created such fearful ravages among cattle, may have had their origin in the unnatural development that breeders have sought for with such great success. There is surely a point beyond which it is not safe to pass. Rinderpest or some other form of disease is sure to confront us and warn us to go no farther.

The dairyman desires to make the most *money* out of his cow. He stimulates her milking properties by stimulating food and warm shelter, so that she becomes, as it were, a green-house plant, incapable of withstanding the slightest exposure. Her progeny of course will, to a still greater degree, partake of this lack of vigor, and only a few generations will be required to develop a sufficient want of functional power to perpetuate their species. We see this principle manifest on every hand, in what we term civilized society. The pampered child of plenty becomes enervated, diseased, unfruitful; while the poor have a heritage of children and the mother an abundance of *nature's* food for their sustenance. I once saw an Indian mother with her infant lashed to her back pass up her well filled breast over her shoulder to the child, who greedily siezed the coveted food as if it was no uncommon occurrence to feast in that position.

It is not, however, in this direction that I proposed to push this question, so very interesting to all farmers. This same principle not only applies to men and animals, but to fruits and vegetables. May we not find here one cause of the failure of many of our fruits for some years past? It is a well known fact to many now living, that parts of our country where the apple, peach, and plum formerly yielded abundantly, now fail altogether or partially to produce these fruits. The first settlers planted orchards, and without *nursing*, gathered an abundance of fruit from them. But *we* must wage a constant warfare and give the most untiring care if we hope to secure even a tithe of what our fathers had almost without an effort.

Our potatoes appear to suffer more than any other vegetable we cultivate, and no doubt from the fact of its being about the only one we propagate from the tuber, and not from the seed. Some years since, in a communication to the FARMER, I asked the question if we were not to ascribe the disease that then was comparatively new in this part of the country, to this cause, and assumed it as the only true hypothesis. I still adhere to the same view. Not one fact has come to my knowledge invalidating this position, while all subsequent developments have served to fortify it. The fact that they do not rot so badly in a dry season as in a wet one, only shows that the disease is not as fully developed by dry as by wet weather. The very fact of their rotting at all proves that the disease is in them. We have fed them up with such surfeits of manure as to destroy their healthy functions, and can never restore them again to health and vigor by propagating from the same stock. Disease is now in the tuber, and the seed derived from it must of necessity partake of that disease. Our only remedy is to commence, where those did who first introduced its culture, with seed or tubers from the plant in the wild state.

K. O.

Broad Brook, Conn., 1868.

For the New England Farmer.

FENCING.

The importance of fences to farmers must be my apology for again reverting to this subject. I should like to see a good thorough discussion, not only of the economical advantages of good fences, and of the best and cheapest modes of construction and repair, but of their moral influences. Bad fences are among the worst characteristics of bad neighborhoods. Many of the petty estrangements and enmities, as well as most of the more violent animosities, quarrels and law-suits which are too frequent in agricultural communities, originate directly or indirectly in poor fences. No class of citizens probably suffer so much from want of co-operation and social intercourse, and none need to guard so carefully against every thing which tends to prevent such co-operation and neighborly good will as farmers. With the remark, that I regard good fences as great peace-makers in a neighborhood, I leave the question of their moral effect on the character of both man and beast, to those better able than myself to express their thoughts, and will merely offer a few practical suggestions.

The materials of most of the fences on my farm are boards and posts. A part of my farm is a gravelly and part a clay soil. I find that longer posts are needed on the clay than on the gravelly land. On the clay soil they should be set in the ground from two and a half to three feet deep, and the earth should be tamped very solid when setting them, so that each post shall stand as firm as though it grew there, and not be liable to be thrown out of place by the frost.

I have always thought that it would be better if our pastures were feneed into lots, so that different kinds of stock could be kept separately if desired, or changed from one to another, at pleasure. I have therefore this season drawn the lumber for dividing my old pasture into three separate lots. I find that the building of the fences necessary for this is to be attended with a good deal of labor and expense, and I solicit the opinion of experienced farmers as to the question, Will it pay?

I prefer **gates** to bars; indeed I do not

think farmers can *afford* to use bars, though I have them in some places. For posts I prefer stone. I set the post on which I hang the gate some five feet deep, to be sure to have it beyond the effect of frost. The irons on which the gate hangs pass through the post, and also through the wooden upright of the gate, and are held with nuts on both ends in such a manner that the gate can be raised or lowered by turning the nuts. I have two other stone posts, in each of which I drill a hole for an eye and hasp, one for holding the gate when shut and the other when open, with corresponding staples in the gate post. The post to hold the gate open may be made shorter than the other. The wood part of the gates is made of hemlock and red elm.

I have now on my farm two gates that were built twenty-six years ago. I do not mean to be understood that all my gates wear as well, for in some places I have had to make two gates in twenty-six years. The durability of gates as well as of every thing else depends much upon the materials used and the manner in which they are built. The secret of success in all business is thoroughness. And the reason that gates are so often unsatisfactory in their operation and durability is that they are not made strong and well.

In passageways much used in winter, where there is no danger of being troubled by animals, as there seldom is when the snow is deep, I take the gates off the hinges and set them up against the side of the fence. The gates are again hung upon their hinges early in the spring. The barn-yard and other gates that are used during the winter are hung about one foot from the ground, and when necessary to shut out small animals, a board is put at the bottom. O. Foster.

Tunbridge, Vt., June 21, 1868.

For the New England Farmer.

GIANT CACTI.

In a late issue of the *Evening Transcript* there was as an item of news, a statement that in Arizona there had been discovered a variety of the cactus, growing forty or fifty feet high.

Of that extraordinary plant I have some knowledge, as while engaged on the United States and Mexican Boundary Survey, a few years since, I traversed, in various directions, the region where it grows and made the most careful drawings of many of these plants. It is the *Cereus Giganteus*, and is found along the borders of the great desert regions which run through the western parts of New Mexico, Arizona and the State of Sonora in Mexico, growing on dry gravelly lands, where there is seldom any rain and no dew. It is found sometimes of the size of a large tree, fifty feet high and three feet in diameter, with many branches. In cutting them open we find about three inches of the outer part of ordinary columnar cacti; then comes a portion of hard, woody substance, in appearance and quality like white oak timber, occupying about one-third of the diameter, and in the centre is a hollow.

The fruit is about two-and-a-half to three inches long, filled with a very sweet pulp like that of a fig, and many very small shining black seeds. The outside skin is not eatable. The flowers are white, waxy, two and one-half inches in diameter, with a deep calyx, making the whole trumpet shaped. The fruit is gathered by the Indians and Mexicans, and is considered a great delicacy.

This cactus must have been well known to the Spanish and Mexican people ever since the settlement of the country, as we found it around the old mission settlements, through nearly the whole length of the State of Sonora, and yet it had never been properly described or illustrated until our party gave attention to the subject.

The Horticultural Society have a landscape, painted by myself, and presented them by our lamented friend, L. M. Sargent, Esq., comprising "A View of Magdalena in Sonora," which affords a correct idea of this and other cacti, as they are now growing in the vicinity of that place.

I have also at my studio a painting which gives a portrait of one growing on the Maricopa mountain near the Gila river, showing the plant, the flowers and fruit, being painted of the natural size and color, which, with other western scenery, I am happy to show to any persons who wish to see them, at No. 8 Bromfield Street, over the new establishment of Messrs. Williams & Everett.

Boston, June 27, 1868. H. C. Pratt.

North Carolina.—Mr. W. A. Sampson, who is located at Bush Hill, N. C., writes as follows to the *Maine Farmer*:—"The climate here is delightful, and everything for the comfort of man can be successfully grown. I may name figs, peaches—the finest in the United States—apples, pears, plums, cherries, and all the small fruits, wheat, corn, and all cereals. The only thing lacking is grass. No cultivated grass is to be seen, except upon the meadows along the valleys of the many streams. The water is the purest and the timber the finest of any in the country. White oak and hickory abound of the best quality; also walnut, which is largely used for furniture. The hard pine is accessible at $15 per thousand. The people are all anxious to see northern emigration. Land is very cheap; from $2 to $15 per acre.

—The Devons are natives of Devonshire, England, from which they take their name. This breed is one among, if not the oldest of the improved English cattle, and until the present century, was bred with greater purity than any other breed.

THE BUTTONWOOD TREE.

(*Platanus Occidentalis*)

THIS was once one of the most beautiful and magnificent trees of the American forest. It is indigenous in all parts of the country, and is found generally on the shores of lakes and the banks of rivers and creeks, where it flourishes with surprising vigor and often attains a majestic size. On the rich alluvions of the West, it is often of an almost incredible size, and presents a luxuriance of vegetation truly surprising, and beautiful to behold.

It is sometimes known by the appellation of plane and sycamore, and is often planted for ornament as well as use. For fuel it is deemed less valuable than oak or hickory, or even maple, but it is superior to most of the lighter woods. It is quite durable, firm of grain and texture, and when used for cabinet work presents a close surface, capable of a beautiful polish.

This tree may be propagated with ease from the seeds or balls, and when once it has taken root, perpetuates itself by throwing up, spontaneously, innumerable suckers from the roots or stools of the trees. As many as six or eight trees have been known to proceed from one stump, and, on rich land, to attain a size sufficient for fuel, and even for mechanical purposes.

In his "*Forest Scenery*," Gilpin says "no tree forms a more pleasing shade than the occidental plane. It is full leafed, and its leaf is large, smooth, of a fine texture, and seldom injured by insects. Its lower branches, shooting horizontally, soon take a direction to the ground; and the spray seems more sedulous than that of any tree we have, by twisting about in various forms to fill up every little vacuity with shade."

In his "*Trees and Shrubs of Massachusetts*" Mr. Emerson says "there was standing in 1839, on the island of Rhode Island, a buttonwood tree, which measured at one foot from the ground, twenty-four feet four inches," and had then the appearance of perfect vigor.

We once saw one on the banks of the Muskingum river in Ohio, which was *fifteen feet in diameter!* Or as large through as a common sized room! It was broken off about thirty feet from the ground, but had branches below the break large enough for good-sized trees. The trunk was hollow, having a shell perhaps two feet thick all around it. On the south side, next the river, an opening had been made about the size of the doors of our houses, say about six and one-half feet by two and one-half. As we entered this door, a small drove of hogs rushed out through *a hollow root* on the opposite side.

After speaking of the decay of the buttonwood in several parts of Europe, between the years 1809 and 1814, Mr. Emerson says:—"The buttonwoods, throughout New England were affected in a similar manner in the springs of 1842, '43 and '44. The shoots seemed to have been nipped as by a frost. The large trees were particularly affected, but by no means exclusively. For some weeks in each of these springs, many of the trees seemed to have been killed. The extremities of the branches, on almost all the buttonwoods are dead, and many of the trees are now, in the fall of 1845, completely so."

The malady in this tree has been attributed to various causes. Some say by frost; others the action of some insect or worm. It seems to us that it is caused by some general taint, some infectious disease, that has traversed, like the cholera, the world over wherever the buttonwood tree is found. The destruction has been steadily going on since 1845, until the trees that are left present a melancholy aspect. They look prematurely old, their foliage is thin, discolored and imperfect, their branches are broken, dead or dying, with every appearance of rapid dissolution.

Shall we suffer these old friends and worthy monarchs to die entirely out, or shall we make an effort to revive the old trees, or supply new ones? For ourself, we are looking upon their departure with some emotion; with something of the feeling that we part with a venerable old friend who has always been blessing the world with his good works.

—There are complaints of the appearance of the wheat midge in Ohio, Michigan and Indiana.

JOE FICKLE.

A correspondent sends us a "true narrative" in verse of this young man, who, having finished his season's engagement with a farmer who did not keep a hired man during the winter season, fell into the following soliloquy:

The winter's come; my time is out;
The man wants me no more;
I have not where to lay my head;
It's hard to leave his door.

This naturally excites our compassion for the poor outcast, and we feel relieved when informed that

There is a man not far away,
That hires men by the year;
I'll go and see what I can do—
He may think me sincere!

But most unfortunately for our hero this man happened to know just what a Fickle Joe was—we may as well, you know, out-run our shadow as our character—and told him plainly that he could not trust him; he wanted a man that would not leave him after "being wintered out," which he thought was all that Joe "cared about." But Mr. Fickle was not to be bluffed:

Once, twice, and thrice, I went, and more;
I promised to be true,
With many a fair and honest word,—
He took me for true blue.

But the Fickle blood was in his veins:

When summer came, when grass grew fast,
And haying was near by,
When wages, too, were coming up,
For more, sure I did try.

I knew 'twas wrong to go away,
For I was treated well,
And for some reasons I did look,
To make it fair to tell.

And in some six or eight stanzas he gives the result of his attempts to find these reasons in the treatment he received from his employer and his family, which were quite unsatisfactory, until he happened to remember:

The girls they laugh at me about
The young and fair-faced Lu,
I will not stay another day
Where I am treated so!

And he did'nt.

A WORD TO THE BOYS.

It is now haying time, a season of the year when all hands must be lively. You will be called upon to drive the horses for the mowing machine and rake. Don't be too rash with them. Let everything move along steadily and smoothly. No machinery can go by jerks without being destroyed. Be up early in the morning so as to work as much as possible in the cool of the day, and go to bed as early as possible and secure all the sleep you can. If you are learning to use a hand scythe don't whet it over your shoulder but under it. A slip of the snath may spoil your shoulder. Take good care of the hand rakes and forks. Learn to stow a load of hay well, so it shall look in good shape and ride over rough ground without being thrown off with you beneath it. Learn to do your light work nimbly, your heavy work slowly. Whatever you have to do, try and do it as well as anybody else, if you cannot do as much. Rapidity of motion is secured by first carefully watching the motions of things. Keep an eye on the garden and pull up the weeds and give them to the pigs. It promotes their health and growth. Lastly, remember that you are now laying the foundations for a solid manhood. A boy that works well through haying will be likely to thrive anywhere. —*Maine Farmer.*

Remarks.—And permit the New England Farmer to add, that while doing all you are here exhorted to do, remember that you are learning a great trade, and studying the most important of all professions.

For the New England Farmer.

THE GARDEN IN AUGUST.

After a long, cold and backward spring, the later heat of summer hurries vegetation forward with a rush; and August brings us our usual garden harvest. Although we may have been almost discouraged in the earlier part of the season, yet all was necessary to lead us up to the present appreciation and realization of fresh vegetables every day from the garden, crisp and tender; a blessing which the dwellers in cities seldom if ever enjoy. How many, suppose you, "Billy Styx," of the dwellers in such cities as Boston, New York, &c., ever tasted green peas? or, as to that, fresh, green, vegetables or fruits of any kind, such as you have, or may have the privilege of doing every day through the hot season? Just try the experiment of taking any favorite product of the garden and handle it, not very carefully, six or eight times from basket to box, and box to basket, and expose it to the sun several hours before cooking and being brought to the table, and you may, in part, realize what *fresh* vegetables mean in cities. Compare such with those right from the garden, while yet they are fresh, crisp, and shining with the dews of an August morning, and you will soon learn to appreciate the real thing.

All who started with the early spring to have a good garden are now enjoying the fruit of their labor. He who has a well kept garden may not only rejoice in the nice fresh products which supply his table daily, but he often has a surplus to sell to the less provident, or give to the feeble, or decrepid who cannot provide for themselves with equal facility. Farmers who live within easy distance of cities or villages, may add considerable to their income by enlarging the garden and producing vegetables, small fruits, &c. for marketing; and leave the production, in part, of large grain

crops, &c., to those living at a greater distance from market. All vegetables designed for market should be gathered either late in the afternoon preceding, or early in the morning they are to be marketed, so that they may remain out of the ground as short a time as possible before they are used, and then they should be carefully handled, and kept shaded from the sun. While enjoying the varied products of the garden, we should not forget to provide for the future in the way of seeds. Too often this is neglected till all the earliest and best specimens are gathered, and only the leavings and scallawag products remain for the production of seed for future use, or none at all is saved. Now, as "like" is said "to produce like," we may not expect to get handsome, early products unless we save seed from the like; and it is always better for one to grow most of his own seed than to depend on any other source of supply.

Asparagus.—Keep down all weeds, and encourage the plants to grow to recover from the effects of the cutting season. If seed is desired, gather when perfectly ripe, and separate from the pulp, and either sow at once, or dry and lay it away till spring.

Beans.—Gather for the table as fast as they come to suitable age, and see that running sorts are kept to the poles. Some of the bush sorts may still be planted for late use, pickling, canning, &c.

Cabbage.—Savoy and red cabbage, set during the month, will head before winter. Use the hoe freely among those already set, to encourage growth and setting for heads; and destroy slugs and caterpillars.

Cauliflower.—These need very frequent hoeing, and should not be allowed to suffer for want of water, in order to have them produce fine heads, or flowers; use those that come into suitable size, or they will soon run up to seed.

Corn.—Select a few of the earliest and handsomest ears, and mark them with a ribbon or string tied to the stalk, and let them ripen for seed. Use others as fast as they come to suitable size; dry for winter and future use.

Cucumbers.—Those planted late for pickles will need hoeing to keep down the weeds, and we may look for pickles during the month, which should be picked close every other day. Save seed from the earlier crop and observe directions for seed cucumbers given last month, with the pickle patch, if desirable to save more seed.

Egg Plants.—The fruit is apt to get down in the dirt unless prevented by something placed under it; a little hay or straw will serve a good purpose. Destroy caterpillars wherever they may be observed eating the foliage.

Herbs.—As these come into bloom, continue to gather and cure in the shade, away from dust, and store to preserve their aroma.

Melons.—The ripening of melons may be hastened and their flavor improved by placing a clean shingle or stone under specimens, and turn them over occasionally, so that all sides may receive the sun and ripen equally.

Radishes.—Such as the black and white Spanish, salmon and turnip-rooted, and Chinese rose-colored winter, for late fall and winter use, may now be sown.

Strawberries.—Keep the runners cut, unless desirable to let them grow to form new plants. Old beds may be renewed by manuring and spading up strips through the old bed, leaving a row of plants to throw off runners to cover the new bed. Keep all beds clean of weeds and grass.

Tomatoes.—Those trained to a trellis, or on something to keep them from the ground, will do much the best. If trained to a trellis, keep them tied up, and pinch off the ends of growing branches after the fruit has beg unto set, to encourage ripening and increase size of fruit.

Plant, for a succession, wherever any early crop has been removed, or vacant places occur, lettuce, onions for pips and wintering over, spinach, turnips, &c.; gather and save all seeds as they ripen; and let the flower beds have a proportion of attention commensurate with the gratification and pleasure it has produced. W. H. White.

South Windsor, Conn., 1868.

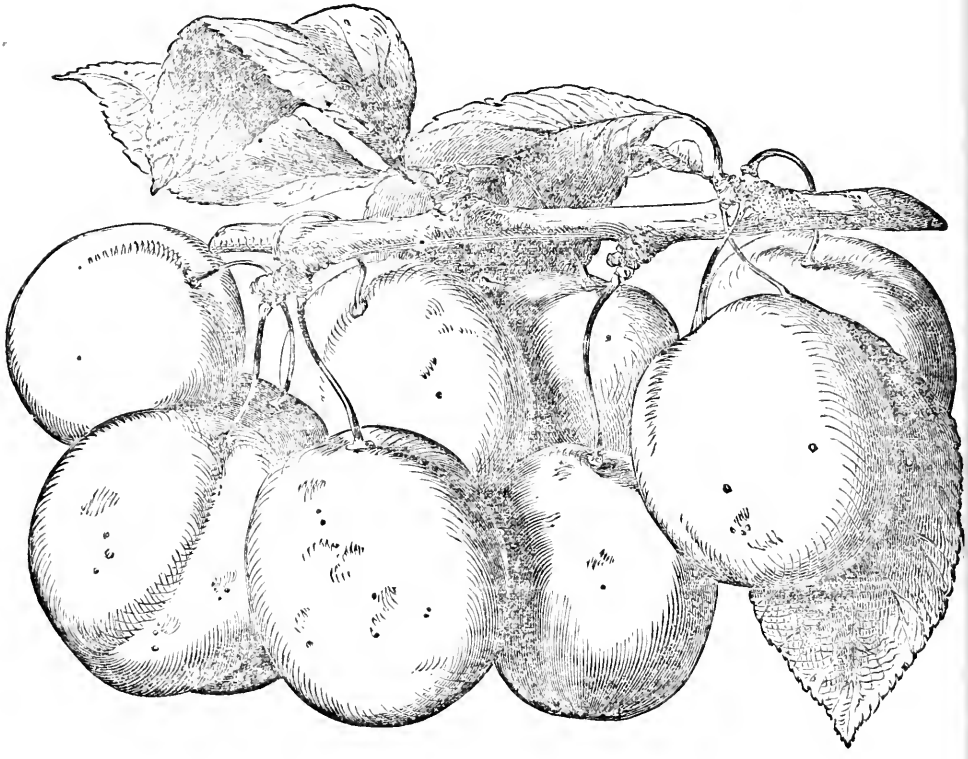
List of Pears.—At a late meeting of the Waltham, Mass., Farmer's Club, Mr. R. Murray, an experienced cultivator of this fruit, recommended the following varieties, remarking that he considered the Beurre d'Anjou the king of pears:—

For Standards—Bartlett, Seekel, Winter Nelis, Lawrence, Sheldon, Buerre d'Clairgeau, Swan's Orange.

For Dwarfs or Quince Stalk—Louise bonne de Jersey, Duchesse d'Angouleme, Urbaniste, Easter Beurre.

Either on Quince or Pear Stalk—Rostizer, Tyson, Dearborn's Seedling, Flemish Beauty, Beurre d'Anjou, Beurre Bosc.

How to Cure a Cold.—Dr. Hall (*Journal of Health*) says: The moment a man is satisfied he has taken cold, let him do three things: First, eat nothing; second, go to bed, cover up in a warm room; third, drink as much cold water as he can or as he wants, or as much hot herb tea as he can, and in three cases out of four, he will be well in thirty-six hours. The neglect of a cold for forty-eight hours, after the cough commences, is to place himself beyond cure, until the cold has run its course, of about a fortnight. Warmth and abstinence are safe and certain cures, when applied early. Warmth keeps the pores of the skin open, and relieves it of the surplus which oppresses it, while abstinence cuts off the supply of material for phlegm which would otherwise be coughed up.



BLEECKER'S GAGE PLUM.

What is the use of tantalizing us with cuts of plums, when everybody knows that the curculio destroys all the fruit, and the black knot all the trees? may be asked by the readers of the Farmer, as their eyes fall on the above illustration while unfolding its broad sheet. We are aware of the difficulties which for many years have discouraged the most careful and intelligent cultivators of this fruit in most parts of our country, but we believe that this seeming triumph of insects and disease is but temporary. When we think of our agricultural colleges, of our pomological associations, of our scientific men and of our skilful gardeners, we must believe that eventually the battle will be to the strong, the swift, and the industrious. Every insect and every disorder, like every dog, may have its day, but to man belongs the "dominion," and he will resume the sceptre and rule, as he should, "over the earth, and over every creeping thing that creepeth upon the earth." This we hold is our "manifest destiny." Our wheat is not to be given up to the weevil; our potatoes are not to be abandoned to the rot or the Colorado bug; nor is the curculio to have and to hold all the right, title and usufruct of the thirty-six different varieties of the plum recommended in the catalogue of the American Pomological Society, noticed in another column.

In this faith we present the above beautiful engraving of fruit raised by Mr. H. P. Wiswall, of Marlborough, Mass., and believe that the reader will agree with us in pronouncing the illustration a beautiful work of art, however faint-hearted he may be as to the possibility of re-producing its original.

Downing says it is a "fruit of the first quality; remarkably hardy, and a good and regular bearer. It was raised by the late Mrs. Bleecker, of Albany, about thirty years ago,

from a prune pit given her by the Rev. Mr. Dull, of Kingston, N. Y., which he received from Germany. It ripens the last of August, from a week to two weeks later than our Yellow Gage. Branches downy. Fruit of medium size, roundish-oval, very regular. Suture scarcely perceptible. Stalk quite long, an inch or more, straight and pretty stout, downy, slightly inserted. Skin yellow, with numerous imbedded white specks, and a thin white bloom. Flesh yellow, rich, sweet, and luscious in flavor. Separates almost entirely from the stone, which is pointed at both ends. Leaves dark green. Easily distinguished from Yellow Gage by its longer and stouter stalk."

LETTER FROM MR. BROWN.

BRATTLEBORO', Vt., June, 1868.

About one year ago, the *N. Y. State Agricultural Society* invited the makers of ploughs, in any State of the Union, in Canada, and in Europe, to bring their ploughs together at Utica, N. Y., and compete for certain prizes which the society offered. They had previously had one trial at Auburn, which developed so many interesting circumstances in relation to ploughs and ploughing, that the cost of another trial seemed justified, and was incurred. That trial took took place at Utica, N. Y., May 7, 1867.

At this trial, also, many developments took place with which most ploughmen were not familiar, and were all carefully recorded and reported in the Transactions of the Society. So far as contrasting the qualities of differently constructed ploughs was concerned, these trials were sufficient and satisfactory; but neither the objects of the enterprise, nor the character of the soil, were adapted to develop the powers of a good plough in very many particulars. Learning that the soil on the Connecticut river bottoms was such as the judges desired for a further trial, they wrote Gov. Holbrook, at Brattleboro', to secure a suitable field, furnish ploughs and teams and attend them in the trial. The grounds selected were a portion of a field of 150 acres belonging to the Asylum for the Insane, and quite near the village.

The judges, and principal managers in the tests that were made, were the Hon. JOHN STANTON GOULD, of Hudson, N. Y., a former president of the N. Y. State Agricultural Society, and HENRY WATERMAN, Esq., of the same place. These gentlemen are educated and thoroughly scientific persons, in the full vigor of life and intellect, and are extensively known as experts in most matters relating to science and art. I do not remember ever to have met before two persons so intimately acquainted with the principles that govern mechanism in all its forms. The State society selected them because they possessed these rare qualities, and commissioned them to make the most exhaustive trials with the plough. Two other gentlemen were present, both of whom have given as much thought to the plough as any two men that are living, namely: JOEL NOURSE, Esq., of Boston, and Gov. HOLBROOK, of Vermont. They assisted the judges, and gave minute attention to all the diversified changes which were introduced; and the judges found, in persons so thoroughly familiar with the subject as they were, great help in their complicated investigations. Mr. HENRY BROOKS, of Acton, Mass., held the ploughs during the three days' trial. Such were the operators. Mr. HENRY M. TUCKER, one of the Editors of the *Country Gentleman*, and myself, came to see, and to tell the world what we saw. Several other gentlemen were present who are interested in ploughs and ploughing, among whom was the Hon. JOHN S. KEYES, of Massachusetts.

The ploughs used were five in number, some one of which, it was supposed, would be adapted to any condition of soil where a plough would be called into use, and were all devised, I believe, by Mr. Holbrook. The trial was not, then, one to ascertain which of a great variety of ploughs is the best, but to ascertain,—

1. The relative increase of power required for each inch of depth ploughed, the width of furrow being constant in all cases.

2. To determine the amount of power required for each inch of breadth of furrow, the depth being constant in all cases.

3. To determine the relative power required by the coulter and skim plough.

4. To determine the portion of force required by each of the individual parts of the plough.

5. To ascertain the influence of velocity on draft.

6. To show the influence of the *adjustment of the plough* on draft.

As a general result, these trials showed the

importance of an accurate adjustment of the different parts of the plough with each other. It was found, for example, that when the tendency of the plough was to dip into the ground, and was resisted by the ploughman, such counteracting influence absorbed 150 pounds of power! When the adjustment was made so that the plough swam free, the aggregate indications of the dynamometer fell that amount. Even placing the coulter three-fourths of an inch out of the centre of draft, greatly increased the resistance and spoiled the perfection of the work. In one instance a coulter that was somewhat blunt and rusty, was rubbed with a scythe stone until it was bright and its edge sharpened a little, which decreased the power required in its rusty and dull condition some twenty-three pounds! The accurate adjustment of the parts of the plough invariably decreased the amount of power.

The labor of these experiments would have been comparatively fruitless had it not been for the service which the *dynamometer* rendered. This not only measured the power with great nicety, but measured the distances travelled over at the same time. It is the invention of Mr. Henry Waterman, of Hudson, N. Y., the gentleman of whom I have spoken in the former part of this letter. It has been tested in various ways and found accurate, so that it has been called into use on railroads, common roads, and in many other ways where power was to be measured. By it, it is ascertained that *seven* pounds weight will move a ton on the railroad, at a velocity of ten miles per hour; on a Macadamized road 60 pounds, and on a common road 260 pounds per ton. The changes which continually occurred in this wonderful machine, when the plough left a light for a compact soil, or came where bunches of small roots were interlaced in it, proved it to be sensitive in the highest degree. It only needed an hour's watching to ensure perfect confidence in its truthfulness.

Some of the results of the work were surprising and exceedingly gratifying. The first experiment with a plough was to find its "surface draft"—that is, how much power was required to haul it along, standing on its sole, on the surface of the ground. The largest plough required ninety-nine pounds. It was then intended to plough one furrow one inch deep, and then increase an inch in depth and an inch in width, until a furrow twelve inches deep and eighteen inches wide had been turned. This was done, but commencing with three inches, as it was found impracticable to plough only one inch. Nothing could exceed the fineness of the particles as they lay. No skill in spading could reach it. It was a perfect seed-bed, only needing a little leveling to receive the finest seeds ever used. A succession of experiments followed this, during nearly three days of the closest application, but I must not detail them here. Mr. Gould will make a full report from his ample record, when I hope to refer to them again.

I began to plough in boyhood, and with some intermissions, have continued it to this day; thought I comprehended it, in part and in whole, and understood about how much and what quality of work it was capable of performing. But witnessing these tests has proved that my ideas were comparatively crude and imperfect, and shown that the plough is governed as much by scientific principles as the jenny or the loom, and is as sensitive as these to any departure from such principles. It seems to me that but little more is to be done to perfect the ploughs which were used in these tests. Some of the principles that have generally prevailed in all ploughs heretofore, have been entirely reversed, such as changing the face of the mould-board from a concave to a convex form, and so shaping it as to twist the furrow-slice until it is broken into innumerable fissures or cracks.

All the reports of Mr. Gould, on this subject, ought to be published and put into the hands of every farmer in the land.

A few examples from my notes will show the nature of the tests. The object was to ascertain the *amount of power* required in ploughing at different depths.

Swivel plough, No. 4, 6½ inches,	557 lbs.
" " " " 7½ "	584 "
" " " " 8 "	641 "
Same plough, to ascertain power required without a cutter. 6x13 inches,	482 "
Coulter 1 inch in the ground,	605 "
Within 3 inches of the plane of the sole,	504 "

Plough No. 69, weighing 165 pounds, surface draft, 99 pounds.

No. 65, Lap plough, 77 pounds, and with a furrow 2½x11 wide, required a power of 324 pounds; and at 8x11, 552 pounds,—the cutter in all being set for flat furrows. A lap

furrow required 42 pounds less power than a flat furrow, and on sharpening the cutter and giving it more rake, the draft was further reduced to 453 pounds in a furrow 8x11 inches, showing that the lap furrow required a less power by 99 pounds than a flat furrow.

No society in this country is doing more to promote the interest of agriculture than that of the State of New York. It is a power in the land for good. Great credit is due it for instituting these valuable experiments. These followed on the heels of those relating to mowing machines, and will undoubtedly be succeeded by others equally valuable and interesting.

I have enjoyed these opportunities greatly, and am truly yours, SIMON BROWN.

P. S. Before leaving town, RICHARD BRADLEY, Esq., took most of the party over one of his farms, where I saw the most extensive and complete example of irrigation that there is, probably, in New England. I hope to speak of it more particularly at some future time.

THE END OF THE HORSE.

When the horse falls, he is bled, and his blood is preserved for the use of the dyer. The mane and tail are next cut off for the manufacturer of seives, hair cloths, and bow strings for the violin; the shoes are taken off for the nailer; the hoofs are cut off for combs and various other kinds of horn work, and a portion of the feet goes to the glue maker; the skin is stripped off for the tanner, who converts is into excellent leather for boots, harness, &c., and the collar-maker finds it in its rough state, the best material for cart harness. The flesh is then cut up for carnivorous beasts in menageries, or for dogs, and though without knowing that they are (hippophagi,) a club of horse eaters, who regularly advertise their club days, some of our fellow creatures are regaled in the cheap eating-houses of great cities with delicate bits of carcass in the form of *pates*, pretended beef steaks or soup. When the flesh and fat have been removed, the stomach and intestines are laid aside for machine straps and strings for musical instruments, and are often sold for the latter purpose as the best Naples cords; the ribs are turned into buttons and children's toys; the large round bones serve for tweezers, whistles, ferules, knife handles, cups and balls, dominoes, &c., the large flat bones are of use to the toy men for many things; even the teeth are useful when polished, to the dentist, and for many purposes for which ivory is required. The bones of the head are either consumed in heating furnaces, or crushed for manure.

The remainder of the carcase is burnt, and by this process produces ivory black, soot black, and valuable manure. And from the fat is extracted a coarse oil, which is used by mechanics.

MICHIGAN WOOL BUYERS' ASSOCIATION.

A meeting of this association was held in Detroit, June 2. By the report of its proceedings furnished by the *Western Rural*, we learn that the "established rules" are to be rigidly enforced by the association, as, among others, the following resolution was adopted:

Resolved, That we will buy wool only on these conditions, nor put any local or travelling agents in the market except upon the same terms, and that in any case of deviation from these rules, on the part of any such agents, we will withdraw them from the market.

In another resolution, surprise is expressed that a spirit of antagonism should be manifested or encouraged by any wool grower or dealer to the full adoption of these rules.

In his statement of the objects of the meeting, the president, Thomas McGaw, said "there seemed to be a determination among farmers to sell wool in a bad condition, for the same price as the best quality of wool should bring."

This accusation against wool growers appears to us to come with very poor grace from the president of an association which, by their own rules, insist on buying wool only on a principle which denies their agents the privilege of discriminating between the bad and the good.

The mutton butchers of Faneuil Hall employ "travelling agents" in the Western States and in Kentucky to buy sheep for their shambles. But whoever heard of any other rules for buying "heavy bucks," fat wethers, or half fed sheep, than the exercise of a sound and trained judgment as to the value of each particular flock? Why, then, should the manufacturers of wool expect, by any set of arbitrary rules, to avoid the necessity of employing, as their "travelling agents" for buying wool, men of skill and experience? The dro-

ver pays according to quality, why should not the wool buyer?

The object of the association is declared to be the attainment of "a higher standard and improvement in quality and condition of our Michigan wools." But instead of doing this by grading prices according to "quality and condition," they adopt a system that practically discourages individual efforts for improvement, by insisting on a fixed shrinkage for "greasy and gummy buck fleeces," for "heavy washed buck fleeces," and for all other "unwashed or partially washed, &c., fleeces," whether the foreign substances in them amount to 30 or 70 per cent. of the gross weight.

Large Steers.—About one year ago our correspondent, "B. D. W.," sent us a brief notice of the stock of E. D. Works, Esq., of West Fitchburg, Mass., in which he alluded particularly to a very fine pair of yearling Durham steers, which then weighed 1800 pounds. Having again "swung round the circle," our correspondent has recently visited his pets again, and writes that these steers, now two years old, weighed 2700 pounds before being turned out to pasture, and that he believes, with their owner, that by next Fair time they will balance a 3000-pound weight. Mr. Works has also a pair of native two-year-old steers, weighing 2100 pounds, which are thrifty and fine cattle, and away from the Durhams, would be considered a very extra pair. In view of the fact that Mr. Works has been offered $300 for the Durhams and $200 for the Natives, "B. D. W." asks, does not raising good stock pay? This question he respectfully submits to the calculation of those who know the value of calves and the cost of feeding and caring for them two years.

Milking Machines.—Mr. Benj. Chase, of Auburn, N. H., writes to the *Mirror and Farmer* that he purchased a machine, paying $7, and $5 for the patent. He tried it on an easy milker, and after a good deal of effort succeeded in getting it adjusted on the cow's teats, and by working it could draw some milk, but by the time the cow was half milked the teats would not fill the cups, and the machine would drop off, there being no suction. He wrote to the agent stating the difficulty, and asking to be referred to somebody who had one in successful operation. The agent replied, giving no reference; but saying that he must persevere, for it required a good deal of practice to learn to use one. He and his hired man tried until they had exhausted all their mechanical talent, but without success. The machine is offered for sale at a large discount.

For the New England Farmer.

WHAT SHALL FARMERS SELL?

Shall we sell our hay and grain, or buy stock to consume it? Winter Care and Feed of Milch Cows. Abstract of a discussion of the Irasburg, Vt., Farmers' Club, by its Secretary, Z. E. Jameson, Esq.

Wm. L. Jameson said it had been his practice to sell some hay every year; yet his crop constantly increased, and his farm is in better condition than when he bought it. He believed it will pay well to buy stock to winter and sell. He once bought three cows in the fall, and the butter made from them and the increase of price was forty dollars on each cow. Another winter he contracted his butter at twenty cents per pound, and made from four cows eighty dollars worth to sell, and estimated that twenty dollars worth was used in the family, which would be one hundred dollars for wintering, without including the value of the manure. This spring he fed his cows two quarts of meal, —oats, barley and peas ground together—each per day, in addition to their hay, and they averaged six and a half pounds of butter each per week. Some claim that they can get as much profit in milking cows eight months in a year as ten; but he said he knew it was not so. By going dry only two months, his cows do well the next year.

G. B. Brewster said when his brother and himself bought their place, they were in debt, and at first sold their grain, but never sold much hay. Now he believes it is better to feed the grain as well as the hay. Last fall he fed his cows fodder corn when the pastures began to fail, and it seemed to keep them in condition, after which they had the fall feed in his fields, and in winter good hay; so they have done well, except a few old cows that looked a little rough, but were in good heart. Toward the last of winter he began to feed two quarts of meal each per day. Four or five of his cows come in during February, eight or ten more in March, and others later, till he had about twenty, and within a few days two more have come in. He has raised thirteen calves that are turned to pasture, and has sold four hundred dollars worth of butter up to June first. Now, he would not say that he had done as well as he might, but he would say he had done $150 better than ever before in the same time. He thought it paid to feed well.

Wm. Jameson, who has made a half ton of butter from four cows in a year, remarked that

"the neighbors have often talked about the quantity of butter I made, but Mr. Brewster has found out the secret of it—feeding well in the fall! I begin to feed in the fall before any of my neighbors, and feed well all winter."

Wm. Locke, Jr., had bought another farm this spring, from which hay has been sold; and he had been advised to use plaster and still sell hay, but he should try the experiment of feeding his produce to stock. Had fed some meal this spring, and was satisfied with the result.

Z. E. Jameson suggested that as meat and butter will not satisfy every want of the farmers' customers, some of our other produce might be sent to the cities and villages, from which we could obtain fertilizers, such as poudrette, superphosphate, &c., if not stable manure, to assist in keeping up the fertility of the soil. If a man has a farm that can all be tilled, the produce of the pasture lands added to the produce consumed by animals in winter would go far towards bringing in as much income as the animals themselves, and then the farmer's work would be less, especially in winter. If the farmer feeds extensively, he must become a cattle dealer, which is a trade by itself that it will take time to learn.

For the New England Farmer.

FARMING AT WOOD'S HOLE---SINGULAR DISEASE AMONG CATTLE.

For several years past I have occasionally found myself at Wood's Hole, on Buzzard's Bay, about eighteen miles east of New Bedford, by the course of the steamer that touches here in going to and from Edgarton to the former place. Formerly it was a place of no small importance for its coasting and fishing business and at one time whaling vessels were fitted out here. These are now things of the past, and so far as I have learned, not a vestige of them remains.

The only substitute is an extensive establishment for the manufacture of Ammoniated Pacific Guano, which gives employment to sixty or more men, and furnishes a market for large quantities of fish, and also for fish pumice, from the oil works on the coast. This place has been held in high esteem by some as a place of summer resort, but can never obtain any great patronage as such without improved facilities for reaching it.

Joseph S. Fay, Esq., of Boston, has a farm of about four hundred acres, which for several years he has been *improving*—especially in attractiveness and beauty,—by planting evergreen and other trees, both of native foreign varieties. The Austrian and other foreign varieties of the pine grow much faster and are more ornamental than the native. Mr. Fay has upwards of one hundred acres of trees planted on various parts of the farm, some of which have been planted sixteen years and have attained a goodly size. Those interested in tree culture would do well to see his plantations, as they might afford them encouragement and instruction.

Farming here appears to be pursued under difficulties almost, if not entirely, insurmountable. This whole region abounds in hills and rocks requiring a deal of hard work to cultivate crops, which very often return no adequate remuneration, and sometimes entirely fail by reason of the ravages of worms. They not only destroy cultivated crops, but I see on every hand large tracts of pasture land as barren of grass as the travelled road. Root crops are exempt from their ravages, grow to great perfection, and might be made a source of income if judiciously managed. I ought, however, to state that the onion is an exception to the above statement, as it is subject to the ravages of the maggot that has about driven its culture from all this region.

A singular trouble is experienced in keeping neat stock all along the borders of this bay, from New Bedford east; and, I believe, to some extent on the *coast* west, for a few miles, which is especially annoying. Now and then there is an exception,—to account for which is as difficult as to give a reason for the general prevalence of the disease. What *causes* the disease is involved in mystery. It is known among the farmers here as the *neck-ail*, from its having first appeared in a section of the country known as the Neck.

The first symptoms are a disinclination to drink, followed by loss of appetite and consequently a loss of flesh, until the animal in many instances breaks down. No treatment practiced avails only temporarily. Physic and a dose of copperas affords relief, but only for a few months; after which it is of no avail. Animals when reduced to mere skeletons by this disease soon recover, if removed only a few miles,—often only to contiguous estates, back from the shore.

James LeBarron, Esq., of Mattapoisett who owns a large farm and usually keeps a large stock, has never had a case of this disease on his place, while his neighbors, on the southern boundary of his farm are never exempt from it. Diseased cattle when taken from his neighbors' farms on to his own, soon recover. I was told of a person, whose name has escaped me, who took the best care of his stock, who has long been subject to this trouble, while his next neighbors, on each side of his farm, have been exempt.

Some have supposed it was owing to the water, but that theory fails to be sustained. The cause, as already stated, is involved in perfect mystery. I have sent healthy oxen, bulls and cows to Mr. Fay's place, that in a few months would be troubled seriously. If some one could be found to point out the cause and cure of this disease, he would secure the gratitude of all this portion of the State. The hope that this may fall under the eye of some

such benefactor is the motive for writing this communication. K. O.

Wood's Hole, June 5, 1868.

WOOL AT THE CUSTOM HOUSES.

The following is the report in full of the committee appointed by the National Wool Grower's Association, with authority from the Secretary of the Treasury to examine the manner in which imported wools have been classified and appraised for the payment of duties in the New York and Boston custom houses, since the wool tariff, passed March 2, 1867, went into effect. The committee consisted of Henry S. Randall, S. D. Harris, Edwin Hammond, J. W. Colburn, Wm. R. Sanford, Winthrop W. Chenery, John D. Wing, Burdett Loomis, Leander Wetherell, and Wm. Chamberlain, who fully concurs in the report so far as the New York Custom House is concerned, but not being present at the examination made at the Boston Custom House he withholds any expression of opinion in relation thereto.

Mr. John A. Bausch, the Assistant Appraiser in the New York Custom House, having wools in charge, and Mr. Thomas G. Rice, General Appraiser in the Boston Custom House, having the same in charge, extended to the committee every possible facility for making a thorough examination, and evinced the utmost willingness to communicate all desired information explanatory of their official action generally or in particular cases, and also in regard to all facts tending to illustrate the practical operation of the law.

Both of these officers had put an official construction on the provisions of the wool tariff, in regard to classification and in other respects, corresponding with that put upon them by the Committee of the National Wool Growers' Association, who assisted in framing the bill; and accordingly they did not ask, in any case, to have the correctness of their official proceedings tested by any other standard.

Invoices of wool, on being entered at the custom house, are examined by the appraiser, whose business it is to classify them and appraise their value, in order that the legal rate of duties may be levied and collected on them. Every invoice is recorded in the books of the office, with the number and weight of bales, name of vessel, name of consignee, date of entry, etc., and the adjudged classification, appraisal and rate of duties levied are also recorded; so that the books furnish a full history of the official action of the department in every separate case.

In the examination of an invoice of wool by the appraiser, the bales are cut open, and samples taken from different parts of the bale indiscriminately and from enough bales to determine beyond a reasonable doubt the character and condition of all the wool embraced in the invoice. When wools of different classes are found to be mixed, or any indications of intended fraud are discovered, the examinations of the bales are made more rigorous, and more numerous samples taken from them.

The samples in the New York Appraiser's Office generally weigh from one to three pounds each, and in cases where, owing to a mixture of different wools, or other circumstances, doubts were entertained by the appraiser in respect to classification, etc., the samples are considerably larger. They are all put up in well secured packages, marked so that the particular invoice from which they were taken can at once be determined, and hence, by reference to the records of the office, they furnish satisfactory evidence of the appraiser's action in regard to each separate invoice of wool, and enable the correctness or incorrectness of that action to be properly reviewed. That is to say, they furnish such evidence unless it can be supposed that the samples are not what they purport to be, but are false ones substituted to cover up fraudulent classifications and appraisal. The official action of the appraiser is necessarily subject to the inspection of so many persons—official persons and others, including wool importers, keenly anxious to prevent other wools of the same description from going into the market with the advantage of being burdened with less duties than their own—that any attempted fraud in this particular would be subject to immediate detection and exposure. We believe no suspicions are entertained in any quarter that such frauds have been practiced.

The committee examined samples from every invoice of wool which has been entered at the port of New York from the day the wool tariff went into effect, down to May 20, 1868, with the exception of a few invoices,—not exceeding a dozen in all,—which were entered in bond, and which were immediately re-shipped to foreign ports without being landed. In such cases there was no object in the appraisers taking samples.

The examination made in Mr. Bausch's department, at New York, satisfied the committee that this experienced and valuable officer has faithfully executed his duties as wool appraiser, to the utmost letter and spirit of the law. Not an instance was found where a shadow of doubt was entertained by any member of the committee, in regard to the accuracy of any of his official decisions or acts.

The committee found that the wool appraiser's department at Boston was conducted on substantially the same system with that of New York. Here, too, the committee examined samples taken from every invoice of wool entered since the enactment of the wool tariff

down to the period of their examination. The zeal and fidelity which so signally characterized the New York appraiser's official action, were found equally to characterize Mr. Rice's official action; and this committee would deem it unjust not to avow that, in their opinion, the warm thanks of the wool growers of the country are due to both of these officers, for their fearless and upright administration of the law.

The attention of the committee was specially directed to the practical effects of the tariff in the admission of foreign wools, and particularly to the fact whether wools which pass the custom houses as third class (carpet) wools, and which pay the lower duties of that class, are not wholly or in part applicable to, and actually used in the same branches of manufacture with Class One and Class Two, (clothing and combing) wools; thus, to the extent of such use, robbing the United States wool grower of the protection against foreign competing wools, avowed to be one of the principal objects of the law. If it can be shown that wools admitted as carpet wools are thus brought into competition with United States wools, by being used in the same class of fabrics, it either establishes the fact that there is no essential distinction between them, and hence no ground for the distinction made in the duties imposed on the respective classes, or else that the terms employed in the tariff classification are defective and open to evasion. In support of one or both of the latter propositions, the committee were informed by individuals, that they had seen combing machinery in operation in certain distinguished carpet mills, and knowing no occasion for its use in carpet manufacture, they were led to infer that it was employed to prepare carpet wool, or a portion of it, to be used in other fabrics.

On the above subject, the committee took the testimony of carpet manufacturers and wool spinners, eminent for character and experience, and supposed to be particularly conversant with the wool manufacturers of the whole country. These gentlemen stated that they did not know of any case of wools admitted as carpet wools being sold or used as clothing or combing wools. An experienced and eminent spinner, Mr. Cameron, of Graniteville, Mass., declared that there were intrinsic properties in carpet wools, (which he described at length,) which unfitted them for *profitable* use in any case, and even from *practicable* use in most cases, as substitutes for Class One and Class Two wools. The combing machinery used in the designated carpet mills was found to be used in their own legitimate operations. Wool is combed for carpet manufacture, the longer portions being used for the warp, and the noils, etc., for filling.

Taking the above statements in conjunction with the important fact that there has been no unusual import of carpet wools since the enactment of the present wool tariff, the conclusion is irresistible that no appreciable amount of the wool which passes the custom houses of New York and Boston, or probably the other United States custom houses, in that class, is employed in the same fabrics, or brought into competition with United States wools.

The committee are fully satisfied, from the results of their investigation, that the classification of wools contained in the tariff has thus far effectually carried out in practice the objects it purported and was intended to embrace, and that at present it needs no amendments to give the wool growing interest of the country full security against evasions of the law, when administered by competent and honest officers. Administered by incompetent or dishonest officers, no legal provisions could give the wool growing interest such security.

Woodchucks with Tusks.—A recent account of a horned woodchuck in the *Mirror and Farmer* is followed by the following statement by Mr. S. M. Baker, of Hillsboro' Bridge, N. H.:—

My boys killed one on my farm last week, of the *Tusk* breed. From the lower jaw, two tusks over four inches in length protruded, turning upward and rising one and one-half inches above the head; also two from the upper jaw, each three and one-fourth inches long, one growing through the roof of the mouth into the passage of the nose, thence turning down and again penetrating through the roof of the mouth, forming a ring large enough for a man's finger; the other turning out of the mouth like the horn of a ram. Any one doubting is invited to call at my house and see for himself.

Beets for Sugar.—Attempts are being again made in Great Britain to re-establish the manufacture of beet-root sugar. A Mr. Duncan, a sugar refiner who deals with no less than 300 tons of sugar weekly, has advertised for 6,000 tons of beet-root, to be delivered in the fall. It is asserted that the failures which have been experienced hitherto have been caused by the imperfections of the processes in ordinary use, and it is confidently expected that certain new methods which avoid these defects will result in success.

One of the most singular conditions attached to the advertisement of Mr. Duncan is that no farm-yard manure shall be used in the culture of the beet-root supplied to him. The over-luxuriance of growth which is produced by the liberal use of manure is fatal to the development of much sugar in the juice. This corroborates what has long been familiar to grape-growers and others who desire to produce fruit with a highly saccharine juice.

EXTRACTS AND REPLIES.

HOOP POLES AND RAISING FOREST TREES.

In your reply to Mr. Fletcher, relative to raising forest trees from seed, you very kindly referred to my little work on that subject. Now every such notice brings me scores of letters asking for information about the price of the young trees, seeds, &c. All such questions I am happy to answer. Still, I wish it distinctly understood, that I have no trees or seeds for sale; and, further, that my books are not written for the purpose of advertising nursery stock of any kind.

You say in your remarks that the subject is a very important one for the West; but allow me to add, to the East, as well.

I believe—in fact know—that there are thousands of acres of rocky hillsides in Massachusetts, and the other new England States, that should be planted with forest trees. Maple trees, particularly the sugar maple, should be extensively planted in such places. Any little crevice where a small one year old seedling can find root, should be occupied with a tree. We all know how thrifty and healthy the trees grow among the lime-stone and granite rocks.

If I were a farmer among the rocks, or even upon the rich lands of New England, and wished to leave a fortune to my heirs, I would plant seeds that would grow into money while I was growing old.

Will any of the young men who read the FARMER, plant one or more acres of suitable soil to hickory trees, and let us know, in five or ten years from now, the result? Plant them for hoop poles. In my little book alluded to, are the following directions: The young, one or two-year-old plants, or even the nuts, may be put in rows four feet apart, and the plants one foot apart in the row; this will give 10,890 to the acre. At this distance they can be allowed to remain until they are six to eight feet high and one or two inches in diameter. They should reach this size in five to eight years, according to the soil and the care they receive. Then they should be thinned, by taking out every alternate tree; this should be done by cutting them off near the ground. We therefore take out 5,445 trees suitable for hoop-poles. Their value will of course depend upon the market, but we will say four cents each, or $40 per 1,000, which would be a low price in New York; this would give $217.80 (two hundred and seventeen dollars and eighty cents) as the return for the acre's first crop. In three or four years they will need thinning again, and we take out, as before, one-half, or 2,722; these will, of course, be much larger; and if they will reach ten feet, and are of good thickness, they will readily bring ten cents each, or $272.20 for the second crop. In a few years more they will require thinning again, and each time the trees, being larger, will bring an increased price. But we are not by this means exhausting our stock—far from it, for those we cut off at first have been producing sprouts which have grown much more rapidly than the originals; and if a little care has been given them so that they shall not grow so thickly as to be injured thereby, we can begin to cut small hoop-poles from the sprouts of the first cutting before we have cut our third or fourth thinnings of the first crop; consequently we have a perpetual crop, which requires no cultivation after the first few years. As soon as the leaves become numerous enough to shade the ground, no weeds will grow among them, and the annual crop of leaves that fall will keep the soil rich and moist. The time to cut trees which it is desirous to have produce sprouts, is in winter or very early spring; if cut in summer, it is likely to kill the roots.

How many acres of young thrifty, white ash trees are wanted in Boston every year for agricultural implements? Is there any one in the vicinity making preparations to supply the demand in the future? I fear not. But there is one thing which I am quite certain of, and that is, the time will soon come when many a land owner in New England, and elsewhere, will say, What a fool I was in not attending to this tree planting in time, for I might have known that there would be a great scarcity and high prices in consequence.

A. S. FULLER.

Ridgewood, N. J., June 7, 1868.

RHEUMATISM IN THE HORSE.

I have a mare ten years old. I have owned her five years. Last winter she was lame in one fore foot (or rather ankle). I doctored it with spirit, saltpetre and gum camphor. It soon got better. Soon after she began to be stiff in her fore legs,—sometimes one, sometimes the other and sometimes neither. I could drive her one and a half miles and back; and she would be but a little lame, perhaps not at all. I found by driving her sometimes in breastplate harness, and sometimes in hames, that she travelled much the best in the hames. She has not been driven hard, nor worked hard, nor fed high. She has had no grain this winter, and till quite late but a few carrots. She raised a colt last year, which at six months old weighed 526 pounds; at ten months, 620 pounds. She is to foal again in about five weeks. Has this anything to do with her lameness? I have had a goodly number of men look at her, and no one can tell me what ails her, nor what to do for her. Now if you or any of your correspondents can tell me, through your paper, what is the cause of her lameness, and what will help her, you will much oblige

A SUBSCRIBER.

Westfield, Vt., May 25, 1868.

REMARKS.—We should think from your description that it is probable your horse has the rheumatism. In the horse, as in man, this is a difficult disease to manage. Though every neighborhood may have plenty of "cure-alls," both men and animals suffer on for months and years uncured. Instead of attempting to prescribe any particular treatment as adapted to your horse, we copy from Youatt the following general remarks:—"In the treatment of rheumatism attention should be paid to the probable nature and causes producing it. When it follows pneumonia, influenza, or other debilitating causes, our first object should be to restore the general health of the animal by the judicious administration of tonic medicines and nutritious foods; an occasional diuretic may also be given. Our local applications should consist in the acute stage of warm fomentations, to be soon followed by some stimulating liniment, such as the compound soap liniment or the vinegar of cantharides. By these means this form of the disease will generally quickly disappear. When rheumatism suddenly attacks an animal in apparent health much more active means must be resorted to. We must endeavor to arouse the excretory organs, as the liver and kidneys, into increased action. Half a drachm of calomel and opium combined with three drachms of aloes should be at once administered, followed in a day or two by active diuretics. Warm fomentations should be applied to the parts,

and when the acute inflammation is subdued, a blister; the animal being kept perfectly quiet, and allowed nothing but bran mash or other soft foods. Colchicum, guiacum, and other medicines which are esteemed as valuable remedial agents on the human subject in this disease, appear to produce but little effect upon the horse."

BLOODY WATER IN OXEN.

I have noticed several articles in your valuable paper of late about red water in cows, but I don't see anything about it in oxen. I have an ox that I bought three or four months ago, and some three weeks since, I noticed his water was considerable bloody, and it has been so ever since. Sometimes it is higher colored than it is at other times; but it comes from him apparently as freely and easily as ever it did. He is in good working order, and eats, drinks, works, and appears as well as usual. But I fear if he does not get better pretty soon it will be likely to affect his health. I have been careful not to draw him very hard, and I don't know that he has ever been strained. Now if you or any of your numerous subscribers, can tell me of anything that will help him, you will oblige me very much. A. B.

South Royalston, Mass., June 1, 1868.

Remarks.—If our correspondent will refer to the Weekly Farmer for March 14 and 21, or to the Monthly Farmer for April and May, pages 161 and 223, he will find something about red water in oxen. In the first, "L. W. B.," of Brookfield, Vt., cured an ox that had been troubled for over a year, by four doses of one tablespoonful of copperas and two of saltpetre,—to be doubled in severe cases,—given in the morning at intervals of "a few days." In the other case, after the trial of "some simple remedy without much effect, the ox was fatted and killed. This writer "B. B. S." of Dover, Me., believed the cause to have been warts on the inside of the bladder, and had greatly benefited cows by giving them vinegar.

Dr. Dadd recommends "opening the sluices of the body." For which purpose he prefers giving the animal one pint of linseed oil, and its operations assisted in a few hours with injections of warm soap suds, each injection containing a spoonful of powdered ginger.

In F. A. Gunther's Manual of Homœopathic Veterinary Medicine, it is said that this disease is generally observed in the spring after the animal has been allowed to browse the young shoots of oaks or fir trees, or other noxious substances. The principal remedy mentioned is ipecac, of which a single dose will often suffice to remove it when administered in time.

BEES—APPLE CROP—COWS DOING WELL.

Bees are swarming well this season, but are storing little honey. There have been too many rainy days for much honey. They came out of their winter quarters with an unusually large amount of honey, which has enabled them to rear their brood and swarm early.

Grass is looking very well, but many pieces of grain are badly injured by the rain. Last autumn, Hiram Stow, of Webster, gave it as his opinion, that there would be more apples in 1868, than in any year of the last ten. The blossoms that have just fallen from the trees were abundant enough to verify the prediction.

As a remedy for many of the diseases to which cows are liable at the time of calving, an old milkman recommended "a thriving condition." Cows may carry a good amount of flesh and yet not be *thriving*. Such are very liable to do badly when they calve, while others with much less flesh, and to one unacquainted with their previous condition, apparently in far worse condition, will do well, because they *are* thriving. We have found no need of rosin, snake skins, boiled rye, or such like remedies, for thriving cows at calving time. F.

Mastyard, N. H., June, 1868.

LOBELIA, OR INDIAN TOBACCO.

A correspondent, who allows us to use only the signature of "Mary," believes this plant to be the cause of a great proportion of the sickness and death of farm stock. The writer does not expect people generally will agree with her, but believes that careful observation will result in the conviction that it is a mischief-making plant. As it flourishes best in wet seasons, and more is gathered with the second than first cutting of hay, our correspondent suggests the large crop of last season as the cause of the prevalence of the unusual amount of sickness among sheep and other stock the past spring.

STIFLE OUT.

I would like to inquire if any subscriber can ask questions through the Farmer, free of charge. As I have just commenced farming, I would like to ask a few questions through the Farmer. And first, my best cow threw her stifle out, and I cannot keep it in place. I would like to know if the editors or any of the readers of the Farmer can tell me what I can do for her? Sometimes she does not limp at all, but at others she can hardly walk. B. M. Ballard.

Fairfax, Vt., June 1, 1868.

Remarks.—Instead of making any charge for publishing such inquiries, we are grateful to those who take the trouble to make them; because these questions,—even those which appear the most simple to some,—draw out valuable hints and suggestions. We hope the foregoing will do so. Since its reception, a gentleman of much experience with cattle, Mr. Charles Bird, of Walpole, Mass., informs us that in very serious misplacements of the stifle, it is necessary to fix up in the stable a rest or swing for the animal, similar to that used by blacksmiths, so as to support a considerable portion of the weight of the animal. The lame leg should then be brought forward by means of straps, and the bone put in place; and an ointment of 4 oz. of sweet oil, 3 oz. of skunk's oil, 3 oz. of good brandy, 3 oz. of balm of Gilead buds, 2 oz. of wormwood and 1 oz. of hartshorn applied occasionally to the joint. The animal should not be kept in the swing more than four hours at a time.

But in your case we hardly think all this necessary. The animal should be kept away from other cattle, and as quiet as possible, on a smooth surface, without being required to go over bars, or up or down steps in passing to or from the stable. We think a more simple liniment than that recom-

mended above, or one composed of a part of the materials mentioned, might prove beneficial. We have much faith in the free use of pure cold water in all such cases. A decoction of 4 ounces of wormwood in 2 quarts of scalding vinegar, applied cold is recommended by Dr. Dadd for strain in the hips, and would perhaps be beneficial in case of stifle. For deeply seated strains, Mr. Cole recommends: Spirits of turpentine, half a pint; oil of organum, half an ounce; olive oil, a pint and a half; cantharides, half an ounce; mixed together in a bottle. Rub in, morning and night. Should it produce redness and tenderness, reduce by adding olive oil.

CURING HAY, SALT AND LIME.

Mr. Brown:—I noticed in the New England Farmer, under date of August 17, 1867, an improved method to me, of curing hay, viz.: four quarts of lime and two quarts of salt. It appeared from the same paper, that you also put down one square in the same way. Please state the particulars in regard to the value of the hay, compared with that cured by the common mode. What becomes of the lime? Is it all taken up by the hay, and therefore into the animals' stomachs? If so, are such quantities of lime good for animals?

Fitchburg, Mass., June 2, 1868. E. Graham.

Remarks.—The grass upon which we put the salt and lime was cut upon a lawn, was not more than five inches high, very juicy, and consequently difficult to cure. It was dried as well as the weather would permit, but when put into the barn was damp and heavy. The lime and salt mixture was added as the hay was stowed away. On examining it several times, no heat or musty smell was found. It was fed out in March, and the cattle ate it freely. It had not, however, the sweet and fragrant odor that well made hay usually has. We should recommend the use of the lime and salt only where it is found necessary to put hay into the barn imperfectly cured. Nothing can add value to the richness and flavor of English hay that is well made.

A lot of grass cut from the same lawn about fourteen days previously was dried out of doors as well as the unfavorable condition of the weather would permit, was taken to the barn and spread over the empty floor and scaffolds, but in spite of frequent turning and attention, grew musty, and was essentially injured.

The salt and lime probably attract the moisture in the hay to themselves. When the hay was fed out, some portion of the lime was found to fall out in a fine dust, while pitching it over.

A correspondent of the *Utica Herald*, Mr E. Lampher, of West Martinsburgh, N. Y., who used "less than a bushel of lime on forty tons of hay," put in the bays two years ago, while that in sheds was not limed, says that the limed hay came out all bright, but dusty. Stock eat it well, but when his cows come in, in the spring, they did not give as much milk as they did the spring before, or this spring, although they were messed with better grain for milk than they have been this spring. One of his horses has the heaves, and cannot work on the limed hay without wetting, while other hay affects it very little; his other horse has no heaves nor cough, but can eat the limed hay but a few days without coughing badly. He has some of the hay now, but cannot feed without wetting. In this case it appears that the lime was used without salt.

COOKING FOOD FOR CATTLE.

It appears to me that extravagant statements are occasionally published in agricultural papers in respect to the advantages of cutting and cooking fodder for animals. In the Monthly Farmer for December last, page 572, there is a brief report of the discussion of this subject at one of the evening meetings held during the New York State Agricultural Fair at Buffalo, last fall. Some considered two bushels of steamed fodder better than three uncooked. One said that by cooking, the value of food was doubled; another that it was trippled. Supposing the lowest estimate to be the true one, what a pity that farmers generally are not convinced of it. What an immense gain to save even one-third of our fodder. It would very sensibly lower the price of hay. Why do not some of our agricultural societies or agricultural colleges decide this matter by accurate experiments? Is it not their appropriate business?

Derry, N. H., May, 1868. E. B.

Remarks.—The medical college, the theological seminary, and the scientific school have failed to settle questions on which men disagree in medicine, divinity and science. Why, then, should we expect the agricultural college to be more successful in harmonizing the "many minds" of farmers? No, friend "B.," the agricultural college may do much good; it may train the "head to save the heels;" it may compel chemistry and geology and many other sciences to put their "shoulder to the wheel" of the farmer's cart, and to prepare the manure for his impoverished soil,—but it will never do the thinking for the men who have the granite of New Hampshire in their bones, the air of the Green Mountains in their lungs, the sunrise of Maine in their eyes, or the memory of the Pilgrim Fathers, or of Roger Williams in their hearts. The agricultural college may stimulate inquiry, investigation, and experiment; but it will never supersede the necessity of individual thought and experiment.

DEEP PLOUGHING.

I wish to inquire through your paper about deep ploughing; whether eighteen inches are not better than twelve would be on most soils?

Weston, Vt., June 8th, 1868. E. A. Moore.

Remarks.—Very few farmers plough anything like twelve inches deep, and yet among all those who practice shallow ploughing there is not a single one probably that would not like a rich soil even eighteen inches deep. But will ploughing alone secure such a soil? Many of our agricultural teachers seem to think so, and advocate universal deep ploughing. In his new edition of *Elements of Agriculture*, Mr. Waring says, "the advantages of deep ploughing cannot be too strongly

urged," and farmer Greeley of the New York *Tribune*, who affirms that no garden or orchard should be planted unless trenched or ploughed at least two feet, holds that "deep ploughing is a remedy for the woes of our country." The NEW ENGLAND FARMER also believes in and advocates what it calls "deep ploughing." Is your question, then, answered in the affirmative? We think not. Whether eighteen inches are better than twelve, or six, or four, depends on circumstances. However desirable a deep rich soil may be, it may be that he who hasteth to plough deep without regard to the character of the subsoil or the amount of manure he can apply, "considereth not," like old Solomon's man that hasted to be rich, "that poverty shall come upon him." Still we believe that a gradual deepening of the furrow slice is desirable on most of our old fields, and on many of them quite necessary. The celebrated Mechi, of England, ascribes his success in the cultivation of heavy clay soils to deep ploughing and *heavy manuring*, and yet he cautions against turning up too much of what he calls "the villainous subsoil," even on such land; while on loose, sandy or gravelly soils he advises "compression" instead of deep cultivation. If there were a bed of manure twevle inches below the surface, or a strata of the "green marl" of New Jersey, perhaps "the advantages of deep ploughing could not be too strongly urged;" but if instead of a bed of manure or of a subsoil as good or better than that at the surface, there is a layer of hungry sand, washed gravel, or a pavement of boulders, little perhaps would be said in favor of a two-foot furrow after a fair trial. The fact is, that in ploughing, as in all other operations on the farm, circumstances and common sense must govern.

RAPE FOR COW FODDER.

In the FARMER of May 23, is a communication over the signature "N. S. T." on corn fodder for soiling. I agree with him as far as he goes. But he has said nothing of the best feed between the first frost and winter. I have for a few years past planted rape for green feed, after the frost has cut corn. It is first-rate feed as long as it can be had for snow. Say two and a half or three feet by eighteen inches is about the right distance to plant it, which may be done any time in June, the sooner the better, however. The seed is the same that is sometimes fed to birds, and may be had at the seed stores in Boston. Rape makes the best butter of anything I ever fed to cows. It wants rich land. It won't grow on land without manure.

Westboro', Mass., June 14, 1868. W. S. GROW.

REMARKS.—This plant which is largely grown in Europe, belongs to the cabbage or turnip family, but it never heads like the former, and its roots are of little value compared with the latter. It is frequently called *coleseed* in England, and *navette* in France. Its seed is rich in oil, and the whole plant is extremely valuable as green food for cattle and sheep. The plants survive the winter in England and produce seed the second year. There are several different varieties of the rape. On heavily manured land it grows to a height of six feet. Mr. Blackie, an English writer on agriculture, remarks, "I am almost afraid to say that I believe, with the addition of some straw, an acre will keep thirty head of cattle in full milk for a month."

NEW ENGLAND PIONEERS IN WESTERN VIRGINIA.

The following bit of history of two young men from New England fell in my way some time since, and I think it worthy of preservation.

In the year 1749, the head waters of the great Kanawha River that lies immediately west of the Alleghany mountains, in what is now West Virginia, was discovered; and from the reports of that rich country, abounding with game and fish, many visitors were attracted there the following year, 1750, and among others two young men from New England, by the name of Jacob Marlin and Stephen Sewell. They were so captivated with the country, and with the Buffalo, Elk and smaller game which they found there, that they remained over winter, though near a hundred miles from any white settlement. Here they were found in the spring of 1751 by a surveying party from Eastern Virginia, the Lewises and others; but then living some eight miles apart. Mr. Lewis inquired what could have induced them to separate in the absence of all other human beings, and was told that a little difference of opinion had caused the separation. At this time, however, a better understanding existed, and they were sufficiently friendly to salute each other with "good morning, Mr. Marlin," and "good morning, Mr. Sewell," when they chanced to meet.

The location of these young men, during that winter has ever since retained their names. Marlin's camp was on one of the finest bottoms on Greenbrier River, and a post office there is called "Marlin's Bottom." This "Bottom" has been cultivated in corn and wheat for about one hundred years, and that without manure or rest, and still produces from fifty to eighty bushels of corn to the acre. The writer, himself, has seen about eighty bushels to the acre.

Sewell's shelter was a large ledge of limestone rocks, near a fine spring, and the neighboring stream is called "Stephen Hole Run" on the public records of all the lands on that water. Both of these localities are in Pocahontas County. During the year 1751 Sewell went some forty miles further west and was killed by the Indians on a mountain known on the map of Western Virginia as "Sewell Mountain," and a post near the place of his death bears the name of "Sewell."

During this surveying expedition of Col. John Lewis, in 1751, his party at one time became seriously entangled in an almost impenetrable jungle of the Green Brier bushes, and hence the name of Greenbrier River has attached to the stream on whose rich intervales these briers grew so luxuriantly. J. H. R.

West Virginia, June 1, 1868.

TIME AND MODE OF MAKING HAY.

ESTEEMED FRIENDS:—Being a subscriber to the NEW ENGLAND FARMER, and looking to it for instruction, I hope to see more definite instructions as to making hay. I have several articles before me recommending very early cutting, and not making as much as is generally done; but none of the writers state whether they use salt or not.

I intend to cut earlier than usual, make two days while the hay is green, and put four quarts of slaked lime and salt, equal parts, per ton; after the grass is nearly ripe, I propose to get in the hay the same day it is cut. Now if there is a better way I would be glad to learn it, as hay is our most important crop, and how to get it, the most important question in farming.

Does steam from heating hay tend to draw

lightning? Will lime and salt, used as I mentioned, have any bad effect on the stock? Would it be advisable in any case to get in hay cut green, the first day? CHARLES KEZER.

East Winthrop, Me., 6th mo. 15th, 1868.

REMARKS.—It is generally understood that chimneys from which heated air is ascending into the atmosphere, and barns stored with new hay, the vapors from which also produce warm ascending currents, are especially liable to be struck by lightning. Our own experiment in the use of hay to which salt and lime was applied, and also that of a gentleman in New York, are stated in another place in this paper. Others who have used the mixture think it has no injurious effect on stock.

EAST *vs.* WEST.—BUNCH ON COW.

Six years ago I came here to No. 4, near Lakeville, from Topsham in Sagadahoc Co., and bought a farm on the head waters of the Schoodic lakes, about thirty-five miles from Calais, and seventy from Bangor, in preference to going West. I am well satisfied, and to day would not exchange with any Western man for the same number of acres. We have plenty of good land, good markets, and good health. We have had a very wet spring this season. Grass looks well. Apple trees are just blooming out, which is very late for us.

I have a cow that is sick. She has a lump on her dewlap where it joins the bri-ket, about five inches through and ten long, and is as hard as a rock, apparently. Some say that it is garget; but it looks to me more like a tumor. I have given garget and also put a piece in her brisket, but it does not seem to run or do any good. Will some one please give me some information through the FARMER, and oblige a new beginner.

A. E. GOWELL.

Lakeville Plantation, Me., June 8, 1868.

REMARKS.—Sometimes these bunches will yield to repeated washings and rubbings with salt and water, vinegar and water, or tar and salt. Sometimes surgical operations are performed, which are often troublesome and costly. If the animal eats well, it may be best to fatten her for beef. What say others?

BELLS FOR SHEEP.

Would it not be a good plan, for some one who has them, to advertise in the FARMER bells to put on sheep; cow-bell pattern, small size, to frighten bears, dogs and foxes away from sheep and lambs? Fifty dozen could be sold in this town if we knew where to send for them. Can't you help us a little and oblige. J. W. LAMPREY.

Orfordville, N. H., June 8, 1868.

REMARKS.—In some dissertation on sheep that we read lately we remember the remark was made that every tenth sheep should wear a bell. Now if there are 22,000,000 sheep in the United States, over two million bells are wanted. Is not such a demand worthy of the attention of some bell-maker?

FOR RAISING PICKLES FOR MARKET.

Old pasture land is preferable. Plough it up now, turn as smooth as possible and roll smooth, then the grass will rot quickly and you will have no weeds to trouble. Any kind of well rotted manure mixed with green night soil, or the night soil well mixed with loam will raise good pickles. Furrow the ground both ways, having the rows four feet one way by six the other, put two shovelfuls of manure in a hill. Be sure and get the right kind of seed. Obtain it from some one who has raised for his own use. It will pay you to visit some farmer who has been in the business and is willing to impart the knowledge gained. Plenty of such can be found in Lincoln and Concord, Middlesex County. Farmers hereabouts usually contract in the winter with pickle dealers in Boston to raise a certain number of acres, at so much per thousand pickles, delivered at the factory. Before the war they were a profitable crop at $1.25 per thousand. They are a very easy crop to raise and can be raised on any land where corn will grow. Plant from the 10th to the 20th of June. Z.

Reading, Mass., June 6, 1868.

SLIDING AND ROLLING HORSE RAKES.

In the FARMER of June 13, "Richard" of Oxford county, Me., inquires for a horse rake that is not liable to get out of order, and that *slides* the hay along on the ground instead of rolling it as all spring tooth rakes do. After trying several kinds of rakes, I have used for the last three years one of the Warner wooden revolving rakes, attached to wheels. It obviates all the difficulties which the writer speaks of. The teeth running flat on the ground, it rakes clean, makes the snuggest window, and the best to pitch of any that I ever saw, except those made with a hand rake. They are easily managed, and durable. The rakes are manufactured at Williston, Vermont.

HARMON NORTHROP.

Fairfield, Vt., June 15, 1868.

REMARKS.—An anonymous correspondent recommends Burt's Self Adjusting Independent, Spring-tooth Rake, as one that rakes clean without scratching, is easy to manage, and gives perfect satisfaction in his case.

SUGAR FROM WHITE MAPLE TREES.

Your correspondent, J. 1. Landman, of South Londonderry, Vt., inquires if sugar can be made from the common white maple. I have never seen it made from that alone, but I do make it with the rock maple. I have a second growth of thirty-two trees, sixteen of them are white maple. This year I made about 100 pounds of as handsome sugar as can be found in Vermont. He asks if it can be profitably done. I think the sap is not so sweet as the rock maple, but no doubt it is profitable.

AN OLD SUGAR MAKER.

Westfield, Vt., May 25, 1868.

REMEDY FOR THE CURRANT WORM.

I saw in your last paper, you recommended white hellebore, which is not only costly, but a dangerous poison. Some persons have been poisoned fatally by using it. I have used air slaked lime for several years with perfect success. Take lime that is air slaked so as to be fine as flour, and sift it on with a hair or wire seive when the bushes are wet with rain or dew, till they are white with it. No fear of using too much as it will not hurt either leaves or fruit. It will also stop the slug on rose bushes. SUBSCRIBER.

Pepperell, Mass., June 13, 1868.

COW-CORN *vs.* SQUASH VINES AND WEEDS.

In an article on corn for green feed, "N. S. T." referred to a conscientious milk man who abandoned the use of green corn. Was its use discontinued through ignorance, or was the milk produced from it of inferior quality? If the milk is inferior, what is the gain to the person who con-

sumes his milk in the manufacture of butter and cheese? From the same article we learn that at a certain stage of the growth of the corn, the whole value of a ripened crop is found in the green stalks. If that is so, will it exhaust the fertility of the soil as much to grow a crop of green corn, as it would to ripen the same crop? We need a substitute for grass late in the season, and notwithstanding the discussion of the cow-corn subject in the FARMER, we prefer to try our luck with green corn, rather than with squash vines and weeds. F.

Mastyard, N. H., June 10, 1868.

SALT FOR RYE.

In 1865 I sowed about eleven acres of land, which had been entirely impoverished, consisting mostly of light sandy soil, with rye—two bushels of seed to the acre. The field had been in white beans the year before, and had not returned the cost of seed and labor. For the rye it was ploughed in July, and buckwheat sown, which was turned over when in blossom and rolled down. The rye was sown in October, broadcast, and after harrowing, ten barrels of refuse Saginaw salt was spread over the field. The result was, in some respects, extraordinary. Before germination, a tremendous gale, lasting through several days, carried volumes of sand off the field, reminding one of the simooms of Sahara. The following winter was open, without snow sufficient at any time to cover the rye. During the succeeding summer and fall several severe gales prostrated the timothy and corn in neighboring fields, but did no injury to this rye, which was of very rank growth and attained an unusual height, yielding a trifle over thirty bushels to the acre. The rye crop in my vicinity that year was almost a total failure. In the spring of 1866, clover was sowed by a machine on the young rye, and produced as even a lay and good yield as could be desired.

My deductions from this experiment are, that the salt gave increased growth and stoutness of straw, and increase of yield and plumpness of berry, fully confirming, to my mind, the soundness of our revered friend John Johnston's views on the use of salt as a fertilizer for wheat and rye.—*E. N. Wilcox, Whitwood, Mich., in Country Gentleman.*

HEALTH OF AMERICAN CATTLE.

Among the curious things which we should like to see explained, is the reason why American cattle, of late years, are more afflicted with disease than formerly. The census reports do not show such a marked increase in numbers as to warrant the assumption that it proceeds from any such increase. We are constantly hearing of fatal maladies breaking out among cattle in various parts of the country;—in the Eastern States, in the Middle States and now at the West. The so-called "native cattle" of the country were singularly free of disease. Of late years there has been a general desire to improve our stock by strains of imported blood. We do not say that this has been the direct or indirect cause of disease, but the fact stands boldly out, so far as the Central counties of New York are concerned, that the trouble among the herds commenced with the admixture of thoroughbred blood in the herds. The old stock of the country was far more hardy and vigorous than are the improved breeds of Great Britain. The climate of Great Britain differs materially from that of this country. How far a change of climate and the infusion of blood from a less vigorous race has affected the health of our stock, the physiologist is best able to explain, but it would be reasonable to suppose that all the circumstances combined might have more or less influence upon the health of American cattle rendering them less able to resist disease.—*Utica Herald.*

APPLYING MANURE.

After a variety of experiments running through forty years of close application to agriculture, I have adopted the following practice: 1st. Make and save all the manure you can. 2d. Apply the winter's production to the spring crops, so far as its condition will allow its admixture with the soil; and that which needs decomposition, apply to winter grain and top-dressing of meadows in autumn. In applying manure to winter crops, I prefer to fit the fallow well first, then spread the manure as even as can be done; sow the grain and work the land thoroughly with a cultivator and harrow. The manure being so near the surface, protects the young plants from the frosts and winds of winter, and places the very food they want within ready reach of the plant, and assists the grass seeds to a good catch.

In applying manure to spring crops, I put the heaps at such convenient distances apart that there is no difficulty in a careful hand spreading it *evenly* over the ground, and spread it only as fast as you are ready to plough it under, to prevent waste by evaporation, and plough no deeper than is necessary to protect the manure from waste by the elements, the land having previously been thoroughly worked by deep culture. It is seldom that a good catch of seed fails by the foregoing practice, unless the land has been cropped so much that the vegetable mould is exhausted. Seed down with the second crop, with a good application of manure, and you will not have "worn out lands."—*Hiram Walker, Mexico, N. Y., in Country Gentleman.*

—According to the Monthly Report of the Director of the Bureau of Statistics of the Treasury Department, Alex. Delmar, Director, it appears that the importation of raw and fleece wool in March, 1868, amounted to 1,866,820 pounds, and in March 1867, 3,808,402 pounds.

PRESERVING ARTICLES OF FOOD.

PERHAPS in no department of human economy has there been a greater advance within a few years past, than in the preserving of articles of diet in a wholesome and palatable condition, for the use of travellers, sailors, soldiers and families.

Condensed milk, canned fruits and meats; pemmican; dried fruits, as apples and peaches; Hosford's essence of beef, in which the nutritive substance of an ox is reduced to a few pounds and packed in a sealed can, ready to be transported in the traveller's trunk, and converted in a few minutes into a rich soup; Professor Gamgee's method of preserving meats in their natural form so that whole quarters of beef and mutton can be transported from South America to Europe in a good condition, and brought upon the tables of London or Paris without their taste or healthfulness being in the least impaired,—are but a few of the instances that might be mentioned, of what science has suggested for the convenience or necessities of many. The preserving of vegetables, fruits and meats, in a fresh state, in our houses, kept at a uniform temperature, sufficiently low to prevent fermentation and decomposition, and just above the freezing point, is another instance of the same kind. In this way, articles that would otherwise rapidly decay, can be stored when there is a surplus in the market, and be kept till they are wanted, to the advantage of both the producer and the consumer. Such establishments are springing up in the vicinity of large cities, and if they do not become sources of monopoly and speculation, will prove a great convenience

Our attention has been turned to this subject, by a notice in the Report of the Department of Agriculture, of the drying of sweet potatoes, to which we briefly alluded a few weeks since. This tuber is wonderfully productive at the South, and is not only cheap and nutritious, but is a favorite article of food with all classes. The difficulty of keeping it is fully appreciated by families and dealers in vegetables.

Dr. C. K. Marshall, in the *Vicksburg Times* in September last, asked, "Cannot sweet potatoes, which our soil and climate are so wonderfully adapted to produce, be cut into slices and so dried that they might be made an article of merchandise? Fruits and vegetables have been dried and prepared for shipment, and thus become valuable crops. If sweet potatoes can be treated so as to preserve the saccharine matter, and become an article of food, even though not as agreeable as the undried root in its best condition, they would pay as handsomely as any product of the Southern soil" This inquiry has been answered by Francis H. Smith of Baltimore, who has dried sweet potatoes successfully in his drying tunnel, which is a chamber of lathes and plaster, twenty feet long and six feet in breadth and depth, with a peculiar furnace at one end, and a chimney of boards at the other, capable of preparing twenty-five bushels of dried peaches.

The potatoes are peeled by a little machine and sliced three-eighths of an inch think by another, with great rapidity. When dried they have lost two-thirds of their weight, weighing twenty pounds; are white and so flinty, that a knife makes but little impression upon them; but when cooked—steaming is the best way—they resume their original appearance and are in every respect equal to the undried root in its best condition. Should the sweet potato in this dried state, become a popular article of diet, and we see no reason why it should not, especially at the North, where the difficulty of preserving it is so much greater than at the South, it would be of great economical value. We see no reason why the common potato may not be dried in the same way, although its better keeping property makes this less necessary; yet it would thus be rendered portable, and might be more readily obtained in many cases in which it is now impossible to get it. How much suffering might thus be saved in the camp and the naval service, from which its free use would banish scurvy, that terrible scourge of the soldier and sailor.

SOIL FOR FLOWERS.—Leaf mould is good for flowers if two or three years old, and very much decayed; when but half rotten it is an injury. Rotten sod is the best sod for flowers; and cow manure which has lain two years to rot, the best fertilizer. Where rotten sod is not easily obtained, the edging parings of walks may be preserved in a heap for flower purposes.—*Gardener's Monthly.*

TREATMENT OF OLD ORCHARDS.

I have an orchard of about five hundred apple trees that were set forty years ago, one rod apart. When I came into possession of the farm, eight years since, the trees had been neglected to such an extent that full one-half of the limbs were dead, and now one-half of the trees are dead. The remaining trees are large and have a large amount of brush. I have thought of cutting them down, and put two trees in a pile, and burn wood and brush all together, and then set half the number of trees on the same ground in the ash beds. Please inform me what you think of it. O. H.

New Vineyard, Me., June 9, 1868.

REMARKS.—Well, we are not prepared to endorse your plan. Perhaps we should be if we could see your trees. But if the "large amount of brush," you speak of, is live wood, either of old limbs or sprouts, we should certainly hesitate to apply the torch. We have eaten so much fine fruit from rejuvenated old orchards that we are disposed rather to say, "Woodman, spare that tree." The pomological tutor of one of the editors of the FARMER, the late Chauncey Goodrich, of Burlington, Vt., was very successful in making old orchards "almost as good as new," and we propose to give you a brief account of the treatment he adopted, and which we assisted him in executing, for reclaiming old apple trees. We do this the more readily as our memory is refreshed by a little work he published in 1850, entitled *Northern Fruit Culturist.*

After admitting that our old orchards in New England are becoming scrubby and worthless, and rapidly dying out, he inquires for the cause. He alludes to the well settled principle in vegetable physiology that no plant or tree will flourish and produce fruit in ordinary soils, after the particular ingredients required for its growth is exhausted, though other plants or trees may grow there in the most perfect manner. Analyses of the sapwood and of the bark of apple trees, show that both are composed largely of potash, lime and carbonic acid, viz:—

	Sapwood.	Bark.
Potash	16.19	4.930
Phosphate of lime	17.50	2.425
Carbonic acid	29.10	34.830
Lime	18.63	51 578
Total	81.41	93.763

These, and the other materials, such as soda, magnesia, organic matter, &c., which according to the analysis make up the tree, were abundant in the new soils of New England, and hence for a time apples were easily raised on new land. But as these materials become exhausted our orchards fail, and nature proposes a "rotation of crops." No farmer expects to grow corn for twenty or fifty years by planting it every spring, in the same hills, without manure or cultivation, especially if in a field of grass. Is it not as unreasonable to look for successive annual crops of apples under similar circumstances? In some cases, also, the soil, which was at first loose and porous from the presence of the leaves and roots of the primitive forests, has become compacted and too wet.

If right in this brief statement of the disease of our sick orchard, at least "half the cure" is suggested. If the trees are starving they must be fed, and if their feet are in cold water, we can draw off the water easier than we can take their feet or roots out of it.

The first prescription of Mr. Goodrich was uniformly a dose of plough. Then for each large old tree "take" a bushel of slaked lime, or ashes, with plenty of peat or swamp muck, or any coarse vegetable matter, with enough stable manure to fit the ground for corn or potatoes, which may be cultivated upon the land. After this an annual top dressing of muck with refuse lime or ashes, should be applied. Never sow any grain under the trees, and if you must let the grass grow after the trees are started, cut that under them, at least as far as the branches extend, "early and often," and leave it there for a mulch,—don't begrudge the tree that much.

The next year after this cultivation and manuring, *commence* operations on the trees. So far you have acted the part of a "physician;" your "alteratives" and "tonics" have invigorated the system of your patient; and you now enter upon your duties as a "surgeon." Don't forget that your patient is a living, organized being,—and not the "dead subject" of the "dissecting room."

Scrape the old bark from the bodies and large limbs, and with a large brush or broom apply ashes and water to them; this will destroy insects and give a healthy appearance. White-washing with lime is always bad for a tree. as a hard crust is left. As the trees will now be in a growing state, they can be grafted successfully, which cannot be done with scrubby, uncultivated, dormant ones. Commence grafting by removing at least one-half of the top, and the whole of the centre, which alone should be grafted this season.

This will increase the growth of the lower branches, so that the next season they can be grafted successfully; the third and fourth season, any limbs left should be removed or grafted, so as to present an entire new top.

If we examine the body or limbs of a tree covered with sprouts, we shall find it rotten at the heart. If these sprouts are yearly removed, the tree will gradually decay and die. If a portion of them sufficient to form a new top, are retained, and a severe yearly pruning of the old limbs is given, the whole of the old top may be removed in five years, and a new, healthy, bearing top formed. Dead or decaying limbs rapidly exhaust the life and vigor of a tree; as long as any part of a tree is alive, dead limbs must at some point join the living part, and necessarily be slowly, but constantly, exhausting its vitality. Great care should be used, in cutting off large limbs, to cut them obliquely, and so close to a growing limb, or sprout, as to have a *lip* soon form over its edges, which effectually protects that most vital part of a tree, the bark. To enable any tree to do this, some covering must be applied where the limbs are removed. The best (and we have tried all kinds we have ever heard of) we have ever used, is common tar, made thick, when warm, with brick-dust, procured by grinding to a powder soft brick; this when kept in a small kettle, can easily be applied, when warm, with a common painter's brush. For small trees or small limbs common grafting wax will answer all purposes; but from large limbs, it will peel off the first season. Where new tops are formed from shoots, and the old top removed, care must be used not to do it too soon; if so, the growth is so suddenly checked that the new wood is destroyed. A sufficient number of new shoots or suckers, to form a new top, should be retained, and suffered in all cases to grow till one inch or more in diameter at the bottom, and then only a part of the top removed in one season. Stocks grafted should be left at least twenty inches long.

We have seen trees in Mr. Goodrich's renovated old orchards, with only a strip of live wood and bark of from one to two-thirds of the circumference of the original trunk remaining, and consequently so weak as to necessitate careful propping, yet heavily loaded with splendid fruit.

In closing these somewhat extended remarks, we must pay our correspondent, "O. H." in his own coin, by repeating his words; "Please inform us what you think of it?"

NEW PUBLICATIONS.

THE ELEMENTS OF AGRICULTURE: A Book for Young Farmers. By George E. Waring, Jr., Author of "Draining for Profit and Draining for Health," formerly Agricultural Engineer of the Central Park in New York. Second and Revised Edition. New York: Tribune Association. 1868. Price $1. 254 pages.

This is neither a scientific treatise nor a handbook for practical farming. It is merely an attempt, the author informs us, to translate into common language, for the use of every-day farmers, that which science has discovered and has told in its own necessarily technical terms, and which practical experience has proven to be of practical value. This, we believe is a difficult task. The old adage that there is no royal road to learning, is just as applicable to the "every-day farmer" as to the sons of kings. And if it were true, as our author asserts in the opening of the first chapter of his book, that a knowledge of the "exact composition" of plants is necessary to their successful cultivation, a famine such as the world has never known, must at once follow, because it is not probable that one farmer in ten thousand possesses this knowledge. Agriculture is an art, which men learn as they learn other arts; and it is possible to cultivate the earth successfully and economically with very little knowledge of the chemical properties of soils or plants.

Still we do not ignore nor undervalue scientific agriculture, or scientific knowledge. We believe that every farmer in these days of many books and papers, and in these days of wise writers, who have all manner of chemical and other scientific terms at least at their fingers' ends, ought to be posted as to their meaning. This Mr. Waring gives in a plain, if not always perfectly satisfactory manner, and we commend the book to farmers and farmers' boys who stumble at the big words they come across in their agricultural reading, and to those also who wish to know what science is doing for the farmer, and how she does it.

FIVE HUNDRED AND SEVEN Mechanical Movements, embracing all those which are most important in Dynamics, Hydraulics, Hydrostatics, Pneumatics, Steam Engines, Mill and other Gearing, Presses, Horology, and miscellaneous Machinery: and including many Movements never before published, and several which have only recently come into use. By Henry T. Brown, Editor of the *American Artisan*. New York: Brown, Coombs & Co. Boston: New England News Company. 1868.

The illustrations and letter-press descriptions of these five hundred and seven mechanical movements are on opposite pages, so that the one may be readily compared with the other. A copious alphabetical index also facilitates reference. We think the work must be indispensable to artisans, inventors and all who would understand the mechanic arts, as well as to every one who operates

machinery or carries a watch. As machinery is introduced upon the farm, a knowledge of mechanical movements becomes necessary to those who run mowing machines, tedders, threshers, planters, &c., and we advise farmers and farmer's boys to procure this little volume, from which much may be learned of the principles of machinery, and of what it is capable of doing.

IOWA AGRICULTURAL COLLEGE.

An important business meeting of the Board of Trustees of this College was held May 11th. Officers and Professors were elected as follows:—

President—Professor A. S. Welch, formerly of the Michigan State Normal School.
Professor of Chemistry and Practical Mechanics—Prof. W. A. Anthony, of Antioch College.
Professor of Mathematics—Mr. G. W. Jones, Principal of Franklin Institute, New York.
Professor of Practical Agriculture—Mr. Norton S. Townsend.
Professor of Geology and Natural History—Mr. M. St. John.

A Board of Non-Resident Professors or Lecturers was also recommended, consisting of Prof. Agassiz, Hon. J. B. Grinnell, J. J. Thomas, Dr. John A. Warder, Dr. Dadd, and Prof. Johnson.

A resolution to admit females to the privileges of the College on the same condition as males was adopted by a vote of nine to three. From the report of the committee to whom this subject was referred, we make the following extract:—

If young men are to be educated to fit them for successful, intelligent, practical farmers and mechanics, is it not as essential that young women should be educated in a manner that will qualify them to properly understand and discharge their duties as wives of farmers and mechanics. The greatest defect in the education of girls and young ladies of the present day, is the tendency to limit their acquirements to the superficial, frivolous accomplishments that unfit them for rational enjoyments, useful or satisfactory pursuits. Influenced by the fashionable course of instruction so prevalent, they soon learn to despise labor, to look upon it as degrading, and turn from the young men who are employed in industrial pursuits, with feelings of pity, if not of aversion, as though a life devoted to honest labor was a misfortune to the young man whose choice or necessity had led him to adopt it. Again we hold, that we as Trustees, have no right to exclude girls from the benefits of our State Agricultural College. The funds for the purchase of the farm and the erection of the buildings, are derived from the tax payers of the State, and upon what principles of justice can we declare that only those who have *sons* shall enjoy its benefits?

The committee further says that all the other colleges in the State, including the University, admit girls upon equal terms with boys, as does also the Kansas Agricultural College.

It was recommended that the number of students to be admitted for the first term should not exceed one for each member of the State House of Representatives, making the whole number ninety-nine.

For the New England Farmer.

EARLY CUT AND POORLY CURED HAY.

Believing that the neat cattle and sheep of the New England States are worth a great many dollars less,—that their health has been injured and their condition reduced, by the use of partly grown and imperfectly cured hay, which has been much encouraged of late by agricultural papers, I feel it to be a duty to my brother farmers to enter my protest and caution against the practice; though by so doing I should find my own convictions in opposition to that of all mankind.

The experience of observing farmers generally, in New England, for a long series of years had established the rule that the right time to cut English grass is when it is in blossom; but as it cannot all be cut exactly at the right moment, it has been necessary to mow a part a little ealier, while another part stands a little later. I do not advocate the principle of letting grass stand until the stalk becomes woody and wiry, but when I see a farmer cutting his grass before one spear in ten shows its head, I feel that he is suffering a great waste.

I also most earnestly object to the modern doctrine of slack drying of hay, believing that it is at best a saving "that tends to poverty."

Hay put into a bay poorly dried will sweat out more weight than the sun and air would have dissipated in proper curing. An amount sweetness, goodness and nourishment for the beast, is thus destroyed that never can be returned to it. If you wished to keep your family in good health, would you think of feeding them with bread made from any kind of grain that had been closely packed in a large body in such condition that it would heat, swell and perhaps some of it sprout? How then can we expect our cattle to be in a healthy condition that are fed on slack-dried, musty hay? I do believe that cattle and horses will be in better condition fed on Massachusetts *wild* meadow hay, well cured, than on Maine, New Hampshire and Vermont early cut, upland hay, poorly cured. If this is not the case, why are the store cattle in Massachusetts, where so much of this meadow hay is used, in better condition in the spring of the year than Maine, New Hampshire and Vermont cattle are, where they have such an abundance of English hay?

What experienced horseman who has a beautiful mare from which he hopes to raise a colt worth one thousand dollars, would send her into the country to be fed on early cut and musty hay?

Almost everybody considers white clover or honeysuckle the best of feed in a pasture. I do know from long experience that this kind of feed will not fatten a creature and will not make so much milk or so much butter, while it is all growing beautifully, and when, as some observers will say, 'your pasture looks as white as a sheet,' as it will after some of the heads become ripe.

I used to think that my cows must be out early to feed, while the dew was on. This may be necessary where the feed in the pasture is short, and all day is required for the animals to fill themselves; but experience has taught me that when I can have as much feed as I should like, and as much as there should always be, that my cows do better not to eat one mouthful of feed in the pasture until after the dew is off, especially in honeysuckle. ASA G. SHELDON.

Wilmington, N. H., June 13, 1868.

For the New England Farmer.

DO BOTS EVER KILL HORSES?

We were not a little surprised to see a statement in the weekly FARMER of June 6, and in the MONTHLY, page 330, from Mr. Stuart's "American Farmer's Horse Book" that "there is no evidence, that, in his normal condition, the bot ever injures the horse's health in the least degree." And again, "as to the popular belief that the bot causes the death of the horse by eating through the stomach," Mr. Stuart says: "although the stomach is often found to be completely riddled by the bots, as the popular expression is, there is good reason to believe the work is done entirely after the horse is 'struck by death.'"

Now, in 1850 we lost a valuable horse, under these circumstances: Early in the fall the horse was turned out to grass in good health, as we supposed, though we noticed that she did not feed quite as well as usual. In the morning the horse was nearly dead. Her suffering must have been intense. It hardly seemed possible that an animal could be altered so much in one night. She appeared to be in the greatest agony; holding up her head, and laying it over on her side, as if conscious of what was the trouble, and appearing as horses are said to appear when they have the bots.

We immediately sent for a horse farrier, who lived near by, but the horse was dead when he arrived. He opened the animal, and inside of the stomach clusters of bots, from the size of a four-pence-half-penny up to that of a dollar, were found so closely together that it was impossible to see any interstices between them, and in perfect circles. Her stomach was literally covered with those clusters, and in every instance they had eaten completely through the inside of the stomach, but leaving the outside covering untouched. In no case had they eaten through that. If they were endeavoring to escape on account of the illness of the animal, or other cause, why did they stop there? The fact that they had eaten their way to this tough skin as evenly as though carved with a knife, showed most conclusively to my mind that the inside stomach was devoured to satisfy the appetite of these parasites, which thus caused the death of the horse.

Will Mr. Stuart say that the horse was "struck by death, and the animals were trying to escape?" Then why did not some of them do so? Why thus uniformly eat their way to the outside covering of the stomach, and no further? Simply because it was not so good as the other part.

Again, says our author, "the cuticular covering of the stomach to which the bot fastens himself by means of two little bearded hooks, is nearly if not wholly insensible, having no more feeling, apparently, than the horse's hoofs. When the animal is in health, it is hard, rigid, impenetrable, and the bot, if ever so much disposed to do so, would attack it in vain; but when death seizes him, this coating becomes relaxed and soft, and begins rapidly to decompose. Then only it is that the bot can or does ever work his way through it," &c. How does Mr. Stuart or any other man know that the inside or cuticular covering of the stomach of a living and well horse is impervious to the bot? Has he or any body else ever been there to ascertain these facts?

We have heard the assertion made before, that the horse is never known to die from the effects of bots. We protest against such wholesale, theoretical assertions, unsustained by facts. From their boldness and novelty they arrest attention, and thus go far to establish a popular belief and error.

The statement that the bot is hereditary with the horse may be true or may not. It may also be true that what we call the bot is only the offspring of the gad fly; but that it cannot penetrate the inner or cuticular coating of the horse's stomach until "after the animal is struck by death," we deny; for what our eyes have seen, and our hands have handled, that we are bound to believe.

There are one or two facts more in connection with this case that perhaps it may be well to give. The horse had been used during the day, and her stomach was empty. Probably the bots, by seizing simultaneously on her stomach, put her in very great distress, which must have caused a great disturbance in her bowels. Her manure, which was to be seen in probably not less than twenty places where the animal had been up and down through the night, was in the first place natural, but changed by regular gradations as it was voided, down to the consistency of mere water. And from a robust, sound, and well-looking animal, she was changed to a mere skeleton. If it had been possible to have taken out all her bowels, I do not think she

could have looked any thinner. And all this the result of a single night's distress and agony.

Of all the animals that God has given to man perhaps there is none more useful or more noble than the horse. How often have we seen him when in distress appeal to us for relief in every way except that of a spoken language. We, as his superiors, ought to know his diseases, and their proper remedies. It is a commonly received opinion that among the ills his flesh is heir to, are bots. But if after the lapse of so many ages, it is still a disputed point whether they are ever injurious, it is surely time the question was settled. I am but an ordinary individual, and generally allow the world to slip and slide as it will, but when I see an idea advanced, contrary to the teachings of experience and analogy, I feel it my duty to protest against its acceptance, and call for more proof and better reasons than appears to have been advanced in this case. JONA. FARNUM.

So. Uxbridge, Mass., 6th mo. 15, 1868.

For the New England Farmer.

NORTH EASTON PLANTING COMPANY.

DEAR SIR:—Your kindly notice of the North Easton Planting Company was joyfully received by us at this time. It gives us strength and courage in this important movement.

In April, we announced our intention to form a planting company upon this most simple and equitable plan, the outlines of which you gave in the FARMER for April 23. We found any quantity of persons ready and willing to invest from one to twenty-five dollars in the stock of this company, with its only two self-constituted officers, *Chief Manager* and *Treasurer;* but seven persons (the requisite number for a legal organization) could not be found with courage to venture their reputation in so humble an enterprise.

Nevertheless a few of us are doing something. We have seven acres of land now planting, and as the people are fast growing into favor with this movement, we shall soon have a permanent organization, and issue our stock certificates for the sowing a good breadth of land this coming fall to winter grain. So that all lovers of good bread can, in the course of the summer save up a few dollars to invest in this and similar companies; and evermore find that in "Our father's house there is bread enough and to spare."

Our outlays, thus far, in planting, have in no instance exceeded our estimate. A strict account is being kept and a full report will be made at the maturity of the crop.

As a testimony of our appreciation of your kindly notice of us, we present you with one of our certificates of stock. It will do to fill up your museum of curiosities if nothing more. By this you will know the value of one dollar invested in our corn plantation, as we shall forward to you your share at maturity.

L. SMITH, *Manager.*

REMARKS.—We most gratefully acknowledge the receipt of the certificate of stock alluded to above. We shall look with interest for our share of the dividends of this new form of co-operative industry, particularly as "Corn with Beans intermixed" remind us of our favorite dish, good old Yankee succotash. The industrial classes in Europe, as well as in this country, are considering and experimenting largely with the co-operative principle. In fact, what more vital among all the principles of free government than that of co-operation? We hope, therefore, our friends will pardon us for copying our certificate, which may still further illustrate the operation of this planting company:—

"CO-OPERATIVE PLANTATION, No. 3, FOR 1868. —For one dollar received, the bearer is entitled to one-fiftieth part of the net income from one acre of land, to be managed and operated by the North Easton Planting Company, the principal crop to be Corn, with Beans intermixed. Dividends will be made principally in the productions, and delivered free to the stockholders residing within a radius of five miles from the plantation, and at a moderate charge to those residing at a further distance. L. Smith, Chief Manager. M. D. Schindle, Treasurer. Location of plantation, Dikeman farm, North Easton."

"Explanation—Plantations, Nos. 1 and 2, Potatoes; 3, Corn; 4, Beans and Squashes; 5, Cabbages; 6, Turnips; 7, Buckwheat. All moneys not expended, either from the sale of crops or from the capital not used, will also be divided."

"Hon. SIMON BROWN."

For the New England Farmer.

VALUE OF FORESTS.

The preservation, growth and culture of the woods or forests of New England are subjects of interest to every citizen. The inclemency of our winters draws heavily upon them for the support of the family fire, while our network of railroads require large quantities of fuel to warm up the iron horse for the work that is required of him.

It is to be regretted that our forests should be destroyed by the wholesale, as they are, and that so little effort is made to keep up the supply. There is a large breadth of worn and exhausted or rough land, unfit for cultivation, that would pay a fair rate of interest, if allowed to grow up to wood. Our forests perform at least a three-fold purpose: first as a means of renovating the soil, and restoring it to something like its primitive fertility; second, their value for timber and fuel; and third, their influence on our climate. From careful observation there can be no doubt that the

volume of water has been sensibly diminished in many of our brooks and rivers within a comparatively brief period. There are many streams which a century and a half ago were capable of turning mills that do so no longer. I have looked with astonishment at the remains of old dams on these streams, and have asked why this great change? At this day they are wholly insufficient for the purpose for which they were once used. I can account for it on no other ground, than the removal of the forest which once bordered them or their sources, and thus allowing the fierce rays of a summer sun to fall on the soil, and giving the dry and parching winds full sweep over the country, which carry off the moisture, &c. to other districts more favorably situated for condensing the humidity of the atmosphere.

Within the writer's memory, the tracks of our thunder showers have changed in a great measure. I can account for it on no other theory than that of the removal of large belts of woods, which has changed the path of the passing vapor.

Open plots in woods are almost always more fertile than exposed fields, probably from the vapor given off by the surrounding atmosphere, and its transmission to the soil by the leaves; also from being better sheltered from cold currents of air, thus enjoying a more equal and higher temperature during the growing season.

On most of our farms there are many acres of but little value for annual cultivation, which, by a very small outlay of labor, could be planted with one or several of our forest trees. In but a few years it would require thinning for fire wood, and the remaining trees could stand longer for timber, or the whole may be removed and the owner would have a renovated soil at but little cost. The writer is fifty-six years old, but he has lived to see saw logs grow from the seed planted since he was fourteen years old. H.

Epping, N. H., Jan., 1868.

For the New England Farmer.

PREPARATION OF LAND FOR WHEAT.

I will mention an idea suggested to me a few days ago in relation to the preparation of land for winter wheat. A piece of old land was nicely fitted with plenty of well rotted manure, harrowed in with the seeds. When this was done the owner, to make the crop sure against winter killing, covered the whole piece with a good coating of straw. After this, he concluded, as he wished to have his piece a little larger, to break up a piece of green sward adjoining, without manuring or straw or rolling the turf down. In ploughing, the furrows ran up and down the slight declivity on which the field was located.

Now for the result. The first piece, although it was the highest and dryest part of the lot was a failure,—being winter killed—while the second was a splendid crop. There seems to be no other way to account for the difference than to suppose that the sward was perfectly surface drained below the roots of the plants by the eight-inch furrows which left no water to freeze about the roots. I think much grass land might be renewed profitably by this method, with care in ploughing to lap furrows carefully and taking the advantage of the descent of the land, if there is any; then give a good top-dressing to be harrowed in with the wheat and stocked down, the first year. The drainage thus secured will favor a good "catch" for the grass, as it prevents the wheat from winter killing.

Diarrhœa or Scours in Cows.

It may benefit some one for me to mention my success in curing a cow that was violently attacked with the scours, which was taking her flesh off rapidly and had nearly dried up her milk. My hired man told me to boil hemlock bark and give her small doses in a bran mash till cured. This cured her in less than three days, and she has been doing nicely ever since. Be careful not to give too much at a dose, as it might prove too astringent or binding.

Uneasiness of Cows in Stables.

Can you or any of the readers of the Farmer tell me the cause or cure for cows that stamp their hind feet violently on the floor while they are stanchioned to be milked. Mine have spells of stamping, as if their feet itched or pained them so that they could hardly endure it. It generally lasts about fifteen minutes, and then they will be quiet again.

Hiving Bees.

I have to acknowledge the timely benefit I have just received in perusing the last Farmer, by way of information in relation to hiving bees, as I have had no experience in this business, and have some about ready to swarm. The above article caused me to realize the fact that we, brother farmers, could benefit each other greatly by imparting such little information as we obtain from our personal experience or observation, for the benefit of others. T. C. N.

Williston, Vt., June, 1868.

Remarks.—An article on Foot Rot in Cows, in another column, will probably lead you to examine the feet of your cows for this or some other disorder, as the possible cause of the uneasiness you allude to. The exhortation to "do good and communicate, forget not," cannot be repeated too often.

—Mr. Riley, State Entomologist of Missouri, states that the lady birds, those little blessings, are attacking the potato bug in the egg and destroying multitudes in Illinois, Iowa, and Missouri.

CIRCULATION OF SAP.

The late article of our correspondent, "C. N. A.," on the source of the saccharine matter in the sap of maple trees, and on the causes and conditions of its flow, was well calculated to excite thought and inquiry.

In reading the new edition of Waring's "Elements of Agriculture," noticed last week, we found the following illustration of the manner in which food is taken up by the "spongioles" or mouths of the roots of plants, —an illustration, by the way, which we had some trouble in referring to after we had shut up the book, from the want of an alphabetical index to subjects; an omission that we can hardly excuse in any book-maker. We found it at last, however, on pages 36 and 37, as follows:

Take a tumbler, filled entirely full with water; tie over it a bladder, and on the bladder sprinkle a little salt. The bladder becomes moist throughout its entire thickness, and transmits enough moisture to the salt to dissolve it gradually, and as fast as it is dissolved, it passes through the bladder into the water inside of the tumbler. In a long enough time the water can be made, in this way, to dissolve as much salt as though it had been stirred into it without the intervention of the bladder. If we keep the salt soaking wet, as it lies on the outside of the bladder, it will pass through much more rapidly, but if we do not wet it by a direct application of water, enough water will reach it through the membrane to allow it to pass into the tumbler, as above described. The roots of plants contain sap, which is separated from the plant-food in the soil, by a thin film of matter, which constitutes its cell-walls. So long as the water of the sap has the capacity to dissolve more mineral matter than it already contains, it will take it through the cell-walls, as the salt is taken through the bladder. If the plant-food outside of the roots is in a moist condition, it will be taken up more rapidly than if too dry. The moisture of the soil itself, containing mineral matter in solution, passes through the cell-walls to supply the place of that which has been evaporated at the leaves, the matters in solution passing through with the water itself.

We are also glad to see that the editor of the *Boston Cultivator*, who is versed in the science of botany, has let in a few rays of light on the "unusually visible darkness" in which our correspondent thinks the remarks of the editor of the *Maine Farmer* left the subject.

Experiments made by distinguished vegetable physiologists are cited, in which the stem of trees were tapped, at different heights from the ground, for the purpose of ascertaining the points where the sap made its first appearance. In all the cases mentioned the exduation of sap in the spring occurred earlier in the lower than in the upper part of the trunk, tending to show that the *fluid* portion, at least, of the sap comes from the "cold, dark ground."

As to the amount of sap in vines and trees, Keith's Botanical Lexicon, (London,) is given as authority for the assertion that "a small branch of a vine has been known to yield from twelve to sixteen ounces in the space of twenty-four hours; a maple of moderate size yields about 200 pints in a season; and a birch tree has been known to yield a quantity equal to its own weight.

As to its chemical composition, reference is had to "Ann. de Chim." for the remarks that, if exposed to the action of fire, sap emits bubbles of carbonic acid gas, exhales a strong odor of vinegar, and yields by distillation carbonate of ammonia. It combines in all proportions with water, which dilutes and dissolves it when thick and viscid. Alkalies combine with it readily, and saturate its excess of acid. In the sap of *Fagus sylvatica*, Vauquelin found the following ingredients: water, acetate of lime with excess of acid, acetate of potass, galls, acid, tannin, mucous and extractive matter, and acetate of alumina.

But the most satisfactory statement is found in the following quotation from "E. Darwin, M. D., F. R. S.," which we copy entire.

"The ascending sap-juice during the spring season is in some trees so sweet, that it is used in making wine, as that of the birch tree in this country; and sugar is procured in such quantity from a maple in Pennsylvania, that from each tree five or six pounds of good sugar have been made annually without destroying it. (Rush, on Sugar Maple. Philips, London.) This sugar is deposited, I believe, in the sap-wood of the trunk and roots of trees, as in the manna-ash, and is dissolved in the spring by the moisture, which is drunk up by the absorbents from the earth and atmosphere, and forcibly carried on to expand the buds. Its existence in the sap-wood as well as in the root is shown from the pullulation of oak trees, which have been stripped of their bark, and also from the expansion of the eyes of a vine shoot, when it is cut from the tree, and planted in the earth.

This suggests to us the reason why the wood of trees is so much sooner subject to decay, when they are felled in the vernal months; because the sugar, which the sap-wood then contains, soon runs into fermentation, and produces what is called the dry rot; whence the custom has prevailed of debarking oaks in the spring, and felling them in the autumn; and it is probable that the wood of all other trees would last much longer, if it was thus managed, as the growth of the new leaves would exhaust the sugar of the sap wood.

Sweet juices for a similar purpose of expanding the buds of herbaceous plants are deposited during the autumn in their roots, as in turnip, beet, tragapogon; or in the knots or joints of the stem, as in grasses, and the sugar-cane; which like the farina and oil in seeds, and the dulcet mucilage of fruits, and the honey of flowers, were designed for the food of the young progeny of plants, but become the sustenance of mankind!

As the saccharine matter which is thus deposited in the roots, or in the albumen, or in the joints of plants, must be diluted by the moisture absorbed from the earth by their roots, we understand why the leaves of the lower branches of trees are first expanded, as seen decidedly in the hawthorn hedges in April, as these must first receive the ascending sap-juice, as was observed by Dr. Walker in his account of the maple."

FOOT ROT IN COWS.

In some sections this disease seems to be increasing among our dairy cattle. We have heard of many valuable cows being affected with it this season. It does not seem to be confined to any particular season of the year, or method of keeping. A neighbor asked us this morning, June 17th, what he should do for a fine young cow, quite lame with foot rot. She has been in a good pasture three or four weeks, and is in good condition. It has been in some of our herds through the entire winter. Various remedies are resorted to, with more or less success. Oil of vitriol,—sulphuric acid,—is the established remedy in the foot rot of sheep, and we believe seldom fails, when seasonably and properly applied. This is very often used in the foot rot in cows, and though a severe remedy is commonly successful. Blue vitriol, pulverized and sprinkled on the part affected, or made into a strong solution, and applied with a swab, is used extensively. White vitriol—sulphate of zinc—is used, and in mild cases, with good success. The parts should be well cleansed, and the remedy thoroughly applied, and repeated daily until the inflammation and swelling subside, and the parts assume a healthy aspect, and afterward they should be applied occasionally as needed.

Oil of spike, procured from the *Lavandula Spica*, a variety of wild lavender, spirits of turpentine and tar, are among the common remedies, and they are all sometimes successful.

Poultices of bran and flaxseed meal, applied warm, are often useful in allaying the swelling and relieving the pain. The pain is often so great as to cause a good deal of fever, and to dry up the milk. Cows affected with the disease will stand for hours in water in the pasture, where they can have access to it. It probably allays the heat and pain.

After the swelling is abated, any of the above remedies may be used. It will be observed that they are all highly stimulating and irritating to the skin. The oil of vitriol and the blue vitriol are even caustic, when applied in their full strength, which they never should be, unless it is necessary to eat away a portion of dead flesh. The origin of this disease is obscure, and it is a debated question whether it is contagious. When it gets into a herd it is apt to extend, and it often happens that one or more of the cows will be troubled through the whole season, and sometimes they will be attacked a second time.

A Mr. Whitman suggests, in the New York *Tribune*, that it is caused by an insect burrowing under the skin, as the acarus or itch insect causes the itch, and that the proper remedy is one that will destroy the burrowing insect, and prescribes a remedy that is successful in curing the itch, and is the best remedy we have ever found for scratches in horses.

The remedy is the red precipitate, or peroxide of mercury, made into an ointment with lard, one ounce of the powder made very fine, rubbed up with four ounces of lard. This is applied to the part, and rubbed or heated in by holding a hot iron near it. When the disease is between the claws, a string may be smeared with it and drawn between them. One thorough application is generally successful, but it should be repeated until it is effectual. This is also a powerful stimulant, and whether the disease is of insect origin or not, we have no doubt will prove useful. If a more careful investigation should prove the disease to have such an origin, this remedy will be a specific for it. This and other preparations of mercury are the most effectual remedies known for all parasites affecting the flesh and skin of both animals and men.

IMPROVEMENT OF STOCK.

We learn by the Rutland, Vt., *Herald* that Mr. Daniel Kimball, of Clarendon, Vt., having kept his thoroughbred Short-horn bull, Mogul, as long as he thinks expedient to keep one animal, has recently sold him to S. D. Townshend and H H. Waldo, of Wallingford, Vt. Mogul was bred by L. J. Wright, of Weybridge, is of a red roan, and weighs about 2300 lbs. So well satisfied is Mr. Kimball with Mogul's stock that he very willingly agreed to donate to the use of the Wallingford or some other agricultural association the sum of $500, provided that after the use of Mogul for five years the farmers in that section do not acknowledge that he has benefited their

stock at least $1000. Mr. Kimball was recently in Massachusetts looking for another animal to supply the place of Mogul.

For the New England Farmer.

A PLEA FOR FARMING.

There has been a doleful cry among farmers, both before and since the late war, that farming was an up-hill business,—its prices were low, and labor was high. But I believe that such a mode of reasoning cannot stand the test of facts. In this section of country, prices of farm produce have nearly or quite doubled, since the commencement of the war. Hay $25 per ton, formerly $10 or $12; corn $1.60, once 75 cts.; oats $1, once 40 cts., &c. Not so with labor. Before the present scale of war prices, the farmer had to pay $1.50 per day for good hands in haying, while even now the laborer exacts only about fifty cents more.

Again the field of demand is widening for the New England farmer, to a vast extent. The wailings of hungry millions is borne to our ears on every southern breeze, from cultivators, who, in the days of my grandfather, helped to supply our markets with "Virginia pork," "Southern corn," and "Richmond flour." Now they scarcely supply their own wants. Emigration's tide at the rate of one million and a half a year, is setting westward to consume what otherwise might arrive in our markets. Mechanics and manufactures tending south and west, effect about the same result. Still the same complaint continues,—"labor is so high that farming does not pay." "The fault, dear Brutus, is not in our stars, but in ourselves." "Farming is not honorable!" because the swell, fop or poisonous knave, with dashing horse and fine equipage, covered perhaps, from his creditors, passes the honest farmer in the street with cold disdain, or a grimace, or a sneer, forgetting, perhaps, or never having read what wise old Alexander Pope once said:—

> Honor and shame from no condition rise:
> Act well your part, there all the honor lies.

If any individual, whether lawyer, minister, mechanic, or farmer, is not master of his calling or business, or imperfectly practices it, of course the profession or occupation is dishonored by him.

While the farmer who inherits the paternal acres, ample and broad, continues, by the skinning process, to harvest his waning crops for many consecutive years; while he pitches out the manure of his stalls to the sun and rain, but never replenishes his barn-yard or stables with muck or loam; while he sows no clover seed or plaster to plough in to his exhausted fields; while he suffers his cattle and horses to gnaw the fall and spring feed to their hearts' content; while he denudes the grand old hills of their forests, to obtain money to buy corn and flour of the sunset regions of the West, that should be raised on his own cleared acres, thus paying dividends to western railroad stockholders; while he harnesses up his team once every day or two and visits the village store or post office to hear or talk political news three or four hours, as though the whole "government was upon his shoulders;" and while he is too wise for farmer's clubs, agricultural papers, and book-farming.—no wonder that farming is "dishonorable" and will not pay; or that the sons of such farmers leave the old homestead for the counters of the city merchant, or the workshop of the mechanic, leaving the science of agriculture, the pedestal of the column of national wealth and power thus short of labor.

M. J. Harvey.

Epping, N. H., 1868.

GARDEN HINTS.

Transplanting of annuals, tomatoes, cabbage, &c., should never be done when the ground is wet. It is also a bad practice to puddle the roots, that is, to wet and so mud the roots by dipping them in a pail of mud as to cause them to adhere together. Our most successful practice in transplanting is to plant in the dry ground, when the earth pulverizes fine like meal; sift the earth among the roots until the hole is half filled with earth; then fill the hole with water, and as soon as it has soaked away, draw in dry soil to finish and level the surface.

Increasing the Size of Fruit.—While the fruit is swelling, the size of raspberries and strawberries may be increased by thinning out the number on a cane or plant, removing all suckers or newly-forming attached plants, and watering occasionally with manure water.

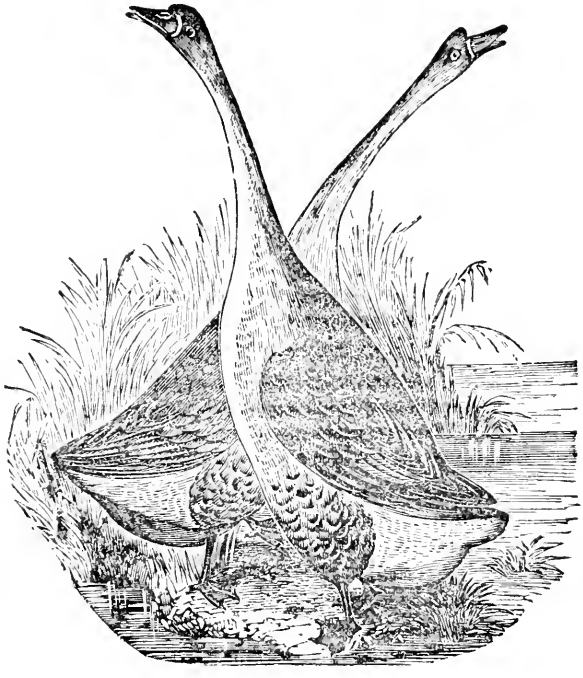
Tomatoes will bear more abundantly, and occasion the least trouble, if the ends of the shoots, just beyond the fruit, are pinched off. A surface mulch of rotten manure, and if a dry time, frequent watering, well repay in increased size and abundance of fruit.

Herbaceous Plants, as soon as they have done flowering, may be easily propagated by cuttings. These should be planted in a cold frame in a mixture of sand and loam, and kept shaded until the roots have formed.

Asparagus should not be cut too late in the season, or its value another year will be lessened. A dressing of well-rotted manure lightly forked in should now be given the bed.

Fuchsias should be shaded from the midday sun. It is a good time now to make cuttings and propagate.—*New York Horticulturist.*

—Of the $142,000,000 worth of breadstuffs imported by England last year, only $16,000,000 worth went out from the United States.



INDIA GOOSE.

Mr. Bennett describes the India Goose as dunnish on the breast and belly, and entirely destitute of a pouch or dewlap. In size it is a medium between the African and Chinese. It is the most symmetrical of the goose tribe; and if such a thing can be said of a goose, this variety is decidedly graceful. At the time of writing his book he had a single specimen, a male, of which he gives a cut. It was a present from Dr. Bates of Barre, Mass., who says that the gander, when in good condition, weighed 28 pounds. The cut which we give above was electrotyped for us, from the plates for an unpublished work on Poultry and has never before been printed. We have no personal knowledge of the variety, and it appears to be only incidentally alluded to in the books on poultry in our possession, a fact which is not a little remarkable, considering its striking appearance. Mr. Bement says, that "like the Jews and Gipsies, it has not been allowed a place among the natives of any one region," though it must have been domesticated for a long period, and Mr. Willoughby says the old writers called it the Guinea Goose, from a fashion once prevalent of applying the term "Guinea" to everthing of foreign or uncertain origin.

THE CANKER WORM IN MICHIGAN.

We have not heard of the appearance of this insect in any new locality during the present year. Neither does it appear that any special means have been taken to destroy or check it where it has appeared for several years. The colony in the neighborhood of Marshall is still flourishing and gradually spreading. It was mentioned in the report of last year, that some of the trees first attacked were dead, and that others were evidently dying. I am informed that the indications of decay and death are much extended the present year, and that the speedy and total destruction of the orchards which have harbored this insect is now obvious. It would have been better if the suggestion of cutting down the trees and burning them had been adopted. It was evident three years ago, that the profits of the trees were ended. The insect could have

been annihilated then with less expense than it can be now. But even at this late day, the best thing that can be done is to apply the axe and the torch. This would be an effectual and considering the importance of the case, not expensive remedy.—*Mr. Howard's Report of Michigan Board of Ag.*, 1867.

Remarks.—We are sorry to learn by the same Report that the Colorado potato bug has appeared in the Western part of Michigan. Experiments show that fowls will not eat them. The insect belongs to the order Coleoptera, and therefore is a true beetle, and not a bug. It is four-fifths of an inch long; oval in form; cream-colored, with ten black lines running lengthwise along its back. Prof. Walsh thus describes the larvæ: — "Soft, elongated, six-legged grub; dull Venetian-red color, with several black spots; no wings. Some specimens of the larvæ which I obtained from Wisconsin have two rows of black spots on each side of the body, ten black dots in the upper and seven in the under row."

For several years past this terribly destructive insect has been advancing Eastward some fifty to sixty miles per year, and keeping possession of all the territory once acquired. According to some calculations this bug may be expected in New England in five or six years.

LONG WOOL SHEEP IN FLOCKS.

In reading the report of the Ohio Wool Buyers' Meeting, at Cleveland, I could not help noticing Mr. Muzzy's caution not to rush into the long wool business, since this style of sheep are not adapted to be kept in large flocks. I beg leave to tell Mr. Muzzy that some of the largest and best flocks in England are of the long-wooled sheep, (the New Leicester and Cotswold). And I have never seen any difficulty in keeping a large flock, if there are not too many pastured together; and why won't they do here, if they have proper care and attention?

I am well acquainted with several of the best flocks in Herefordshire, England, and they are of the New Leicester and Cotswold breeds. They are owned in flocks of from fifty to five hundred, and are kept from fifty to one hundred in a pasture, which number I think is plenty together, of either fine or coarse wooled sheep. The flock or five hundred is owned by Mr. J. Davies of Webster Court, near Hereford. They are not a thoroughbred Cotswold, but have a dip of the New Leicester blood, which makes them more disposed to take on fat rapidly, and mature earlier. They averaged a little more than eight pounds of clean washed wool per head, last shearing.

I think any man who will get a good flock of good long-wool sheep, and give them a fair chance, and not cross them with either Downs or Merinos, as two-thirds of the flocks here are, they will say in a short time that they are a profitable sheep to raise, both for mutton and wool.

The demand for the Cotswold sheep in England has more than doubled within these last few years. The reason is that more attention is paid to the breeding of them, and they are not crossed with the Ryelands and Downs so much of late as formerly. I am well aware that by crossing them with the Downs, you can get a very compact carcass, but it is at an enormous sacrifice to the fleece.

I quite agree with Mr. Muzzy, that all should not run into the long-wool business, but if it was double what it is at present, it would not meet a fifth of the demand.—*W. Powell, in Ohio Farmer.*

Hay and Grain.—Clover should be cut before the seed balls are ripe, also orchard grass; while timothy is better after the seeds are formed, and should be cut when the latter are between the milk and dough state. In curing all kinds of hay, turn with the hay tedder about 9 A. M., and if the weather is good it may be cured and drawn into the barn the same day; otherwise it is best, especially with clover, to put it in high slender cocks and cover with hay caps. Clover ought to be cured without much exposure to the sun, and it is well to sweat it in the cock. If your mowing grounds are not in condition for the use of mowing, tedding and raking machines, let not another season pass without effecting this great improvement.

Wheat, rye, &c., should be cut when the grain can be pressed between the thumb and finger without forcing out moisture; the yellowness of the chaff and upper parts of the straw also indicates the harvest. If delayed beyond this time, much grain will be lost by shelling. Grass and grain use up their juices in ripening the seed. Hence grass should be cut early to save juices, and grain if cut in the dough state will mature its seed from the juices in the stalk.—*Working Farmer.*

Shropshire Down Crosses.—S. M. Moore, Ironton, Mo., writes to the *Rural New Yorker:*

I purchased an imported Shropshire Down ram three years ago, for the purpose of making a cross, for a flock of mutton sheep. The cross more than meets my expectations. Lambs drop in February and March with mottled faces and legs. The ewes encounter no difficulty in yeaning, although some of the lambs weighed 12½ pounds when dropped. The ewes fed on meal and bran, with clover

hay, until grass, and then are turned into the woods upon wild grass, weeds and vines. At five months old I weighed half a dozen lambs. They varied from sixty to eighty-five pounds, —one extra fine one weighing ninety pounds at four months, live weight. I have no doubt they could be made to weigh one hundred pounds at five months, with proper feed and care.

EXTRACTS AND REPLIES.

BRAHMA CHICKENS FOR MARKET.

Mr. Editor:—In the Weekly Farmer of March 28, and in the Monthly Farmer, page 234, I gave you some of the reasons why I prefer the Brahmas to any other fowls.

As I have the past week sold my first lot of early chickens, I thought I would give you some of the figures. My first brood came out the first day of March. I have six hens now sitting, and have, besides the seventeen sold, about one hundred and thirty-five of all ages, from one day to fifteen weeks of age. At first, during the cold weather of February and March, it took nearly three eggs to bring one live chicken, but since the weather has been warmer, I have not lost more than three or four out of a sitting. Last Thursday, June 18, I sold to a dealer who buys for the Boston market, seventeen roosters at fifty cents a pound, live weight, with the crops empty. The largest pair weighed eight pounds. The seventeen weighed fifty-four pounds, or three and three-sevenths pounds each

The same day I sold mine, a load passed my house that were bought for forty cents each. They were of all sizes, complexions and breeds. Some of them have white skin and legs, and some had skin and legs of a bluish color; and all, except a few white Legnorns, had colored feathers.

Now I think the dealer who bought mine will make more money than the other will on his mixed up lot. The cheap lot may find more purchasers, but mine will go where the buyer is not as particular about the price as the quality.

A pair of chickens weighing six or seven pounds, with legs and skin of a bright gold color, and with the little pin feathers that are too small to pluck, of a color so light that they will not show through the skin, if fattened not over four months old, do not have to go a begging for buyers in Boston this time of year. And as yet, I have found nothing equal to the White Brahmas for making up such pairs of chickens. A. W. Cheever.

Sheldonville, Mass., June 22, 1868.

BLOODY WATER.

I have a cow that was in good order when she calved, April 11th, which is now sick, and appears to be growing worse. Sometimes her water is bloody, at others it has a pinkish hue. Can you tell me what to do for her? A Subscriber.

Richford, Vt., June 20, 1868.

Remarks.—There has been considerable published in the Farmer upon this subject during the last six months, but probably our correspondent is one of our many new subscribers, and may not be able to refer to past articles. We therefore copy the substance of what Mr. Allen has to say on "Bloody Murrain, Red and Black Water," in his new book on "American Cattle."

"The red water and black water arise from a preternatural quantity of blood being determined to the kidneys, and a consequent rupture of some of the minute blood vessels of those organs. This undue determination of blood to the kidneys is very frequently induced by turning cattle, in the spring of the year, into low pasture grounds, or woodland pastures, where the air is moist, and lessens perspiration, occasioning the blood to become too watery. The balance of circulation is deranged from the perspiration being suppressed, and a too great quantity of blood is in consequence determined to he kidneys, which gives rise to the disease. On removing cattle, thus affected from the state of the atmosphere, into a more elevated situation where the air is dryer, the beast will frequently be restored without the aid of medicines. It very often proceeds from cattle being removed from good to bad land, sometimes from their taking cold from the changeable state of the weather, or driving them long distances in the day, and turning them into fields at night, where they take cold. The red and black water is most prevalent in the spring and summer, when the grass is nutritious and produces a plethoric state of the system, or what is commonly called a *redundancy or overflowing of the blood*, which favors an unequal distribution of the blood, when they are affected by the causes above mentioned. The red water is sometimes attended with a lax state of the bowels, and in some instances a considerable quantity of blood is evacuated with the thin dung, and none with the urine.

Purgative medicines are the best remedies in these disorders. The following is recommended as a safe and efficacious purge: castor oil, six ounces; nitre, one ounce; epsom salts, four ounces; whey, or thin gruel, one quart mixed. After this gentle purge, the following to be given: roche alum two ounces; tincture of cantharides, two ounces. To be given in a quart of lime water.

Mr. White observes, that an experienced farmer, whose cows were affected by the red water, gave them half a pint of the juice of the white-blossomed nettle, which speedily cured the disease. When the animal is perceived to be frequently endeavoring to stale, voiding only a small quantity, with considerable pain and difficulty, mucilaginous drinks, such as infusion of linseed and decoction of marshmallows, are most likely to afford relief."

HAY *vs.* CORN.—EARLY CUT GRASS.

Since the days of canals and railroads, the necessity for New England farmers to raise corn and grain has become less. At no time has the value of our grain crops been equal to the value of the grass. Grain is an exhaustive, while grass is a recuperative crop. Why not cease diggin g among the rocks, stumps and witch-grass, for a little corn that we can buy with less labor than is required to raise it, and apply our manure directly to the grass crop, at least, such portions of it as have been used for corn? We shall, of course, have less planting and hoeing to interfere with early haying, and more and better hay, with which to pay for the corn we must have. The time usually devoted to harvesting the corn might be devoted to profitable farm improvements. To these add the increase of all

crop that will result from an increase of manure consequent on an increase of hay, and of other improvements, and also the increased value of the farm itself.

Besides the superior quality of the hay made from early cut grass, there are other advantages to be gained by cutting grass early. The fertility of the soil is supposed to be less exhausted. The second crop certainly has a longer time to grow, and if not large enough to be profitable to cut there will be more to protect the roots in winter and to fertilize the fields. Grass will also start earlier the next spring and mature quicker; or if it does not mature quicker, it will yield a good crop of hay earlier, thus often escaping a drought that pinches later grass. EARLY CUT.

Concord, N. H., June 26, 1868.

HORSE MANGER.

At a late visit to Mr. Charles Thrasher's, in Coventry, Vt., whose flock of half-blood Cotswolds is attracting some attention, I was shown a manger that had proved very satisfactory to him, and doubtless would to other farmers who wish to save the orts of the horse. The trough and rack is similar to the usual hotel style. In addition to which about eighteen inches in front is a tight partition or screen rising a little higher than the trough, and forming one side of a box, into which all feed from the rack and trough not consumed by the horse drops, and rendering it almost impossible for a horse to waste any feed. These droppings can be taken out and fed to other stock. Mr. Thrasher uses saw dust for bedding.

End view of Rack.

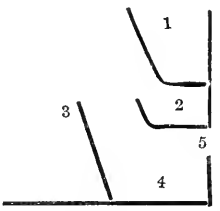
1.—Rack for hay.

2.—Grain trough.

3.—Partition or screen to which horse is fastened.

4.—Receptacle for orts.

5.—Place to take them out if there is a walk in front.



TOP DRESSING WITH STRAW.

Last fall I spread a ton of poor India wheat straw upon my dry grass ground, and now, June 1, the grass is much larger where this dressing was applied. I don't believe in rotting clear straw down to manure in heaps near the barn. The benefit of straw as a mulch on grass is at least equal to the fertilizing properties of its decomposed substance.

Irasburg, Vt., June 1, 1868. Z. E. JAMESON.

CAUSE OF GREASE OR SCRATCHES IN HORSES.

In Monthly NEW ENGLAND FARMER, Jan., 1868, page 54, you give the opinions of several correspondents as to the cause and cure of the scratches. Now I do not believe, as some say, that it is caused by impure blood. Did you ever see a horse's leg sweat? No. Did you ever see what different people call the "issues" or "castors" or "warts" on horses legs? Yes. Well, here is the cause of the disease. These should be kept open by peeling off the hard outside, but not so as to cause them to bleed, in order that the steam, heat, &c., can issue through them as nature designed. If this outlet is stopped the heat or humors of the limb find vent in the thousand little sores or holes that we call "scratches." In every horse troubled with this disease, the castors will be found contracted, or nearly or quite gone; and all through neglect, but not always carelessness, for most people do not know what the castor is for, and some will not believe it, when they are told. If these issues are kept open and smooth from colts up, no horse will have the scratches, even if he is in the mud all the time and not cleaned.

I have no trouble in curing the worst cases of scratches. I take one pint of lard, and half a pint of common tar, mix well by heating moderately. Apply with the hand and rub it in thoroughly and plentifully among the hair, then swaddle. Keep the castor clean and exercise the horse, but not harness or ride him, and wash the sores three times a week with soft water and soft soap, (bar soap is better, but castile is of no use whatever).

Marysburgh, Minn., 1868. J. S. FOSTER.

REMARKS.—Dr. Dadd says that before veterinary surgeons were employed in the British army many thousands of valuable horses were condemned as useless for active service in consequence of the prevalence of this loathsome disease. Mr. Youatt also remarks that it has been driven from our cavalry, and it will be the fault of the gentleman and the farmer if it is not speedily driven from every stable. Still in no veterinary work at hand do we find anything to corroborate the views of our correspondent. Mr. Youatt says, that about the skin of the heel of the horse, in its healthy state, there is a secretion of greasy matter which prevents excoriation, and chapping, and keeps the skin soft and pliable. Too often, however, from bad management, the secretion of this greasy matter is stopped or altered, and the skin of the heel becomes red, and dry, and scurvy; cracks of the skin begin to appear, and these, if neglected, rapidly extend and the heel becomes a mass of soreness and ulceration.

CITY WASTE OF FERTILIZERS.

The sewers of Boston discharge fertilizing materials, which if applied to the soil would be worth more than one million dollars every year. The consideration of this fact should be sufficient to induce wealthy farmers to employ a good chemist to try experiments in order to ascertain whether some large portion of this waste may be saved.

If a small quantity of chloride of calcium in solution is mixed with sewerage, a decomposition instantly takes place. The phosphoric acid combines with the lime forming phosphate of lime, which by its superior gravity immediately settles, carrying with it all mechanical and nitrogenous substances, but leaving in the clear solution above, most of the ammonia. This clear solution may be allowed to flow into extensive shallow reservoirs, containing any kind of earth with 25 per cent. clay to absorb the ammonia. These reservoirs should be used alternately. After one is saturated it should be left to dry, while the other is saturated.

This earth will make a valuable application to sandy soils. The semi-fluid precipitate of phosphate of lime may be allowed to flow out upon sand filters until it is dry enough to mix with peat, when it will make a valuable concentrated fertilizer, which will be worth barrelling and transporting to any distance within two or three hundred miles. An enterprise of this kind would require a capital of a few hundred thousand dollars. Ample grounds (say the brick yards on the Fitchburg railroad, near Charlestown,) capacious pipes, steam pumps, large tanks elevated high enough that their contents will flow where you want them.

I make the suggestion for others. I am convinced, by experiments, that clay is a cheap and

most effectual absorbent of ammonia, but it needs a mixture of sandy loam or muck to prevent its great adhesiveness,—and thus all the fertilizing properties of sewerage may be retained in a tenth part of the original bulk. The question is, will it pay? H. A. Sheldon.

Middlebury, Vt., 1868.

Is superphosphate suitable for clay land.

I wish to obtain some information in regard to the efficacy of superphosphate when applied to certain soils. I have a lot containing about four acres, a part of which I planted with potatoes last year. This field is of a moist, argillaceous nature, and the crop obtained, with a liberal supply of phosphate, was far from being satisfactory. Whether this resulted from the unfavorableness of the season, the want of virtue in the phosphate, or its unadaptability to soils of this nature, is the question which I now propose for an answer through the columns of your excellent journal. I would also inquire whether phosphate is better than barn yard manure for fruit trees, garden vegetables, &c.? I ask these questions to get the experience of others, rather than make unprofitable or expensive experiments. D. F. Whitney.

Spencer, Mass., June 20, 1868.

White specks in butter.

I wish to inquire through the Farmer, what is the cause of white specks in butter, and how to prevent them. Some persons think they are caused by too strong a current of air upon the cream while it is rising, others by too great heat. A remedy for it will greatly improve the look as well as the quality of the butter. A. B.

Essex, Vt., June 25, 1868.

Remarks.—The specks ought not to be there. But dairywomen are not exactly agreed as to the cause which produces them. As you remark, some think they are caused by air or heat operating on the surface of the cream, either before or after it is taken from the milk; others ascribe their origin to the mingling of the imperfectly churned cream or "serapings," which collect on the top and sides of the churn, with the butter just as it is "coming;" while others believe that these white specks are particles of the sour milk taken with the cream in skimming, which become hard like cheese.

The remedies proposed vary of course with the various theories of the different individuals who propose them. Those who hold that these specks are particles of the dried or heated surface of the cream, recommend measures that will tend to prevent such drying and heating. But in regard to the proper treatment of the cream after it is put into the pot, there is a difference of opinion; some recommending frequent stirrings, while others would add the successive skimmings to the top of the jar with as little disturbance of the mass as possible, believing that the thick sour milk which settles to the bottom should not be mingled with the cream.

Those who regard these specks as dried or hardened particles of sour or coajulated milk, are careful not to allow the cream to remain too long on the milk or in the crock. In a communication in the Farmer, some years since, on this subject, Mrs. "M. E. C.," of Warner, N. H., said, "I have never had the 'luck' to have my butter specked, unless I kept my milk too long before skimming, or my cream too long before churning. The milk should be skimmed before it curdles, and the cream churned before it has either white or black specks." Mrs. S. Pierce, also, in the Monthly Farmer, 1859, says these white specks are "formed in the bottom of a neglected pot of cream;" and ironically advises to "go a-visiting to-day, and churn to-morrow."

Wounded colt.

I have a valuable four-years-old colt that was turned out in the month of May, with a number of young cattle. I now find he has been hooked by them, and has a hard, large, flat bunch on his belly, covered with flies, the rupture being between the ribs and belly. The sore runs freely, and he eats and drinks well. If you or any of your correspondents can tell me, through your estimable paper, what is best to wash the sore with, and what is the cause of the bunch, and what will cure it, you will greatly oblige E. A. Raymond.

Royalston, Mass., June 22, 1868.

Remarks.—Mr. Allen well remarks, in his new book on American Cattle, that "the best surgeons now regard water as an important auxiliary in treating wounds. Lavements, pourings, wet compresses, &c., are used for the human subject; and water answers equally well for animals. *Simple cut wounds*, when cleansed and dressed with water usually heal without suppuration, especially, if the blood be in a healthy state. There being a tendency in all wounds to fever and inflammation, water dressings, in the form of wet bandages, keep down the unnatural heat, and allow nature to go on with the healing process. The lips of the wound may, generally, be held together with adhesive straps, or a few stitches, and the water application put over. The most dangerous wounds, near some vital part, are frequently healed with the aid of water to keep down the inflammation. We remember a fine mare that stepped on a hoe, the handle of which had been split, leaving a sharp end, and throwing the handle up under her belly, caused a deep, ugly wound, and so lacerating the bowels, that, being in August, it was thought almost useless to attempt saving her. But by dressing the wound constantly with water, the flies were kept out, inflammation prevented, and the wound healed in two months, leaving the animal as valuable as before.

Where the wound is considerable, and important parts are affected, the most decisive means should be speedily employed to keep down inflammation. Immediately after which, a purgative, or relaxative drink should be given, and the parts be fomented with a decoction of mallows, hemlock, or elder, until the inflammation, if any, subsides. *Keep it always washed clean*, and if warm weather, keep the flies away.

After the inflammation caused by the wound has subsided, it should be examined with a probe, in order to ascertain if any matter be confined; as it is sometimes necessary to give it vent by enlarg-

ing the original wound, or make an opening in another more depending situation, that it may run off freely. It may be requisite to apply at this period, the following ointment: common turpentine, six ounces; hog's lard, eight ounces; beeswax, one ounce; melted together.

When taken from the fire, one ounce of powdered verdigris may be added; and the mixture must be constantly stirred until it is cold. Should a lotion be preferred, the following stimulating solution will be found useful: sublimate, twelve grains; tincture of myrrh, two ounces; mixed. One pint of oil of turpentine, to two quarts of sweet oil with good digestive."

SCOURS IN A COW.

I have a cow that scours badly, and I do not know what to do for her. She is an oldish cow, and is thin of flesh, but she eats and drinks well, and chews her cud. I have tried a great many remedies but without success. Now if you or any of your correspondents will inform me what to do for her I will be greatly obliged. L. K.

Fitchburg, Mass., May 3, 1868.

REMARKS.—We regret that this letter, which we intended to have answered at once, unfortunately got at the bottom of the draw, and has been overlooked. Many cases of this kind will yield to a judicious change of diet, such as hay for grass, or a daily mess of dry oats, boiled potatoes, gruel, &c. Dr. Dadd says that this is not a disease, but only a symptom of a loss of equilibrium, which may proceed from improper food, exposure to the cold and rain,—resulting in "a cold." There is no general remedy, or one more effectual in the outset than mucilaginous drinks composed of slippery elm, combined with injections of the same. Warmth and moisture to the surface, with spearmint, or any of the mints, combined with astringents—barberry bark being among the best.

In bad cases, Mr. Youatt, the great English cattle man, says some purgative drink, such as one pound of epsom salts, and half an ounce of powdered caraway seeds, dissolved in a quart of warm gruel, should precede any other medicine.

With cattle, as with the human subject, careful nursing, proper food, rest, warmth and comfort, will do much, and should be tried faithfully before resorting to violent medicines.

A CONTENTED FARMER IN SHREWSBURY, MASS.

There has been so much published lately in respect to uneasy, discontented farmers, both old and young, male and female, that we hope to be excused for making an "extract" from a letter addressed to a person connected with this office. The writer kept a gun store at No 15 Washington street, Boston, for a long time, but as will be seen, he never sufficiently appreciated the great advantages which a city life affords to one's wife and children, to remove them from the country. He says:—

In 1864 I sold out my Boston business and retired to my place in Shrewsbury, which I built in 1834, and where my family resided during all the time I was in business in Boston. I would here say, for the benefit of anybody desiring a home in the country, that Shrewsbury is one of the prettiest villages in all the country around. My farm is located one-fourth of a mile from the village on the main road through Worcester to Boston. I have an orchard of 150 apple trees in prime bearing age, and a row of Rock Maple trees on the street along the whole front of my farm, now grown to a size which makes a rich and beautiful shade in summer for near half a mile in extent. All these trees were planted and the improvements made on this place by myself, for which it a pleasure to receive the commendations of my many friends. I have two acres in market vegetables; one acre in corn, which yielded me last year, though not a favorable season for corn, sixty bushels to the acre, —I have raised eighty bushels; one acre in small grains, and six acres in hay and fruit. My crops last year were 150 bushels cucumbers, 1300 pounds squashes, 6000 of cabbage, plenty of hay, corn, barley, &c., which I value at $800. When my improvements are completed and fruit grows again, I intend to make my ten acres bring me an income of $1200 to $1500. JOAB HAPGOOD.

Shrewsbury, Mass., 1868.

COTTON-SEED MEAL FOR HOGS.

I would like to inquire if cotton-seed meal is considered a good and profitable feed for hogs? I should think that it might be from what I hear of its effect where used for cattle. But I have never heard of any one using it for hogs, and as I am considerably interested in feeding such animals, I ask the above. READER.

Taunton, Mass., June 22, 1868.

REMARKS.—We know as little of the value of cotton-seed meal for hogs as our correspondent does, and shall be glad to receive an answer to his inquiry. Linseed cake, which is largely used in England, in the fattening of horned cattle, is but little used for hogs, as we infer from the remark of Mr. Youatt, who says it is not very clear whether it is as good for hogs as cattle, though it is occasionally given to swine, in small quantities, in connection with food destitute of oil, as potatoes, pea-meal, &c. But as the hog is an *omnivorous* animal he will eat and thrive on almost everything from hay to butchers' offal.

A YOUNG FARMER—DR. MAYHEW'S HORSE BOOK.

While remitting payment for the FARMER, another year, I will say that the market reports, including that on wool, has more than paid me for the paper. I often see inquiries and remarks in it that I would respond to, if I was competent; but I am a young farmer and I feel more and more every year the need of a better knowledge of the scientific principles of my business as well as of other knowledge. But with a single inquiry I close. Where can I obtain a volume of "Dr. Mayhew's Illustrated Horse Doctor, and Management of Horses," and at what price? B. B. S.

Dover, Me., Feb. 25, 1868.

REMARKS.—Not being able to answer the above inquiry at the time the letter was received, we laid it aside for a more convenient season, and hence the delay in publication. The Horse Doctor and the Horse Management are distinct books, with 400 illustrations each, and cost $3.50 each. Herbert's Hints to Horsekeepers, at $1.75, is well

spoken of by many. A. Williams & Co., 100 Washington street, has the latter, and would probably furnish either of Mayhew's, postage paid, on receipt of price. We can assure our correspondent that responses from him will be received with pleasure at any time, and that his plea of want of competency is shown by the letter from which the above is an extract, to be utterly void and of none effect. You are altogether too modest. We shall have plenty of room this summer for what young farmers have to say as to their own experience or as to the practices or theories of others. Free your mind!

A GOOD COW IN A GOOD DAIRY.

I am milking nineteen cows this season, all of which are giving what I call a good mess. Several of them will give from thirty-five to forty pounds of milk per day. I have one cow, of the native breed, eight years old, and raised by myself, which goes so far ahead of the others, that on seeing the hint of your correspondent "F." about steelyards increasing the flow of milk, that I thought I would weigh her milk for a few days. She dropped her calf about the middle of April and has given a large mess ever since, though she has had only a common chance with the other cows. The milk was weighed on platform scales, which are considered correct, with the following result:—

	Morning.		*Evening.*	
June 15	—lbs.	—oz.	25 lbs.	12 oz.
" 16	18 "	0 "	25 "	0 "
" 17	17 "	8 "	— "	— "
" 18	19 "	0 "	27 "	10 "
" 19	18 "	4 "	23 "	0 "
" 20	17 "	0 "	27 "	0 "
" 21	16 "	8 "	24 "	0 "
" 22	17 "	4 "	25 "	8 "
Totals	123	8	177	14

Making 301 pounds and 6 ounces in 7 days; or 43 pounds and almost one ounce per day. On account of my absence from home, the evening mess of June 17th was not weighed. I also weighed her milk at night, June 24, when she gave 27 pounds. Last evening, June 25, noticing that her mess was larger than usual, I found she gave 31 pounds of strained milk; and this morning, June 26, her milk weighed 18 pounds and four ounces; making the two milkings of last night and this morning 49¼ pounds.

"SHOE-BOIL."

I have a valuable horse who had a shoe-boil on her leg as large as a goose egg. Last October I had it cut out, it then being a hard bunch. It never healed, and it is now a raw sore, twice as large as before. What can be done for it? Can you, or any of the readers of your valuable paper, give me, through its columns, any information as to the best method of treating it? Would it do to tie a cord around it and let it rot off?

W. P. Griffin.

Annisquam, Mass., June 21, 1868.

Remarks. — We suppose our correspondent means by "shoe-boil" the swelling which is sometimes caused by the shoe or hoof in lying down. After the part becomes sore and painful the horse will often avoid lying on that side or lie in such a way as not to aggravate the evil. We think he did wrong in cutting out the bunch. He must now do something to prevent the irritation which produced it in the first place, and which still keeps open the running sore. A large cushion is sometimes made, some three inches or more thick in the middle and tapering off at the ends, stuffed with straw or some other material, and buckled upon the leg, between the foot and knee, while the horse is in the stable, to prevent the doubling up of the limb so as to bring the shoe or hoof against the "boil," or irritated part. Will some experienced horseman reply more fully?

CORN COB MEAL.

As I have used cob meal for some twenty years, I wish to corroborate the statement of my neighbor, "T. S. F.," recently published in the Farmer, as to its value, especially when prepared according to his directions. Two years ago I determined to give the cob meal a fair trial, as I had a cow that was to give milk all winter. She was fed constantly with cob meal, and gave the most milk we ever got from one cow during the winter season.

On speaking the other day with one of my neighbors about what was said in the Farmer of cob meal being very injurious to horses, he replied by saying, "Well, according to that doctrine, my old horse, now sixteen years of age, ought to have died long ago, instead of being as smart and fleshy as he is, for he has eaten lots of meal in his life, made by grinding corn and cobs together." In my opinion corn and cob meal is better for a horse than pure corn. Some farmers here are willing to pay a small price for cobs when their own supply is short. Don't waste even corn cobs.

Wm. Wilkins.

Felchville, Vt., June 28, 1868.

MENDING ROADS.

Why is it that highway surveyors will continue the old way of mending the roads, or rather making them worse, by carting and throwing on loam and sand from the sides, instead of digging down the hills and knolls in the roadway, thereby obtaining better material for the road and improving the grade? Some towns have bought gravel for years, to repair their highways, when they had gravel of better quality nearer, in the hills of the highway. Even if a little harder digging, it would seem to be policy to benefit two places instead of one, when it can be done at the same or less cost. Often have I seen the surveyor team gravel one mile and pay five or six cents per load for it at the pit, when better gravel could be had for the taking within forty rods of the place where it was wanted, and lower the grade of the road at the same time. Most towns in New England have plenty of good material for building roads, in the hills of their own roads, although sometimes it might have to be teamed a considerable distance.

Reading, Mass., June 24, 1868. z.

A GOOD HEIFER.

My neighbor, I. W. Raynolds, of Tunbridge, Vt., has a one-fourth Durham heifer, from one of his native cows, which at twenty-one months of age dropped her first calf, weighing seventy-seven pounds, last April. Mrs. Raynolds set her milk separately the first week in June, making from the cream thereof seven pounds of good yellow butter. The heifer had no feed except grass. O. Foster.

Tunbridge, Vt., June 27, 1868.

WHITE MAPLE SUGAR.

I noticed an inquiry in the Farmer whether sugar can be profitably made from the common White Maple. I used to suppose that it could not.

But some years since, I called on a friend, whose sugar lot, like the Irishman's orchard, consisted of "one scattering tree," and that was a White Maple, and to my surprise they had nice molasses made from that tree. Since then I have tapped the White Maple, when convenient That tree comprises about one-fifth of my sugar bush, and I consider it nearly or quite equal to the Rock Maple. I have not made any experiments in boiling the sap separately; but I get as much sugar from a given quantity of sap as most of my neighbors that do not have the White Maple. I only wish I had more of the same sort. B.

Wilmington, Vt., June 26, 1867.

AGRICULTURAL ITEMS.

—Milking machines are exhibited in the city, not in the country.

—The dairymen in Western New Yotk, are experimenting with paper boxes for cheese, instead of wooden ones.

—Twelve families out of fourteen in one school district in Bradford, Vt., made this season seven tons and five hundred and fifty pounds of maple sugar.

—Equal parts by weight of white lead and dry sand, mixed with linseed oil to the consistence of putty, makes a good cement for leaks around chimneys.

—The Novelty Machine Works in Chicago manufacture a machine horse-shovel, or scraper, which will load upon wheels a cubic yard of earth in one minute, and is also an excellent street cleaner.

—Two posts split from the same log were set for gate posts, one top end in the ground, the other with the butt; the first lasted seventeen years, the other ten years.

—For the hop aphis a correspondent of the *Country Gentleman* recommends a dusting of plaster of Paris as an efficient remedy, and at the same time an application that is beneficial to the soil.

—As a remedy for mosquito bites, keep a phial of glycerine at hand, and apply freely to the bites. It will relieve the irratation and swelling at once. One application is generally sufficient.

—Five thousand Texas cattle arrived in Champaign Co., Ill., during ten days, ending June 24. Price there of fair fleshed, ten-hundred Texas steers $25 to $30 per head.

—Sober cattle in the meadows,
In the shallow brooklets wading,
Or 'neath alders' grateful shadows
Ruminate with drowsy eyes;
Dragon flies o'er pools are winging,
Busy bees with honey lading,
And the notes of insects' singing
Everywhere in chorus rise.—*Shillaber.*

—In reply to an inquiry for a remedy for a hop-worm about one and one-half inches long, of greenish color, with reddish stripes running crosswise, that seems to originate in the soil, and eats his way up the pith and cuts off the vine, Mr. A. S. Fuller of the New York Farmer's Club, says "the best way to get rid of insects infesting hop roots is to keep skunks, which will find them. The skunk seems to be the natural guardian of the hop root, and there should be the picture of one on the head of every beer barrel." That the supply may be equal to the demand, some one will do well to start a skunk factory at once.

—Four acres of corn south of the Massachusetts Agricultural College were recently hoed in one hour and three-quarters by thirty-eight of the students. No farmer will object to such "hazing" as that.

—The Hagerstown, Md., *Free Press* states that in that place the locusts which are about emerging from the grounnd, are causing sad devastation among the swine, as the hogs eagerly devour them. A large number of losses of this kind are already reported.

—A correspondent of the *American Journal of Horticulture* says that the roots of Eastern trees run on the surface, while the same trees West run downwards. He says that roots prefer to be near the surface, but must have moisture, and as the West is famous for its summer droughts, the roots are forced to go deep to get their drink.

—A Texan, writing to the St. Louis *Republican*, urging the construction of a railroad from St. Louis to Texas, says that between the Nueces and Rio Grande rivers there are a million head of horned cattle, and ten thousand head of horses and mules. The cattle in that country are being killed for their hides alone.

—The Gamgee Meat Preserving Company have their machinery in working order at Mr. Turner's slaughter-house in Bridgeport, near Chicago, and expect soon to demonstrate to the whole West that the enterprising sons of the soil can not only rear their stock but preserve it and send it any distance by boat, railroad, or Atlantic steamers, to the best markets in the world.

—We learn by the *Maine Farmer* that Mr. Allen Lambard, of Augusta, has lost two valuable calves, and has two others dangerously ill, from the effects of eating or licking some old house paper that was thrown in a corner of their pasture, containing a considerable portion of green color. A medical gentleman who examined the paper said, that a square foot of its surface contained poison enough to kill four men.

—There are in the United States about 6,400,000 cotton spindles, which cost $25 each, or $160,000,000. The capital used to work them is not less than $12.50 a spindle, which is $50,000,000 more. Add to this shops for making cotton machinery and "supplies" $20,000,000, making in all $260,000,000. This machinery works up 16,000 bales of 400 pound per week, making 832,000 bales per year.

—When drinking cold water in hot weather, grasp the glass by the hand, take one swallow at

a time, remove the glass from the lips for a few seconds, then take another swallow; in this way it will be found that the thirst will be thoroughly satiated before half the water has been taken; whereas, if it had been swallowed continuously, the whole contents would not have satisfied the thirst.

—In reply to questions by a correspondent of the *Prairie Farmer*, "Wool Grower" says: Breeding ewes will fatten well at even eight years of age —*if their teeth are yet good.* Merinos fatten all the better for being at least four years old. Much the best plan in fattening breeding ewes is to let them go unbred. Merino sheep have to be fattened in the summer and fall, then grained strongly through the winter to make them keep what they have. Quite old and broken-mouthed ewes can be fattened only on good grass and corn meal.

—Downing states the curl of peach trees is occasioned by the punctures of very minute aphides, or plant lice, which attack the under side of the leaves. It does not materially injure either the tree or the crop, yet it greatly disfigures it for a time. To destroy these vermin he recommends a mixture of whale-oil soap, or strong soft soap and water, with some tobacco stems boiled in it, and the whole applied to the branches from below with a syringe or garden engine.

—A New Brunswick correspondent of the *Country Gentleman* furnishes the following account of a strange freak of a swarm of bees: "Last fall one of my neighbors discovered, while mowing his oats, a colony of bees, which had taken up a lodgment on two thistle stalks, and built comb, and bred there till they had a somewhat globular dwelling containing about a cubic foot of comb. They had no shelter whatever except the thistles and standing grain."

—A correspondent of the *Scientific American* gives this advice to horsemen: Whenever they notice their horse directing his ears to any point whatever, or indicating the slightest disposition to become afraid, let them, instead of pulling the rein to bring the horse towards the object causing its nervousness, pull it on the other side. This will instantly divert the attention of the horse from the object which is exciting his suspicion, and in ninety-nine cases out of a hundred the horse will pay no more attention to the object, from which he will fly away if forcibly driven to it by pulling the wrong rein.

—Pliny, the Roman Naturalist, who died A.D., 79, thus describes an ancient reaping machine: "As touching the manner of cutting downe or reaping corne, there be diverse and sundry devises. In Fraunce where the fields be large, they use to set a jade or an asse unto the taile of a mightie great wheelebarrow or carte, made in manner of a van, and the same set with keene and trenchant teeth sticking out on both sides; now is this carte driven forward before the said beast, upon two wheeles, into the standing corne (contrary to the manner of other carts that are drawn after) the said teeth or sharp tines fastened to the sides of the wheelebarrow or carte aforesaid, catch hold of the corne ears and cut them off; yet so as they fall presently into the bodie of the wheelebarrow."

—The *Utica Herald* says, "There is a looseness in the manner in which awards are made at Fairs which needs correction, and which must be corrected in some way, or the time will soon come when all awards coming from such occasions will be regarded by the public as worthless." This being written in New York applies to our New England Societies only "so far as it goes."

—Mr. Wm. Parry, of Burlington Co., N. J., has a farm of 300 acres, thirty of which are planted with the Philadelphia raspberries, twenty with the Doolittle, thirty of the Nelson blackberry, ten of the Lawton, fifty of the Dorchester and about twenty-five of strawberries. In addition he has a large number of acres devoted to experimenting with new varieties of small fruits, and many more as nurseries of ornamental trees.

—A correspondent of the *Rural World* is in a quandary. His name is William Davis, and he says, "last winter I loaned my broad-axe to a neighbor; afterwards four or five different men called for it, at different times; I told them yes, if they could find it. B. borrowed it; C. called for it; G. got it; H. had it, and W. wanted it. Now, I need it myself—had I better go and hunt it? if so, where shall I look? or had I better buy another?"

—The editor of the *Utica Herald* recently visited the Markham cheese factory in West Turin, N. Y., at which 5114 pounds of milk per day are received from 250 cows. This factory turns out 560 lbs. of cheese per day, and from the whey, which has heretofore been considered of little value, sixteen pounds of butter are made each day, by a process known as the Riggs & Markham. In consequence of the heating of the whey, which is a part of this process, it is claimed that it is even better for feeding purposes, than before the extraction of the butter.

—After alluding to the fact that neighboring farmers occasionally exchange work, a correspondent of the *Journal of Agriculture* thinks it would be well for the men and women folks to do the same. If some men were to do up the cooking, washing dishes, baking, sweeping, dusting, washing and ironing clothes, taking care of the baby and fitting off the larger children for school, they would much better understand the perplexities and fatigue of woman's work, and be more ready by looks and words to express their sympathy for her, even if the dinner for themselves and men happened to fail of being upon the table at the expected moment. And if women better understood the disappointments and annoyances of bad weather, unruly stock, destructive insects, and careless help, they might be more charitable for their cross and fretful husbands.

TURNIPS.

T IS not necessary to discuss the value of the turnip crop. We take it for granted this is fully settled. The ruta baga, and the purple-top strap-leaf flat turnip, are the kinds most extensively cultivated in New England. The great difficulty in the way of cultivating the turnip is the weeds. It costs labor and time to keep them clear of weeds, and to thin them to the proper distance. Sod land is in general, the best land for turnips because it is more free from weeds. A piece of pasture, or bound-out mowing land, with a deep loamy soil, ploughed up about the first of July, and harrowed thoroughly, is as good ground for turnips as can be found. Let this be marked into furrows by a light one-horse plough, and well rotted manure, or superphosphate be scattered liberally in the furrows,—then throw back the soil that was thrown out by the mould-board of the plough, by means of the same plough, and sow the seed with a drill, after which it is well to pass an iron toothed rake lengthwise of the drills. All manures in which fermentation has not been sufficient to destroy the vitality of weed seeds should be avoided. All the remaining work, except thinning may be done by the cultivator. This should be used three or four times, during the season. Turnips continue growing till November in ordinary seasons. They bear the frosts of autumn without injury. They should be thinned out freely, when the soil is rich and they are growing thriftily, ten inches apart is none too much. We are apt to err in allowing them to grow too thick.

The flat turnip is often sowed among corn at the last hoeing. It grows after the corn is ripe. If this practice is adopted, the stalks of the corn should be cut in good season, to allow the sun to reach the turnips more freely. When land is free from weeds this is a good practice, as it does not interfere with the growth of the corn and costs no labor, but the harvesting. The flat turnip is ready for use in the fall and early part of winter. The ruta baga keeps better, and improves by keeping till February, when the flat turnips are mostly used up. Horses may be readily taught to eat the ruta bagas, and will thrive on them, when not severely worked. They should be fed to them in small quantities at first, chopped fine, and sprinkled with salt and meal.

Cooked and mixed with bran or meal, they make excellent food for hogs. If, owing to the shortness of the season, the corn does not ripen well, what better substitute can the farmer have than a pile of ruta bagas? and with a generous crop of corn, they will not come amiss. The first dull day in hay time, the turnip patch should be attended to. It will pay.

THE CROP PROSPECTS.

We have so little faith in the correctness of the reports of the prospects for crops which are usually published in commercial papers at this season of the year, that we seldom copy them. It is so obviously for the interests of those who wish to buy the incoming harvest cheaply to create the impression of a large supply, that we look with much distrust upon the predictions of an "unusually large crop," "an increase of twenty-five per cent. over that of last year," "the wheat crop of 1868 will be fully one-third greater than that of 1867," "the wheat crop will be immense," "an average of forty to fifty bushels per acre," and similar expressions, made in relation to crops in various sections, which we copy from a single column of a New York city paper, now lying before us.

If we had confidence in the correctness of these reports we would publish them, as prices are always affected by the demand and supply; points on which farmers ought to be posted, as well as the patrons of these widely circulated sheets. But these "big, swelling words" of country editors and city reporters, who dash off their estimates from what they see from a car window as the train rushes past a field, and who may possibly be influenced by a desire to "puff" a particular section, or who may permit the wish for cheap bread to be "the father of the thought" of an abundant crop, need confirmation for our use.

This whole subject of marketing produce ought to be better understood by farmers. There are papers enough in their interest to circulate the facts necessary to enable them to form an opinion as to the condition of the crops and as to the prospects of the market. But how shall these facts be collected? May

not farmers' clubs and associations do this part of the work? If the time and money now devoted to "pure agricultural horse trots" were expended in the collection of these statistics, farmers might soon have reports on crop prospects on which they might safely rely. We commend the following suggestions on this point by an Illinois correspondent of the *Rural New Yorker* to the consideration of our readers:—

If all local (town, district or county) societies would attend to this matter and report monthly or oftener, during spring and summer to their respective agricultural journals for publication (or to their State agricultural societies and the latter to the Department of Agriculture) the object sought would, to a great extent, be attained. With well organized agricultural societies, managed by intelligent and practical men in the farming interest, in all parts of the country, the desired information could easily be obtained and communicated to the agricultural press—provided always that each society should make crop reports one of the special duties of a committee or the secretary. Otherwise little can be accomplished, for "what is everybody's business is nobody's." Certainly agricultural societies and journals ought to work together in promoting the interest of producers, and in our view there is no matter in which a union of their efforts would be likely to prove more beneficial than the one under discussion.

But as "big ships move slow," why may not individual farmers resolve themselves into a "committee of the whole" and furnish their own agricultural papers with more frequent reports as to the weather and crops within their own circle of observation?

WOOL MERCHANTS.

Dr. Randall gives in the last *Rural New Yorker* the names of seventeen firms of wool merchants in New York, and fourteen in Boston who have responded to his inquiries in respect to the principles on which they sell wool consigned to them by farmers and others. Nine of these firms state that they uniformly sell all wool on its merits, and either state or leave it to be inferred that they thus obtain more favorable terms than would be secured under the buyers' rules; three merely state that they uniformly sell wool on its merits; nine declare that they will (meaning, if so directed by consignors,) sell wool in any condition on its merits; two offer to sell wool on its merits, but consider it difficult to sell unwashed or unmerchantable wool favorably; two uniformly do or will sell unwashed or unmerchantable wool on its merits, when it composes an entire lot, or when there is enough of it in a mixed lot to sell by itself—but will not separate out a small parcel from a mixed lot to sell separately,—(this probably means same as next); three sell unwashed, &c., lots of wool on their merits, but avow that they allow one-third discount to the buyer on such wool where it is mixed with washed; two sell unwashed, &c., wool on its merits, but think it generally requires *more* than one-third deduction to make it salable; one sells unmixed lots on their merits—but do not say what they will do in cases of mixed lots.

Not one of the above wool houses, says Dr. Randall, practically adopts the *buyers' rules* in form or essence, and but few adopt any portion of them. This is a striking commentary on that pretence which has been put forward by so many country buyers that the enforcement of their *rules* is made necessary by the demands of the trade!

He therefore advises farmers who are not satisfied with the offers of the buyers who are hampered by any fixed rules to correspond with some wool house and learn their terms for receiving and selling wool, and suggests that farmers whose lots are small unite with their neighbors in making up proper sized lots to command attention. But in doing this let every man or body of men act with their eyes open.

What becomes of the Bumblebees?—In reply to this question, C. V. Riley, the State entomologist of Missouri, says through the *Country Gentleman*, that "they all die off on approach of winter, except a few females who quit their nests and hibernate in any sheltered place they can find. These scattering females are the Methuselahs, so to speak, of their race, and with wonderful single exertion dig the holes in which they lay the foundation for a new colony, by forming their oval, unevenly built cells, and depositing eggs, which produce workers. These soon develop sufficiently to help her, and carry out her plans after she is dead."

—The Urbana (Ohio) *Citizen* says that a farmer of that county has made a discovery of great value to sheep-growers. He has used, with great success, coal tar, for maggots in sheep. During the past season several of his sheep were badly injured, and when other remedies failed to remove the maggots from the wounds, he applied the coal tar, which effected a speedy cure.

From the Turf, Field and Farm.

BOB WHITE.

BY N. G. SHEPHERD.

Half way ripe is the wavy wheat,
Abroad in the fields where it stands breast high;
Soft as a whisper, and strangely sweet,
The breath of the wind as it wanders by;
"Bob White!"
Hark! whose is it, the voice I hear?
Calling aloud in the tall grain near—
"Bob White!"

Hotter each day grows the warm June sun,
A shade more purple the sky's deep blue,
And the bright June roses have just begun
To sprinkle their leaves with an ashen hue;
"Bob White!"
There it is calling, again and again,
Sweet and clear from the amber grain—
"Bob White!"

"What does the little bird say, my son?"
The father asks of his fair haired boy,
Where over the porch the wild vines run,
And the humming bee murmurs his song of joy.
"Bob White!"
Sounding aloud as the voice draws nigh,
And the innocent lips of the child reply—
"Bob White!"

One shrill note and a whirr of wings,
Away in a moment, flying low,
As over the loose wall lightly springs
The farmer lad with his rake and hoe;
"Bob White!"
Whistles the boy, while his big black eyes
Follow the flock wherever it flies—
"Bob White!"

A soft, sleek coat of a darkish brown,
And a speckled waistcoat of lighter shade,
Passing to white where it reaches down,
With breeches of chestnut trimly made;
"Bob White!"
This is he whom we hear repeat,
All day long in the ripening wheat—
"Bob White!"

Two half circles around the throat,
One pale streak on his lordship's crown,
And all over the back of his Quaker coat
Paler streaks of a yellowish brown;
"Bob White!"
This is he who fattens and thrives,
Down in the wheat where he calls to his wives—
"Bob White!"

A famous Mormon is he, I'm told,
Full of love for the softer sex;
With a heart like an eagle's quick and bold,
And a spirit fiery and easy to vex;
"Bob White!"
Is it his own or another's name
That he keeps repeating always the same—
"Bob White!"

A few dried leaves and some bits of hay
Under a tuft of sheltering grass;
Hid in a hollow out of the way,
Where only by chance a foot may pass—
"Bob White!"
Thus he calls now the nest is made—
Thus he will call till the eggs are laid!
"Bob White!"

Yellowish white the brittle shell,
Speckled with brown like his own little breast,
Watched, and tended, and guarded well,
A dozen or more in the homely nest;
"Bob White!"
Far less frequent, and somewhat dry
The voice of our friend, as the days go by.
"Bob White!"

A smart young fellow, his son and heir,
Ready at once from the nest to roam;
Little of trouble and little of care
Brings the boy to the mother at home;
"Bob White!"
Almost silenced the once clear tone,
Now that the season of love is flown,
"Bob White!"

There in the grass where the dew hangs damp,
Ever watchful of any harm,
Back to back in a circular camp,
Ready to rise at the least alarm;
"Bob White!"
Sits from the time the twilight falls,
All through the night, while no shrill throat calls
"Bob White!"

By-and-by when the summer is dead,
And the glowing hand of autumn weaves
Gorgeous pa terns of purple and red,
With gold and brown in the orchard's leaves;—
"Bob White!"
Down in the stubble piping low,
No longer shall call as the bright days go—
"Bob White!"

For the New England Farmer.

HOW RAILROADS BENEFIT FARMERS.

Many of the discoveries in the sciences, and the inventions in the arts, which are now recognized as the greatest blessings to the world, were opposed at first as dangerous to the welfare of the community and destructive of the interests of individuals.

Only some twenty-five years ago, some of the most sagacious men in New England predicted that sad consequences would follow the introduction of railroads in this country. They raised a great hue and cry that the country would be undone; that British money must build the roads and control them; that the hay raised by the farmers of New England would not find sale; that horses would be of very little worth; that wood, butter, cheese, hay, &c., would be brought from Maine, Vermont, and New Hampshire, until our market was glutted, and many more evils, not necessary to repeat, were predicted.

In 1833-4, the Boston and Providence Railroad Company commenced operations, and as the pioneer company, with indefatigable zeal, surmounted every obstacle in the form of bog, fen, swamp, ledge and mountain, and finally united the two cities, and demonstrated to the whole country that railroads were a safe investment, even in the snowy, hilly region of Massachusetts. Lowell and Boston, it is true, had built a road in 1831-2, but as Lowell was a city of spindles, owned by Boston merchants, it was not called a fair precedent. The Boston and Providence having settled the question of maintaining itself with good dividends, &c., immediately other roads sprung up in all directions, and not only have the cities united been signally benefited, but the whole country through which they pass has been dotted with villages filled up with mechanics and manufacturers, and a good home market created for all the products of the farm, instead of carrying them to the distant city to stand till near night fall and finally to be disposed of at such prices as buyers might offer, by taking half pay in goods.

All communities, I suppose, have croakers; certainly we have them. Though we have a

good home market for all our produce, all are not satisfied. Some complain that these companies are making money too fast. Such persons forget that in 1833, the New England press generally invited moneyed men to come forward and take stock in these roads, and that many were shy of subscribing. Now those who entered into the experiment and have been successful surely ought not to be envied. Suppose the experiment had been a failure, and entailed loss on the shareholders, as many roads have done, would these croakers have shared their loss? Every man who has occasion to visit the city is more directly benefited by railroads in the saving of time and expense than most people realize. Not long since as some of these fault-finders were making complaints, an old gentleman made the following statement. In the year 1830 he went to Boston, thirty miles, in a stage coach. The stage went but once a day. He paid $1.50 for passage, 50 cents for dinner, 50 for supper, 50 for bed, 50 for breakfast, 50 for dinner, and $1.50 for passage home; making $5.50, besides two days' time, worth $3.00; a total expense of $8.50. Now we can take the morning train to Boston and stay four hours in the city, and return at noon, for $2.00, and half a days' time, $1.00, making $3.00; a saving of $5.50 by railway.

And thus it is with many other inventions and improvements. Let us count up our blessings, and look on the bright side of things whenever we can. D. P.

Attleboro', Mass., 1868.

THE PERCHERON NORMAN HORSE.

This breed of horses originated in, and now exist in their most perfect form and condition, in *Le Perche*, a district of that portion of France which was formerly known as Normandy, and are clearly a pure breed *per se* We do not mean thoroughbred, but a breed capable of producing and reproducing themselves, *ad infinitum*, unaltered and without deterioration of qualities, by breeding like sires to like dams, without infusion of any other blood, just as is done by Durham, Ayrshire, or Alderney cattle; by setters, pointers, greyhounds; and in a word, by any and all animals of distinct and perfect varieties of the same species.

The points of this peculiar breed are that they are much taller than ordinary horses; their standard is probably from fourteen and a half to sixteen hands high. Secondly, they are very short in the saddle place, and comparatively long below; they are well ribbed up, and round barrelled, instead of having the flat sides and sway backs which are the defective points in most American horses; their heads are short, with the genuine Arabian breadth of brow and hollow of the profile between the eyes and nostrils; their necks are well arched, and sufficiently long to correspond with the general stoutness of their frames; their legs are particularly short from the knees and hocks downward, and although heavily haired they are not shaggy, while they have unyielding, iron-like sinews, and feet apparently unconscious of disease.

A writer in *The British Quarterly Journal of Agriculture*, speaking of this class of horses, says: "The horses of Normandy are a capital race for hard work and scanty fare. I have never seen such horses at the collar, under the diligence, the post-carriage, the cumbrous and heavy voitre or cabriolet for one or two horses, or the farm-cart. They are enduring and energetic beyond description. With their necks cut to the bone, they flinch not; they put forth all their efforts at the voice of the brutal driver, or at the dreaded sound of his never ceasing whip; they keep their condition when other horses would die of neglect and hard treatment."

Mr. Harris, of Morristown, New Jersey, in "Youatt on the Horse," says: "These horses first came under my observation on a journey through France in the year 1831. I was struck with the immense power displayed by them in drawing the heavy diligences of that country, at a pace which although not as rapid as the stage coach travelling of England, yet such a pace, say from five to nine miles per hour, the lowest rate of which I do not hesitate to say, would in a short time kill the English horse if placed before the same load."—*Southern Planter and Farmer.*

A Fine Durham Dairy.—A correspondent who is an enthusiastic admirer of good stock informs us that he was very much pleased with a herd of seventeen cows which he saw in the barn of T. P. Root, Esq., of Barre, Mass. Mr. Root has bred the Durhams with particular reference to dairy purposes, and is not satisfied with a yield of less than forty pounds of milk per day. Some of these cows he was informed had given fifty-six pounds of milk per day. His other stock, including a yearling colt, were very fine, and indicated, in the opinion of our correspondent, a skilful breeder and a good farmer.

—In the course of some remarks on a late trial of cultivators and harrows, the *Utica Herald* says, the somewhat recent application of thills to cultivators and horse hoes must be regarded as a decided improvement. With thills, the machines are kept steadier, while at the end of the row the labor of lifting or throwing the implement into the next row is not half so great as with the old style cultivators, while there is much less danger also of cutting up hills from the sudden starting of the horse.

Ladies' Department.

DOMESTIC ECONOMY;

OR,

HOW TO MAKE HOME PLEASANT.

BY ANNE G. HALE.

CHAPTER XIII.

CHILDREN'S CLOTHING.

Many persons when wishing for a change, or when their garments get a little defaced cut them over for their children; and so when purchasing things for themselves, keep their boys and girls in mind. It is an excellent plan. Not only will parents having this end in view be likely to choose articles that will wear well, but they will take good care of them while in their hands, and so indirectly provide for their proper use when in the hands of others. Thus, drab or grey being the best color for boys' clothes, a father's pantaloons and vest of this shade will, with little trouble, furnish enough material for making his son a good suit of jacket and trousers, when they are too shabby for his own use; or, his brown sack may be metamorphosed into such a nice overcoat that the child himself will see that it is better than the "boughten" one which a proud schoolmate ostentatiously displays. The fabrics for summer wear, except tweeds, cashmeretes and nankeens, are seldom substantial enough for this second wearing. For girls, a mother's brown and white valencia, blue thibet, green and white delaine, blue or buff gingham or lawn, after washing and ironing—the cotton-and-wool and cotton goods starched a little—will be just as good and as handsome as new; and her gray or brown sack can be cut, and contrived, and turned to suit successively half a dozen daughters.

Don't make dolls or puppets of boys and girls by dressing them like miniature men and women, as is too much the custom—keep them children as long as you can. There is nothing more charming than the ingenuous simplicity of childhood, and nothing more disagreeable than the assumption of grown-up airs, which always follows grown-up dressing. Be even more fastidious than if choosing for yourself when deciding of what fashion to make their dresses, and keep them as much as possible independent of fashion's changes.

There need be no distinction between the dress of a boy and that of a girl, until the child is old enough to be trusted out of the house alone. Then the boy's low-necked and short-sleeved gown may give place to a frock and trowsers. Two breadths of single width cloth—valencia, lyonese, thibet or cashmere, or cashmeret, gingham, nankeen, or calico for summer—either plain or small plaids or stripes, make the frock body. Take a measure around the throat, and around the chest and the shoulders, and cut the neck and the slope of the shoulders to correspond with these. Bend the elbow to measure the length of the arm, and cut the sleeve like that of a man's coat or make it straight and gather it into a wristband: make the arm-size loose, and let the sleeve enter it straightly—but not tight. The frock should reach to the knee—the edge hemmed to the depth of two inches. It should be bound with a narrow straight collar at the throat and be buttoned down the front; a belt of the same material having a stiff lining, or a stout leather belt, worn with it. This dress for winter should be lined throughout with cambric. A stout silesia waist—double or lined—fitting the form well not tightly—should be worn under this,—to which the trowsers—plaited into a narrow belt—should be buttoned;—the trowsers also need lining, and wear better to be rather loose, and long enough to reach the ankle. As a boy gets older make these trowsers of tweed, cassimere, or doeskin; but retain the frock till he is at least six years old. Then he will want a jacket for his trowsers,—similar in form to a woman's garibaldi jacket, and made of *men's* cloth, like the trowsers. Following this, at eight years, may be a straight jacket, cut long enough to go over the hips, and made to be left open in front showing a vest,—or, rather, the waist of the trowsers buttoned in front and lying over the belt of the trowsers in imitation of a vest; this waist-front must be of the same material as the jacket, and like that, lined with silesia and buttoned with strong buttons. But young America is not satisfied with this a great while—he delights to spread himself. Spurning these limits you must be ready to supply him with a "real, true" vest and "suspender-pants," to wear with his jacket, by the time he is ten, or he will feel that he is debarred of his rights. Yet if you wish to keep him back a little, you can accomplish it by establishing a law similar to that which ruled the damsels of olden time, when no maiden could be married till she had spun and woven the cloth for her bridal out-fit, (hence the name spinster for unmarried women), saying that no suspenders can be worn till they are knit by him who wishes to wear them. They are just the simplest things to knit, of cotton or cotton-and-wool—(sometimes called angola) yarn, and quite elastic and strong. Make them an inch and one-half wide and three-quarters of a yard long. A button hole is knit in each end of both suspenders by dividing the stitches, after one inch has been knit, and taking them on two needles and knitting it in two parts for about an inch, and then taking all the stitches again upon one needle and going on straightly with the work till within two inches of the end when another button hole must be made before finishing.

Still the march is onward and upward—he cannot be repressed—the jacket is but the chrysalis

to his expanding powers. Just as you are getting used to the tiptoeings and the chest-dilatations brought forward by "Jackin-galluses," you have forewarnings of sacks, and box-coats, and even of "swallow tails," till, unless you are of a very cool and conservative disposition, you find yourself some fine morning on the way to the tailor's for a pattern by which to cut one or other of these delectable garments; and, you have lost little Johnnie in the tall young man who proudly offers you his arm when he dons the new garment for the first time.

Boys' hats and caps of straw and felt should be kept in order according to the directions given for the care of men's hats, in Chap. VII. Straw and palm-leaf hats unless well bound with galloon or twilled tape will soon get "used up!" they need cleansing and pressing;—this can be done by sponging them with borax soap suds, rinsing in clean, cold water, and when half dry pressing, either on a block of the desired shape or on a tin pail, or pan, covered with layers of cloth. If they are very yellow after washing, cover with a mixture of sulphur and cold water, (made about as stiff as thick paste), and hang them in the sun for a few hours before pressing. Sometimes they need a second application of the sulphur-paste. This is an easier and safer way than to smoke them over slowly burning sulphur in a barrel or box where they are hung and then covered over air-tight, as is commonly practiced.

Very good hats for boys can be made by covering a straw hat, or a pasteboard frame that copies its shape and size, with cloth cut from the remnants left when making jackets or trousers. Line them with cambric, bind with galloon, and also fasten a band of galloon around the crown. To make a cap: measure around the forehead, and make a band of this size, one inch and a half wide, from layers of cotton cloth, pasted together; then from stiff paper make a ring of the same width, the shorter edge of which will fit this band, and, unless you wish for a perfectly flat cap, shorten the longer edge of this ring six or seven inches by taking out gores at regular intervals. For a top to cover this, cut a round from stiff paper. These are the patterns by which to cut the woolen cloth of the cap; they are also the frame to which it is attached to keep it in shape. Line it with cambric to which a little wadding is tacked or quilted, bind the edge with galloon, and put around it a fold of cloth fastened with a knot of ribbon,—in winter substitute fur for the fold of cloth, if you choose. Quite a pretty cap is made by using a headband two inches wide and fitting a surface piece directly to the top of it,—the circular being formed of six or eight equal pieces meeting in the centre and ornamented there with a button. Give it the same lining and fold and binding as the other cap. If you wish for a visor to the cap, as a protection for the eyes, cut from paste-board a crescent, whose inner edge is one-third the length of the head-band and which measures one and one-half inches across the centre, then cut a covering for this from the same material of which the cap is made, and a lining from kid or stout silesia. Stitch its inner edge to the head-band and bind the outer with galloon.

Men's fur caps, after they are too much worn for their own use, may be cut over for their boys, or may be made into neck-ties or collars. The making up of these things is simple,—the only trouble to be overcome is in piecing and sewing the fur;—for it often happens that the pile is so worn off that the skin is bare in some places. The only way to remedy these ugly spots is to cut them out and fit in nice, well-covered pieces. And this cutting and fitting is very careful work. Bnt anybody can do it, if willing to take pains and to use a little patience. Cut the skin on the *wrong* side; slip the point of your scissors under it so closely as to cut it with short clips and yet not to touch the fur—not a hair of which should be started. To fit a piece—find out which way the pile (or fur) naturally lies by passing your hand over it; the fur of the piece to be inserted must fall the same way, and it must also match the color and natural shading of the portion to which it is fitted. Having cut it according to these directions, the edges meeting exactly, without puckering, sew them together with strong thread, in flat overstitch. Be sure that you sew nothing but the skin—not a particle of the fur should be taken by the needle. Furs are lined by sewing the materials to the edge of the skin, the pile—the fur itself—standing untouched. A little wadding is generally placed between the lining and the skin. Muffs and women's fur capes may be repaired and made over in this way for boys or girls.

Girls' common hats should be of straw or felt, simply trimmed. When of these materials they can be altered by a little ripping or cutting, which the wearers by the time they are twelve years old, ought to be taught to do,—or rather, which most girls of that age are ingenious enough to do without teaching. After that age they will find much pleasure in fabricating them of materials left from their best dresses; and as they get older will want to undertake bonnets in order to display their taste. Straw and felt are the best materials for both bonnets and hats, because they can stand all weathers, and can be so easily altered. If kept for Sunday and other particular occasions, for one season, they do not seem unsuitable for everyday wear the next; which is not the case with those made of other goods. Palmleaf hoods (from their form sometimes called Shakers) are excellent for those who are exposed much to the sun,—they need a gingham cape, and a bonnet of the same shape, made entirely of gingham, lawn, or pique, is quite nice for very small girls; the bonnet being kept in form with stiff cords or narrow strips of whalebone.

Little girls' dresses should be made with

straight, or with what are called infants waists—though the sleeves ought to be long in winter—until they are six years old. Directions have already been given for making these waists. Three breadths of common width material are sufficient for the skirt. It should reach one-third-way between the knee and the ankle. Hem it, face it, and plait it at the belt, if of thick material: gather it, if of thin. Fasten the dress behind. These are much easier to fit, and quite as pretty, besides being more durable and less easily soiled than the casaque style now much in vogue—it is almost impossible to get a neat and at the same time an easy feeling dress of that style for any child. Dresses for girls from six to twelve should be a little longer in the skirt, and this may be gored. The waist, which is still fastened behind, should be biased in front to fit the form. The best way to manage the dresses of children during the awkward time between the ages of twelve and seventeen is to allow for much enlargement and lengthening, and to do the best you can to promote a graceful appearance by gradually introducing them to the styles suited to persons of mature life. For this purpose spencers, jackets, and such undecided garments, to be worn with detached skirts, or over waists, are very suitable. Measure for and cut these dresses as in making those for women. The waist linings of girls', and women's dresses also, are kept much more neatly if a waist-protector made of white cotton cloth is basted within them. They should reach from the throat to below the armsize. Form them like the upper portion of the waist, and hem them. They should be taken out and washed very often.

While hoops continue in fashion, it is well to use them, but do not adopt any conspicuous style; and never put them on young children, and never wear them, nor consent to their being worn, without shoulder-braces or supporters. Overskirts should neither be of gaudy colors nor of showy designs—such things are sure signs of incorrect taste;—there are now to be purchased at very moderate prices many neat and modest styles of skirting, suitable either for summer or winter wear. Do not allow your daughters nor yourself to wear white skirts in wet weather or in sloppy walking,—the old-fashioned drab or stone-colored moreen is best for such times. Mothers who care more for the health and long life of their daughters than for their pride in the acquisition of an unnatural, yet fashionable form will forbid the use of corsets, or stays,—providing for them in their stead waists of double cloth or jean, cut like a dress lining—only a little lower in the neck. Bind the armsizes and the neck of these garments; face the edges of the fronts, and also the lower edge, to the depth of an inch; fasten them with buttons in front, and set half a dozen buttons at equal distances along the lower edge,—by these the belts of skirts may be united to the waists.

The suggestions in regard to trimming and ornamenting women's dresses are applicable to the finishing of children's garments; not only for the reasons laid down in a previous chapter, but because of the frequent washing to which boys' and girls' clothing is necessarily subjected. Braids, ribbons, gimps, fancy buttons, and embroidery, cannot be removed at every washing, and the consequence is that many articles of attire are greatly injured, if not ruined, by the colors of these things soaking or running into the tissue of the dress, or by their shrinkage drawing the garments into uncomfortable and unsightly shapes; while the trimmings themselves are, as Mrs. Maguire would say, a sight to behold. If anything of the kind is used don't go beyond a little white cotton braid for nankeens or ginghams or calicos, or worsted braids, of whose colors you are sure, for delaines, valencias and similar goods, and these must be shrunken, as directed in Chap. VIII, before they are used, As a general thing, children's garments when new are not put on immediately and worn every day; as a best or Sunday suit they are kept for special occasions, and so these fineries look well enough a good while. But when the clothes are taken for common use, being raised above the surface of the material they are quickly soiled, and are very troublesome to the wearer by catching and rubbing against everything,—which, of course, soon spoils them.

Children's clothing should be watched even more carefully than that of grown persons, lest it get beyond repair; one day's wear, or merely one romping frolic, after a hole has started, will sometimes completely destroy a garment; and you will need to use as much care in its mending as for your own, for they are observant of such matters, and are often more mortified by a patch being made too apparent than by wearing the dress in rags—not every boy is like one that I know who wanted his mother to put "squares" on his trousers' knees because his playfellows had them. Many would prefer that she should turn them around before such things became necessary, so that the knees should have means of keeping decent as long as the rest of the trousers. And this turning the back to the enemy is no cowardly manœuvre, nor yet a difficult one. This is the way to perform it: Cut each leg of the trousers in an exactly crosswise direction from the lower corner of each pocket to the top of each inside seam, and then reverse them,—bringing the backs front,—stitch them in that position, rant the seams, and then press them nicely. These new knees should be lined carefully as directed in Chap. VII.

Yarn and worsted comforters, caps, hoods, scarfs, or shawls, when very much out of fashion, may be ravelled, the yarn reeled, or folded, into skeins, and then washed with soft soap in warm water, dried, the badly worn taken out, and the good knit again into new shapes—and thus make a great saving in a large family.

There are many ways in which both boys and

girls can make themselves useful about house, and at the same time find much happiness, even if school or its lessons require most of their attention. In order to become "handy," or skillful, in this work, they should begin quite young and gradually increase their assistance, the boys till they are old enough to work at more laborious occupations, the girls till they are capable of superintending the household. To perform these little services with ease and dispatch they must be properly dressed. If they cannot take off school dresses, boys should have overalls, or loose over-jackets, or frocks and trousers, like their father's; the girls, sacks and aprons like their mother's, or else loose and long sleeved tires. Make also for the girls, aprons to cover the front of the waist and skirt, to put on when at play, or for school wear. Gingham, or brown linen, are the best materials. Bind them neatly with their own or a contrasting tint, or trim their edges with a few rows of braid.

I had nearly forgotten to mention the bit of lace, or the little linen collar, with its bright ribbon knot, which the larger girls will always like to wear about the neck; and the plain, straight collar of linen which may be basted into the neck of a boy's vest or jacket, to be tied with a ribbon. These give a finish to their attire which should never be omitted. But, *jewelry*,—boys and girls should never be disfigured by anything that bears that name,—its use by them would be as unnecessary as to gild refined gold.

Some mothers believe that the art of keeping a neat appearance comes by nature. They say—"Dirt never sticks to Johnnie, no matter how he is exposed to it, but Will is always in a mess. Jenny's dresses are never untidy, and last twice as long as Mary's, for whose clothing every latch seems a magnet and every nail too." Now, according to the old adage, "habit is second nature," they are right—in a measure. Habits of care and neatness are formed early in life, so that children should be helped to acquire them. In the first place by the indirect influence of care and neatness in the management by others of all matters connected with their home-life. In the second, by having in charge, under the supervision of their parents, as soon as they are old enough, the drawers or closets that hold what clothing of theirs is not in actual use; and, in the third, by being taught to clean and to mend many of their own things, and to do it well. For instance—a boy of six years and older should brush and sponge all dust and spots from his clothing every morning, and also black his boots and shoes. And a girl should remove all traces of soiling from her dress, and from the dresses of smaller children, and point out to her mother's notice, if she cannot mend, rents and bracks in her brothers' as well as in her own clothing. When she is ten years old she should begin to assist in mending,—of course she has helped in making all sorts of apparel ever since she was five years old. Thus many a housewife's cares would be shared, and her burdens lightened, while the children are acquiring the means for making their lives beautiful and happy.

Before leaving the subject I wish to say a few words about faithfulness in needlework: Do all sewing, not only for yourself, but for your husband and your children, (which distinction is too often made) strongly, nicely, and neatly. Don't be afraid of setting too many stitches in the seams of a garment, nor of spending too much time in setting them properly. Let your work be such that you will never be ashamed to have it examined, in fact something that you will be pleased and proud to have closely scrutinized. In this way you will help to counteract the popular opinion in relation to woman's work; for much is said of her want of thoroughness in all her undertakings, and if you are faithful in this department of your labors you will be likely to carry that faithfulness into the performance of other duties.

In concluding, let me give you the words of Miss H. E. Lunt, the author of an excellent essay entitled "A Woman's Talk About Clothing": "These items considered in themselves are trifles, but they are such trifles as make up the sum of home-life. On the faithful performance of small duties, a great measure of the comfort, integrity, and happiness of families depends. And in temporal, no less than in spiritual concerns, is the reward of having been faithful over a few things."

THE
NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

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SEPTEMBER FORETHOUGHTS.

SEPTEMBER, the first of the Autumn months, is a happy and a pleasant one. It brings Fruits and Fairs, both of which farmers should enjoy. It also brings longer evenings and more time for reading, thought, and planning. Enterprising and successful farmers, as well as skilful mechanics, have a plan by which they work, and to which they conform with more or less strictness. Every good farmer has decided already what field is to be seeded down to grain this fall or next spring, and what sod land shall be cultivated next year in corn or potatoes, and what grass land shall be top dressed. He sees, in anticipation, the smooth and well-worked surface of this or that field clothed with the green of the springing grain, or waving with the golden harvest. He sees the rich and thrifty corn standing thick on that field from which he has just taken a scanty crop of grass, and he works with reference to the accomplishment of these results. He gets in his winter grain, if he did not do it in August, as early in September as possible, that it may become well rooted and make a good "stand" before the setting in of the frost. Winter wheat, we think, should be sowed before the 10th of September. If the ground is well prepared and the seed well covered with a light plough or cultivator and smoothed with a roller, it will better endure the effects of the frosts and winds of winter, and there will be less complaint of winter killing.

Winter wheat starts earlier in the spring, and matures its grain earlier than spring sowed wheat, and often escapes the enemies that are so destructive to the latter. It is liable in some seasons, and on some soils, to be injured by the freezing and thawing and heaving of the surface. But if it is well drilled in, or well covered with the plough and gets well rooted in the fall, the liability to injury from this cause will be more than counterbalanced by the earliness of the crop; by the greater strength of the straw, making it less liable to be broken down by storms; by its greater exemption from insect depredation; and, in general, by the better quality of the flour.

The spring may be cold and wet, and the ground unfit to receive the grain until late; but in August and September, none of these difficulties occur, and the work may be more easily and thoroughly done.

We think the cultivation of winter wheat is too generally given up in New England. Our fathers found it a profitable crop, and so may their sons if they will adapt their method of culture to the changes of climate and soil. For the deeper snows that protected the plant in the winter, they must apply a deeper covering of earth; and for the fertility of the virgin soil, they must supply the elements of nutrition which the wheat requires.

The practice of ploughing the soil in the fall, for all crops, is we think growing in favor. Worms and the larvæ of various insects increase in lands long under cultivation, and fall ploughing seems to be the best and almost the only remedy we have for this increase. Where lands are level, manure may be applied and covered in the fall with little if any loss, and certainly with great improvement to the mechanical condition of the soil. The manure becomes more thoroughly incorporated with the soil, and both manure and soil are found more fine and mellow, when we come to work them in the spring. The manure that has been accumulated in the summer may be carted easily at this season, and may be used in a green state without composting, thus saving a good deal of labor. We think this is the only time and way in which green manures should be applied. Indeed many who advocate the use of green manures, are in the habit of applying them in the fall, thus making a compost on the spot where it is wanted.

But there is much other work to be done in September. The grain should be threshed and carefully secured from the mice and other vermin. Corn fodder should be attended to with care, and housed as soon as dry. Ditches should be cleaned out and a good supply of material prepared for the compost heap. Calves and colts should be brought up as the frosty nights come on, and be taught to eat hay and roots, and thus be prepared for the winter.

Now is the best time to fatten swine. They will lay on fat much faster in the pleasant weather of September and October than at a later season, when half their food is needed as fuel to keep them warm. Improve the present fine weather, for the winter is fast approaching.

WARTS ON HORSES have been cured by a wash of Sal Soda and water.

LETTER FROM THE FARM.

CONCORD, Aug. 7, 1868.

GENTS.—After an absence of two weeks among the White Mountains, I find a great change in the vegetable world about me here. The abundant rains of spring had thoroughly wet the subsoil, so that when the intensely hot weather of the latter part of July came, plants grew with a rapidity entirely unprecedented in my observation. It was really wonderful how soon the gardens and fields seemed crowded with the most luxuriant vegetable life and vigor. Grass became too heavy to wave, and was falling to the ground; barley stalks were bowing with heavy heads of ripened grain, while the Indian corn, only a few days ago backward and unpromising, had now rushed into comely proportions, and gave great promise of an abundant crop. The potato crop, also, appeared finely, save where the slug had robbed the stems of their leaves. In some fields serious injury has been done in this way, so that the putting forth new leaves will greatly retard the growth of tubers, and the crop will probably be light.

The rye and barley crops are good, and have been generally well secured. Some fields of oats about us have been cut, and yielded well.

The hay harvest on uplands has been excellent in quantity and quality, and most of it housed in fine condition before the recent rains and cloudy weather set in. The "runs" among the uplands were good, but large, low meadows, where water remained until the last of May or into June, will be light and unprofitable. The grass upon them is thin, and partially covered with a dried slimy substance, which adhered to it as the water slowly receded from the meadows. The loss to farmers in Middlesex county, in this respect, will be very heavy.

I have had the pleasure, to-day, of visiting some farms in this neighborhood, and among them that of Capt. JOHN B. MOORE. He has about sixty acres in one enclosure, most of which has yielded a very heavy crop of English grass this season. In one corner of it, I found about one acre in asparagus, as much in strawberry plants, and several varieties of potatoes, millet, Indian corn, and many other plants, which he is testing in order to learn what is best for future cultivation. On a level,

some seventy-five feet above this field, I visited others, cultivated in strawberries, corn, cabbages, squashes, melons, young grape vines, potatoes, &c., and 100 peach trees. Of the latter I found but one tree attacked by insects, and no signs of the yellows. The trees were all budded and in vigorous condition. The land on which these crops stand is a sandy loam, and not subject to early frosts,—the peach trees giving no signs of being injured by the cold of winter.

On another field, some sixty feet above the level of the brook in the valley, I visited his grape vineyard, containing about two acres. With the exception of a few plants where the wind had free sweep over the edge of the hill, the vines were all full of heavy foliage and in vigorous growth. The oldest vines—some eight or ten years old—were not generally in fruit, while those of half that age are loaded, even overloaded, with large bunches of the finest grapes. Some of the vines are tied to stakes and others trained upon wire trellises, in order to determine the cheapest and best modes of managing them. All these vines are set upon land covered with small stones, what is called a "cobbly knoll," and was originally covered with a growth of yellow pines, scrub oaks and white birches. It has received but little manure beyond a dressing of leached ashes. Mr. Moore does not believe in the theory that the grape needs *no* manure, but thinks that *high* manuring tends to injure rather than benefit it,—and that the appearance of the vine will indicate clearly enough when it needs more nourishment.

We have in this town some twenty-five acres in grape vines. I have visited no other fields this season than that of which I have spoken, and cannot, therefore speak of their present condition. This one is well worthy the examination of those who intend to engage in the culture of the grape.

Nearly all the crops on Mr. Moore's farm are looking finely. All the hoed crops are in straight lines and kept scrupulously clean,—what weeds had crept in during the busy season of haying, were being taken up and carried away from the fields. He stated to me the income from some of the crops, such as asparagus and strawberries, but I was too much interested in seeing and hearing to make notes, so that I will only say that the cash items were quite large. He is a skilful gardener as well as farmer, and is doing much to introduce what is called "market gardening" among our farmers. Indeed, a large business is already going on in this direction.

Our people are improving the "rainy season" to lay down their lands to grass, and get in turnips for winter stock.

My visit to the Mountains revealed many changes that have taken place since my first "call upon them." Fine hotels and excellent roads are now common where the dark forest held sway then, so that wonderful works of art are now mingled with the majestic scenery of the region. Among the works of man, the *White Mountain Railroad*, is the most notable. It is now nearly completed; is three miles long, ascends the face of the mountain in a straight line, and *rises one foot in three.* The ascent is made by the engine turning a cog-wheel among strong iron pins on a centre track, and not by a stationary engine as is generally supposed. It is a wonderful work of art, almost frightful to look at, but appears to be substantial and safe. The road is made of timber and is a continuous bridge, crossing the ravines at the same degree of elevation as when rising the face of the mountain.

My trip was a pleasant one, and I only wish that all your readers, who desire it, may enjoy a ramble among those "Crystal Hills."

Truly yours, SIMON BROWN.

MESSRS. R. P. EATON & CO.

BUTTER AND CHEESE.

We have received a somewhat lengthy article from our correspondent, "W. H.," who has long been of the opinion that by our ordinary process of making butter and cheese much of the valuable qualities of the milk are lost. The success which has attended the extraction of butter from the whey of cheese factories, he regards as proof of the correctness of his position. He believes that when the cream is taken from the milk for making butter, there is removed with the globules of butter, something not essential to the production of butter, but which is of value in the production of cheese; just as the cheese makers have found that in setting the milk for cheese, they fail to work in all the butter producing qualities of that milk. As, then, butter has heretofore been lost in the whey of the cheese-maker, so cheese goes to waste in the buttermilk of every churning.

Now as a patent has been obtained by Mr. Page, of Adams, N. Y., for his process of extracting butter from whey, may not some process be devised by which the butter may be extracted from milk without removing those properties which are useful in the manufacture of cheese?

Our correspondent's circumstances not being favorable to the prosecution of experiments to determine this point, he submits the subject to dairymen. He however alludes to an article published some time ago in the *Scientific American*, about a process of extracting butter by burying milk in a cool place in the earth, as one that may be followed up to a practical result. Instead of enveloping the milk in a series of linen bags, he proposes a box with shelves for the milk, and if this proves successful, then enlarge the box to a milk-room, in such a manner that the whole should be subjected to those influences of the earth which, in case of the milk in the bag, separated the particles of the butter from the milk buried as described by the *Scientific American*. After the removal of the butter in this way, the milk, on his theory, would produce first quality cheese.

WOOLEN EXPOSITION.

The first exhibition by the Woolen Manufacturers' Association of the Northwest was opened at Chicago, August 4. The 1500 specimens of manufactured goods from eighty mills, some woolen machinery, and a small but creditable display of wool, occupied the five floors of a new building, 80 by 100 feet. The Mayor of Chicago, the Governor of Illinois, Hon. J. B. Grinnell, of Iowa, Col. Capron, Agricultural Commissioner, and Mr. John L. Hayes, of Boston, were among the speakers at the opening and other public exercises of the occasion.

At a business meeting the following resolution was adopted unanimously:

Resolved, That the rules adopted at the convention in February, 1868, governing the members of the association in buying wool, are hereby rescinded, and members left free to purchase wool on its own merits.

A committee, of which Colonel Needham of Massachusetts was a member, was appointed to submit recommendations governing the purchase of wool.

Mr. W. G. Coulter delivered an address, in which he discussed the subject of wool manufacture, and adduced facts to show that the centre of the woolen interest should be west of the lakes. He also made a comparison of the relative cost and profits of woolen mills in Chicago and Lowell, and presented statistics showing that goods can be manufactured twenty-five per cent. cheaper at the West than at the East.

Mr. G. B. Stebbins, of Detroit gave some statistics of the growth of the wool manufacture in England and the United States, and spoke as follows of this interest at the West:

It is well that wool-growers and manufacturers meet here on common ground, for it is a recognition, too long delayed, of the unity of interest between farmer and manufacturer—the one providing the raw material and the food for the workers in the mills, the other adding by skill and labor to the beauty and value of that material, and consuming the products of the farm. These two divisions of the great army of honorable workers, closely linked as they are by ties of mutual help and dependence, may well blazon on their standards the motto, "United we stand, divided we fall." They are natural allies, destined to fight out the battle of life on the same line, and to win a common victory over poverty and ignorance.

With our great breadth of soil and varied climate, fitted for the production of every kind of wool, it is the "manifest destiny" of our woolgrowers to raise all that our manufacturers want, and not compel them to import over seventy million pounds a year, as at present. The wool clip of Great Britain, with her narrow domain and poorer soil, is some 260,000,000 pounds yearly, while ours is less than half as much. Surely we should go far beyond her; and, judging by "the signs of the times" in this wonderful exposition, that's what you men of the western farms mean to do. And it is a characteristic of the West to accomplish what is well and wisely begun.

Mr. J. L. Hayes, of Boston, would have the Eastern manufacturers make the richer class of goods, while the good and cheap are produced at the West. He said:

Now, in this country we have not began to do the work we ought to do. We are just on the borders of the great field of industry. Why in England, the manufacture of carding wool constitutes but a small portion; the manufacture of dress goods, or the combing wool industry, is the great work. There are two classes of manufactures—the carding wool and the combing wool. The carding wool for cloths, the combing wool for dress goods. The combing wool industry in England is very much larger than the other. The combing wool industry of France is three times as much as the carding industry. And in this country the combing wool industry is not over a tenth of the carding wool industry. But we have all the West open to us, and see what a field it will give us for the manufacture of carding wool—especially in this State. The wool corporations will be glad to do your work. You must furnish us with the wool—the right kind of wool. Now at this very time, wool, the best of Ohio wool, such as you raise, is worth 45 cents per pound. Yet the right kind of wool, such as might be raised here on these Western prairies, would be worth 75 cents; while the mutton would also be better and bring a higher price. See what an inducement there is to open that industry.

Gentlemen, in these remarks I simply intend to point out some improvements to you. Your duty as manufacturers is to push this carding industry forward. Drive the East into the combing wools. You, wool-growers, grow the combing and fine wools, that we may not be dependent upon England, and France and Germany for our dress goods. There is a vast field open for you, and to the energy and talent of the American people. There will be room enough.

The display of cloths, jeans, beavers, shawls, flannels, yarns, knit goods, and in short every description of woolen goods, is pronounced by the Chicago *Republican* a magnificent one in every sense of the word, whether it be regarded either in point of quantity or quality.

HORSES AND ROADS.

Dr. Holland, in a letter to the Springfield *Republican*, makes some important suggestions upon the subjects of roads. There is no doubt that the bad roads in this country subject our people to an enormous tax in horses and carriages, nor that it would be better economy in the end to make smooth and hard roads. Our roads in Eastern Massachusetts are probably as good as can be found in any part of the country, and yet it takes double the amount of horse power to draw a load to market from any point within twenty miles of Boston, that would be necessary if the roads were such as they might be made.

But if we do not have the roads we must put the expense into horses and horse-keeping, and the simple question is, into which shall we put the cost, roads or teams? Shall we have roads on which one horse can carry a ton of produce with ease, or roads requiring two horses to carry the same load?

A few years ago it was the fashion to build all roads straight from one point to another, going over all the intervening hills. This has cost an immense outlay in horse power, besides the increased cost of keeping such roads in repair, owing to the damage from washing. When will people learn that it is no further around a hill than over it? and that it requires less power to move a weight upon a level surface than to raise it into the air? We quote from the *Republican*:—

The point which I wish to impress upon my American reader is simply this, that the English horse employed in the streets of a city, or on the roads of the country, does twice as much work as the American horse similarly employed in America. This is the patent, undeniable fact. No man can fail to see it who has his eyes about him. How does he do it? Why does he do it? These are most important questions to an American.

Is the English horse better than the American? Not at all. Is he overworked? I have seen no evidence that he is. I have seen but one lame horse in London. The simple explanation is that the Englishman has invested in perfect and permanent roads what the American expends in perishable horses, that require to be fed. We are using today in the little town of Springfield, just twice as many horses as would be necessary to do its business if the roads all over the town were as good as Main street is from Ferry to Central. We are supporting hundreds of horses to drag loads through holes that ought to be filled, over sand that should be hardened, through mud that ought not to be permitted to exist. We have the misery of bad roads, and are actually or practically called upon to pay a premium for them. It would be demonstrably cheaper to have good roads than poor ones. It is so here. A road well built is easily kept in repair. A mile of good McAdamized road is more easily supported than a poor horse."

SUBSOILING.

This is attended with some labor and expense, and many farmers are deterred from practicing it on this account. But next to draining we believe it affords the best security for a crop, especially of corn and grass, in either a dry or wet season. It breaks through the hard pan, and allows the stagnant water to sink below the roots of the growing plants. In a dry season it allows the roots to penetrate deeply, and find the moisture in the mellow soil. A few years since a gentleman in Queens County, N. Y., wrote as follows, in the autumn, after a severe drought:—

"During the month of August I was invited by a friend to view his corn and take note of his method. The land had been subsoiled, and although the drought was severe, the leaves were a fine dark green, and the silk luxuriant, seeming scarcely to suffer from the great heat. In the adjoining lot, separated only by a rail fence, the stalk was drying up, and the ears small and poorly filled.

A spade was procured, a hole dug; about eight inches deep we came to a hard pan, and with considerable labor broke through the pan; below, the earth was dry as ashes. The subsoiled lot was then tried; the spade went down into a mellow soil, and at two spades depth, it was moist and mellow. No wonder his corn looked flourishing.

I have examined several other lots of corn. The land that was subsoiled all stood the drought well.

Early in July I visited two lots of grass. No. 1 about nine acres, the soil naturally good, with a loamy subsoil. One-half had been subsoiled. The timothy on this part was over four feet high, and made more than three tons of hay to the acre. The other half producing not more than half as much, all put down at the same time. Lot No. 2, twelve acres, with a gravelly subsoil. Four acres had been subsoiled. Four acres had been ploughed seven inches and the other four lightly ploughed. The subsoiled part produced over ten tons. The lot ploughed seven inches, a ton and a half to the acre, and the part poorly ploughed, very little but daisies and weeds."

Here is the result of actual experience in a severe drought. It is certainly worthy of consideration.

For the New England Farmer.

THE GARDEN IN SEPTEMBER.

Having labored and enjoyed the fruit of our labor, in part, up to the present time, it now becomes us to save up the remaining products of the garden, and to provide for the extension and continuance of the luxury of green vegetables, &c.

Weeds will continue to grow, but should never be allowed to interfere with other vegetation, as they surely will if allowed to grow at all. Where impracticable to use the hoe, they should be hand-pulled. Weeds allowed to form seed will pretty surely be capable of maturing the same by the aid of the juices of the stalk; and if matured will very likely be scattered to perpetuate their species and give us trouble in the future. The safest way is never to allow a weed to so far mature as to come into blossom.

Watch for early frosts, which, in this latitude, frequently come by the 10th of September; while often if that time is passed without frost, we go free till about the 20th. Some vegetables, with a little protection, may grow on for two or three weeks after the first "cold snap" is over.

During this month many of the products of the garden arrive at perfection, and all remaining ones are fast becoming ready to be harvested, requiring care that nothing goes to waste. Gather and take care of all surplus. If not needed for immediate use, store it properly, market, or distribute it among your less fortunate neighbors, who would be glad to receive it. Leave nothing to decay, merely because it is in abundance. If nothing else can be done with it, feed it to the stock or put it in the compost heap.

Beans.—The earlier sorts of pole beans will now be ripening. Save seed from the best and earliest. Limas are now plenty,—save some of the earliest for seed, and, with the others, lay in a dry, airy place, to cure. Before hard frosts, pick all green ones; shell and dry for winter use. Pick the late string beans before they become tough; pickle or can for future use.

Cabbage.—Late planted will need frequent hoeings. Ordinary frosts and cool nights will not stop their growing, but cause them to harden their heads against a more severe freeze. Seed may be sown this month, where it is desirable to winter over in cold frames for early spring planting, greens, &c.

Celery.—When the plants have attained a height of six to ten inches, the earthing up process should commence; and in earthing, too much care cannot be used. A bungler will often spoil half the crop by breaking the leaves, getting dirt into the crowns of the plants, &c. Earthing up will need repeating once in eight or ten days, according as the plants grow. At the first earthing, close the leaves carefully together with the hands, and while you hold them in position with one hand, draw the dirt up and make it firm with the other, close against the plants. This will hold them in position. Be very careful not to break any leaves, or let any dirt get to the crowns; and never earth up except when both soil and plants are dry, or decay is sure.

Corn.—Save and dry for winter use. Canning is so risky that few like to incur the trouble and risk. Last year directions came out in several papers for salting the green corn in the husk, by packing down in salt in a barrel. A friend informed me that he tried it last season, and that on taking up some and soaking it in fresh water for some days, and then boiling it and preparing it daintily, none of his family could eat it; for, said he, besides being salted, it was *salt*. He tried the pigs with some of it freshened, but they ran away from it, squealing. Save of the earliest crop a sufficiency of the finest, earliest ears, for seed; strip off the husks, retaining two or three inner ones, and braid in tresses and hang in a dry, airy place. Cut and save the stalks for the cattle, or feed them out green.

Cucumbers.—Gather the pickles by going over the vines every day and gathering all sizable ones; cutting them with scissors or a sharp knife, and leave half an inch of stem on each; using care not to break or tear the vines. Ripe ones may be gathered and the seed scraped out and left to ferment and work clear in a pail or tub, and then wash clean, dry and save. Sweet pickles may be made of those nearly ripe.

Manure.—Remember that now is the time to add to the compost heap for next year. Such are the laws of nature, that after the soil has produced a crop and it is removed, the elements of the crop must be replaced, or the soil will eventually refuse to yield her increase; and upon decayed animal and vegetable matter must we largely depend to replace these elements.

Melons.—Pick as soon as ripe, which may be known by the stem parting readily from the melon. Watermelons are sounded by rapping them with the fingers,—a dead sound indicating ripeness. Save the seeds of all the best specimens.

Parsley.—If seed be sown this month the young plants may be kept over by covering with straw or litter, and be ready early in spring.

Squash.—The summer varieties have ceased producing eatable squash. Pick and save those allowed to ripen for seed; pull up the vines, cut them and add to the compost heap. The Marrow and Hubbard may be commenced upon for use, as the Hubbard is quite good, even before it is ripe.

Tomatoes.—These will be in their greatest prime the fore part of the month. Bottle a full supply, and make catsup. Eat them freely,—they are healthy, either cooked or

raw. A little protection from early frost will add some weeks to the season.

Grapes.—Early varieties will ripen this month. Pick them with care, using shears or a sharp knife to cut the stem; handle with care, and do not rub off the bloom, if to be kept for some days, or marketed.

Blackberries and Raspberries, after yielding their crop of fruit, should have the old canes cut out and all superfluous shoots removed, leaving only one or two for next year's fruiting. Wm. H. White.

South Windsor, Conn., 1868.

For the New England Farmer.

SUMMER FALLOWING.

Where a field which was originally good soil, is so much reduced, or where the soil is naturally so light, sandy, and poor as to produce hardly grass enough to be worth mowing, and you have no dressing to spare for it, and you do not wish to turn it into pasturage, what should be done with the field?

This important question remains unsolved. It has occupied the minds of farmers since I was a boy. Every year all the agricultural papers in the land are beset with the inquiry: How shall I make my land productive without barn-yard manure, which I have not got, or without artificial dressing, which I cannot afford to buy? The cost of artificial dressing, when carried back into the interior of the country, with the freight added to first cost, is, nearly all farmers say, too expensive. We can buy gold too dear.

I propose, then, that farmers in New England should raise less grain, and more grass. Grass should be the chief crop. Grass is the great source of manure,—of dressing which never fails to agree with any and all kinds of soil. Grass is milk, butter, cheese, beef, mutton. It is the fuel that generates the power which drives the plough, the reaper and mower, and carries us along the highway, for profit or pleasure.

The South and West may get along with grain and corn fodder; but here in New Englaud, grass is power, is life, and the cultivation of it is imperative. Grass should be as much a *specialty* here, as grain is at the West. If this is so, let us see what should be done with the worn-out mowing fields, which are so common in the east.

Almost every farmer in New England has a larger or smaller patch in his mowing field, which, if allowed to lay fallow one, two, or three years, and ploughed every year, would improve by the operation enough to pay for the labor and loss of use; but I never yet saw a farmer that could resist the temptation to put oats or some kind of grain on to land thus lying unproductive. Such a crop of course takes the cream of the land, and leaves for the grass seed only the skim milk of the soil. The seed to be sown upon such fallow should be grass seed *alone;* and then the grass would pay all the bills. A good crop of grass can be grown from the seed the first year, if sowed *alone* in April or May. Then, why should farmers persist in the bad practice of sowing grain with grass seed? It is an error, if not something worse.

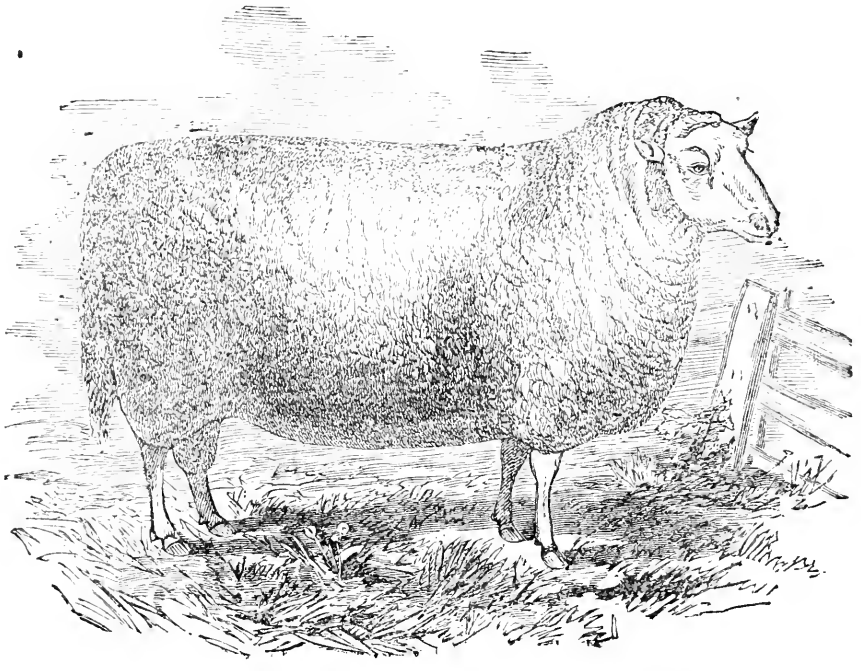
The farmers in Maryland and Virginia generally leave one portion of their fields turned out to rest every year, and rotate their crops of tobacco, corn, wheat or oats. They say that the action of the rain and air adds fertility to the soil. Some may object that two or three years thus required to bring such fields into productiveness, is a long time. But how can it be done quicker without manures? Hoed land is *always* improving, while swarded land remains the same from year to year; or, if mowed, there will be at least no improvement. Clover might be sowed and plowed in to hasten productiveness. So might manure be bought for the same purpose. But my object in writing this is not to show what will enrich ground the fastest, but to decide what shall be done with worn out fields, to bring them to fertility in the cheapest way.

I believe a three years' rest for such poor, worn-out lands in our old mowing fields, to be ploughed once each year, in August, would show a profit on our ledger account the fourth year, if put in grass alone. Who will try the experiment on some portion of his field that is now so poor as to be worthless for mowing? I question if there be five farmers in New England who would hold out to fallow his ground three years, while there are probably hundreds who will agree with me that the theory is sound. Farmers are content to pay taxes on a large, smooth, worn-out, mowing field all their lives, but hesitate to try *long* experiments to find a better mode of farming.

C. S. Weld.

Olamon, Penobscot Co., Me., August 1, 1868.

Remarks.—In England, Summer fallowing is much more generally practiced than in this country, and even there it is seldom applied to any soil but the heaviest clay land, and we understand that "green fallowing," that is, hoed crops, are rapidly gaining on the old plan of "bare-fallow." Land is seldom summer-fallowed more than one season. The object of both systems is to destroy the weeds and prepare the soil for the ensuing season's crop. To effect this, frequent cultivation is necessary. One ploughing in the season would hardly suffice to keep down the weeds. If our correspondent had illustrated his theory by some practical results of the benefit of a three years' fallow, he would have added greatly to the value of his communication.



TEXEL OR MOUTON FLANDRIN RAM.

Early in the seventeenth century the long-legged African or Guinea sheep were introduced into Europe by the Dutch, and distributed among the islands near the Texel and in Gronigen and Friesland, where they were crossed with the common sheep of the country, producing the animal known as the "Texel" or "Mouton Flandrin" breed of sheep. As long ago as 1763, a French writer in a work published by royal authority says "its walk is firm, its deportment is noble, its form well proportioned in all its parts, announcing a good constitution and a healthy temperament, and exempt from the maladies so common to other breeds. Its wool is white without spot; it is contented everywhere—it becomes a citizen of the place it inhabits." Youatt, in 1857, speaks of them as being of large size, and having considerable resemblance to the British or Irish long-wooled breeds, but more prolific, and producing long fine wool, which can be appropriated to valuable purposes by the manufacturer.

Our cut represents one of the animals of this breed imported and owned by Winthrop W. Chenery, Belmont, Mass., and which has taken prizes at the Fairs of the New England and other agricultural societies. He claims that the breed at the present time is a remarkably beautiful, compact, hardy and prolific race of animals, possessing quiet and contented dispositions, readily accommodating themselves to change of soil and climate, producing heavy fleeces of long and tolerably fine wool, mutton of superior quality, and lambs which, at four months of age, attain a weight of from seventy to eighty pounds.

Mr. Chenery's importation consisted of one ram and seven ewes when put on board ship, but on arriving at Boston, after a voyage of eighty-one days, the flock was found to have increased to seventeen animals, nine lambs having been produced; affording strong evidence of the good qualities of the ewes as nurses, as well as of the hardiness of the breed.

HOEING.

What are the Principles Involved in Hoeing, or Stirring the Soil, and How and When should it be Done?

ONE of the most important operations to be performed on the farm, is the thorough cultivation of the surface soil on all crops that require the use of the hoe. In England, and to some extent in parts of our own country, the "hoed crops" include wheat and other grains, when sowed in drills. *Drainage*, however, where necessary, must precede all other operations.

Perhaps the word *cultivation* would afford a better idea of what we are wishing to learn, than the word *hoeing*, as that word includes all the various means used to bring the surface into a fine and porous form.

Ploughing is the first step toward this cultivation, and renders all the subsequent labor comparatively easy. Ten or fifteen years ago, deep ploughing was supposed to be, not only judicious, but important; but according to the discussions to which we listened, during the recent session of the Massachusetts State Board of Agriculture, in Concord, *deep* ploughing is now considered injurious! A distinguished writer, and an eminently practical man, says the statement that the *deeper* and the *finer* the soil is rendered, the more productive it will become, is in every respect true, and which no single instance will contradict."

This deepening, however, must be *gradual*, and when so conducted, different layers being brought from time to time to atmospheric influences, what was at first a soil of four or five inches in depth, becomes one of ten or twelve, and is black, fine and porous, and in the condition to become richer and richer, under a fair treatment, every year.

This is the first step in a judicious cultivation; but is a rude and coarse one, and if stopped there on our soils, would scarcely repay the cost of the operation. We will give only a single illustration of the benefit of *deep* ploughing.

A good farmer had a considerable field which had been cultivated at ordinary depths. He laid it out in equal squares, and ploughed it at all depths from five to ten inches, on the different lands, and sowed oats evenly over the whole. The crop on the five-inch soil was very poor; on the six-inch rather better; on the seven-inch better still, and on the ten-inch soil it was as fine as ever grew; it had stiff straw and broad leaves, while the grain was also much better than on the remainder of the field.

The first duty of the farmer, then, in preparing his soil for seeds and crops, is to look at its *mechanical* condition. This is the basis and ground-work of all after labor; just what the bricks and mortar are to the mason, lumber to the carpenter, fire and iron to the blacksmith, knowledge of laws to the lawyer, of gospel to the minister, and of the nature of the human system, and of the drugs which he uses, to the physician.

He must look to this, because the soil is to hold the roots of his plants in position, and by its sponge-like action hold water for their use.

It must be in a condition to *absorb moisture from the atmosphere* to supply the demand of plants, and absorb heat from the sun's rays to make them grow.

It must supply them with a part of their food by admitting the air to circulate among their roots. The oxygen of the air will make the minerals in the soil available to their use.

Three things, then, are just as necessary to the farmer in preparing his soil to produce the most profitable crop, as timber and nails are necessary to the carpenter in building a house.

1. To make rain water pass *through* the soil, instead of being evaporated from the surface.

2. To make the soil deep and fine.

3. To make it capable of absorbing atmospheric fertilizers, by which it will become dark, fine and rich.

Such a soil will prevent drought.

Because when rain falls it will soak into the ground instead of running off. It permeates every part of the soil, and parts with the *heat, ammonia* and other fertilizing agents which it contains.

It absorbs the dews and the moisture contained in the atmosphere. The air is full of water in the form of vapor. More than 1300 gallons have been found to evaporate from a single acre in twelve hours. This air rests with a pressure of fifteen pounds to every

square inch of the surface of the field, and if the surface is porous it is continually receiving this vapor and passing it along among the particles of soil, *watering* and *manuring* them.

Watering them, because when it gets down where the soil is cooler than the vapor, the vapor is condensed into real water,—and *manuring* them, because the soil abstracts the *manures* which the air contains, such as ammonia, carbonic acid and oxygen, and keeps them in store for the use of the roots of plants as their needs require.

If water stands upon the land it is because the surface is hard and compact, and it gradually disappears by evaporation, which cools the soil and is of very great injury to its powers of producing crops. When the evaporation of water is rapidly going on by the assistance of sun and wind, a large quantity of heat is abstracted and the soil becomes cold and plants will not grow. When water is sprinkled on the floor it cools the room. When a patient with fever is bathed with water, it is to carry off the heat of the body, and standing water on the land operates upon the same principle. This is another reason why the surface should be kept fine and open. It ought to be remembered that when water assumes the form of vapor, it takes up 1723 times as much *heat* as it contained while a liquid.

Such, then, is the condition in which the soil should be, in order to receive the greatest benefit from the manures which we supply, and the atmospheric manures, which the heavens are kind enough to furnish to the soil, if we put it in order to receive them.

We have said that *ammonia*, *carbonic acid* and *oxygen* are atmospheric fertilizers. Let us see what they will do where the soil is prepared for them. Ammonia reaches the soil in two ways; from the air circulating through the soil, or by rains carried to the earth. It is the most important of all organic manures in the soil. Clayey, or peaty soils, retain it the best. Soils that are nearly pure sand, will allow it to evaporate immediately after a shower, and therefore need to be dressed with clay, peat, and a portion of charcoal dust. Plants do not, probably appropriate *ammonia* by their leaves.

Carbonic acid is received from the atmosphere both by the leaves and roots of plants. If there is caustic lime in the soil, it unites with it and makes it milder and finer. It is absorbed by the water in the soil, and gives it the power of dissolving many more substances than it would do without the carbonic acid.

Oxygen oxidizes or rusts some of the constituents of the soil, and prepares them for the uses of plants.

If there are acids in the soil, the oxygen will prepare some of the mineral matters in the soil to unite with and neutralize them.

The next agent is water, and may be considered an atmospheric manure, as it is received from the air in the form of rain or dew, and is charged with fertilizing substances.

Atmospheric manures cost nothing, and are of great value. In the course of nature they are supplied to the soil without the immediate attention of the farmer, but it is not beyond his power to manage them in such a manner as to arrest them in greater quantity.

But we hoe, also, to kill weeds, because they occupy the soil to the disadvantage of crops; because they exclude light and heat from cultivated plants, and thus interfere with their growth; because they take up mineral and other matters from the soil, thus depriving crops of their use,—and because, if allowed to perfect themselves, their hardy nature and persistent growth would occupy the land to the exclusion of all other plants.

By frequent *hoeing* or *stirring* of the soil we keep it in its best *chemical* condition, and that is the condition which will produce the most abundant and the most profitable crops.

The *how* and *when* this should be done, we will leave to others to say.

PROF. VILLE'S NEW SYSTEM.

Many farmers have little faith in science. The blunders and failures of those book-wise men who have attempted to analyze soils, to compound manures, and to direct the operations of the farm generally, are the groundwork of this scepticism. But are scientific men the only ones that blunder and fail? How has it been with the inventors and makers of agricultural implements? Did not the first horse-rakes—"man-killers" as they were called,—the first mowing machines, reapers, and many other labor-saving contrivances, now in general use, work their way to public favor through a long course of failures, and a still longer course of improvements? Science,

machinery and infants creep before they walk. The Atlantic telegraph is now in daily use, and the people of Boston have the news from London as soon as those who read the *Daily Times*. But how long is it since the Atlantic cable was a magnificent failure?

Prof. Liebig's mineral theory, so satisfactory in the crucible of the chemist, failed utterly when tested by the English farmer. But what of it? Does the failure of his compound prove the worthlessness of lime, potash, magnesia, ashes, phosphates, and the other ingredients of his "complete manure?" Certainly not. It simply shows he left a screw loose somewhere, which he or somebody else may tighten up. Failures should stimulate, not discourage. The good Book says that "it is better to go to the house of mourning than to the house of feasting." And how often do failures prove blessings, and successes turn out to be curses.

We have fallen into this train of thought with a copy of the second edition of the Address delivered before the Bedford, N. H., Farmers' Club, last winter, by John A. Riddle, Esq., of Manchester, which we have just closed, lying before us. In this address Mr. Riddle furnishes an account of a series of experiments made in France by Prof. Ville, a learned Frenchman, and of the composition of a manure based upon the results of these experiments. The professor claims that he arrived at his conclusions or facts by using the plant itself as the agent by which he analyzed the soil and the manures which were applied to it. But those who wish for further knowledge of a system by which an English writer claims that "the phantom of sterility is laid," will read this little pamphlet, which, in addition to the matter in the first edition, contains the views of Levi Bartlett, Esq., of Warner, N. H., on the subject, and also a statement by G. W. Wilson, of Providence, R. I., in relation to the improvement of light sandy soils.

Without expressing any opinion as to the value of Prof. Ville's "Complete Manure," we may say that we think every farmer will find Mr. Riddle's pamphlet both instructive and suggestive.

—Mr. Lewis, of Schuyler, N. Y., stated at a meeting of the Little Falls Farmers' Club that he had a meadow which by top dressing, produced twenty different kinds of grasses, and he would not have it ploughed for $100 per acre.

For the New England Farmer.

RURAL ARCHITECTURE.

BY A. B. B.

Much has been written on the subject of Rural Architure, and much more needs to be, to inspire a love for rural embellishment and a true taste for the beautiful. The ability to see and appreciate the objects of beauty which every where abound in the country, is a source of constant and pure enjoyment. The elements of beauty are cheap and abundant, while those of fashion and custom or art are expensive and often offensive.

The people of New England are more at fault on the subject of Rural Architecture than almost any other, and yet it is one which nearly affects our daily life, and in great measure, our characters and habits. Some may say they "don't care what they live in, if it is only comfortable and convenient." Comfort and convenience are indeed important, but this life does not consist, even mainly, in the abundance of material comforts and conveniences. The spirit that "don't care for looks" is a degrading and debasing one every where. From this comes the coarse vulgarity which degrades the country. A wholesome pride with intelligence and an ability to appreciate the beautiful around us, will place the country in advance of the city, in "all that exalts and embellishes civilized life."

In ninety-nine cases out of every hundred, the homes in the country are devoid of taste and attractiveness, not from lack of money expended, but from erroneous ideas of what is fit and proper. Every one of any pretensions to intelligence, knows that beauty, in dress, depends more upon harmony in colors and complexion, than the richness of the material or even the fashion. There is a beauty for the city, and a beauty for the country; what is fit and proper for the former, may be out of place in the latter. Many a man who builds a house in the country, takes his model from the city or village, which is as much out of place as the garments of a city gentleman would be on a farmer at work in the field, or a rich cashmere shawl over the square shoulders and tawdry dress of "foreign help," or the dress of a city belle on the faultless form of the country beauty, whose unadorned attractions surpass the power of art.

Let us draw two pictures,—one of the most prevalent style of farm houses as they are, and one such as they might be, and see which is the most attractive. The first is a "square-as-a-brick," upright, story-and-a-half or two story end-to-the-road building, clapboarded and painted a dazzling white, possibly with green blinds, and, if extra-stylish, with a piazza in front. From this, or, if this be wanting, from the front corners of the house, a picket fence, tall and white, extends to the road, the distance of a few yards, and along in front of the house, constituting the front

yard. In each corner of this, is perhaps a tree, or perhaps a row of firs in front, with their branches trimmed up three or four feet from the ground. The out-buildings have the same hard, square, matter-of-fact appearance. A puerile taste may see something to admire in the clear white of the house and the contrast of its green blinds, if it have any.

Now look at this bit of landscape by the road side. There comes sloping down a sunny hill-side on which, midway from the top, is a gnarled oak with spreading branches, and here and there are aged cedars and clumps of trees and shrubs unspoiled by the hand of art. At the foot of the hill is a level space; on the other side of this, is a rocky knoll of huge riven and splintered boulders, amid which grow trees, shrubs and clambering vines. In the rear is an open field, bounded by a brook, beyond which rises a wooded eminence, whose trees and shrubs form a most agreeable background, with almost every hue and shade of green in summer, and of crimson, orange and gold in autumn. Study the scene a few moments, and take in its simple, yet mysterious beauty. You may look and look again, and not tire of it. Familiarity only makes it the lovelier.

Now suppose we set a cottage, the simplest possible, to begin with, on the level space between the foot of the hill and the rocky knoll, with a steep, Gothic roof, for this is both picturesque and roomy. On this we will have neither clapboards nor paint, but cover with rough, solid boards, six or eight inches wide, matched and thoroughly nailed. Over the door we will make a rustic porch, with a seat on either side, and over each of the windows a rustic trellis for vines and running roses, and leave all for nature to give a color in harmony with its surroundings. A little back of the cottage, in the midst of that thicket of cedars and shrubs which will serve to protect it from the cold wintry blast, we will place a barn to correspond in style with the house, and near the rocky knoll, and within the shadow of the trees and vines, a rustic arbor. For a passage way from the road, for carriages, we will take out a part of the stone wall, and at each end of the gap put up a substantial unhewn post, and here hang a rustic gate, and directly in front of the cottage door, which may be from six to ten rods from the road, we will place a similar gate, but less in size, for foot travellers, and this completes the picture.

Let the two be compared and see which is the most attractive and beautiful. The first is expensive, the latter cheap. Is it objected that the cottage is too small for a *farm* house? It may be increased to any size and almost any picturesque form, and as the great expense of paint which, in the first case, is to be renewed every few years, is saved, the greater convenience may be afforded within. Another material which abounds every where in New England, may be used for building with greater durability and even more pleasing effect than boards. I mean the stones, as they are taken from the ground or surface,—cobble or rubble stones, if you please. An objection is made to these, that a house made of them is cold and damp, but if properly made, the walls of a stone house are as dry and pleasant as one of wood.

Randolph, Mass., 1868.

REMARKS.—We cannot agree with our correspondent in some of his ideas of taste and beauty. We confess to a liking for his "square-as-a-brick," "clapboarded," "dazzling white" building, though we might prefer a light cream color, with "green blinds, a piazza and shade trees," and a dislike of his fanciful cottage, with "steep Gothic roof," "covered with rough solid boards and left without paint for nature to color in harmony with its surroundings." Think of sleeping in a room immediately under such a "picturesque" roof after the fierce rays of a July sun have rested all day on its roomy surface! We have tried it so often that an involuntary "Good Lord, deliver us" springs up at the very sight or mention of a steep, picturesque and roomy Gothic roof. And then as to color, we feel like moving a vote of thanks to the proprietors of the old South Church every time we go up or down Washington Street, for the lighter shade and more cheerful look which a new coat of paint has given to that venerable structure. We rejoice also to see in every direction unmistakable evidence that the taste for the dark and dismal in the color of dwellings is passing away.

For the New England Farmer.

LIGHTNING RODS AND FUMIGATOR.

Do you know of any facts proving lightning rods of any value? If you do not, is there no way of compiling statistics having a look one way or the other, for, or against them?

A third and, it is to be hoped, the last gang of builders of these rods, is now crawling over our hills, and through our valleys, and getting the usual amount of money from the farmers, who are in doubt about the whole subject, and too easily victimized by the artful conductor of these speculations.

Some ten years ago, the whole country, to the farthest west, was canvassed and bled by those carrying iron rods and insulators. Three or four years ago, the thing was repeated with twisted copper and no insulators.

Now they have got a new twist, and perhaps have twisted both materials together, call-

ing their machinery galvano-electric conductors, or magnetics. Now all this has ever looked like humbug! If it is not, let the people get some facts, on which to found an opinion. Are there a thousand buildings in a country with rods, pair them off with a thousand with none. Let No. 1, with a conductor be paired with the nearest building to it with none, and continue till the odd and even numbers count up enough to give us a little history of lightning work for a few years, in the rural districts.

Extremes are said to meet. They sometimes follow each other. The lightning rod man in his covered carriage, was followed by the "Fumigator" man in his top buggy. I am so fortunate as to live on the summit of a high hill; consequently many a weary horse and hungry traveller, crave rest and refreshment when they get to my poor tip-top house. The fumigator, I had got in the spring from one of these benevolent patent-pilgrims for a dinner and sheep's pelt. The sheep breeders of Vermont had "examined and approved." Ah, yes! But these men don't breed the things that eat up sheep. By my own negligence, I had a few sheep with ticks. I applied the fumigator and it killed every tick that got smoked; and I went over my lamb in some twenty or twenty-five minutes, with a man to hold it. Better expend three dollars to clear ticks from the flock, than pay that for the machine and break your back smoking them out.

But the wonderful instrument that gets itself pictured and painted in so many papers, is death on mosquitoes. Well, I charged upon them the other evening, very much as Uncle Toby did on his sod forts. I marched and counter-marched through the house. The smoke of the attack waxed thick. The mosquitoes went up, and all the females of the family went to bed narcotized, swooning with tobacco *tremens*. It is true, a little sugar on live coals will do just as well, but there is no patent on that method.

The virtues of the fumigator are too numerous to mention. Only one more can be named here. It is death on bedbugs. A near neighbor wished to try it on them. Although according to the bond I am not allowed to lend or use the instrument off my own premises, yet I dared to break it just this one time. To make assurance doubly sure, Miss Nabor got one of the enemy prisoner and set him up as a target. She first assaulted him in rear. Instead of surrendering, he at once commenced a masterly retreat. She then made a flank movement, and fired both on his right and left, but with no better success. Finally, our valiant friend filed to the front and poured discharges point blank into the enemy's face and eyes. It was all in vain, so far as Mr. Bedbug was concerned. But to the fumigatress by this time the world and the things therein contained, began to gyrate very rapidly, and she had only time to give the villain the coup de grace with her shoe, before giving herself into the hands of her friends, "smoked out."

Mercury about 86 degrees above, and the summer has made up already for spring's delinquencies.

C. N. Andrews.

Chelsea, Vt., July 4, 1868.

REV. CHAUNCEY E. GOODRICH.

The name of this gentleman has become so familiar to the readers of agricultural papers and especially to those who cultivate any of the many varieties which he originated, that the following tribute to his memory by Alex. Hyde, Esq., will prove generally interesting. For some sixteen years Mr. Goodrich studied the subject carefully, and has left us a rich legacy in the results of his investigations and experiments. We copy from an article in the *American Journal of Horticulture*:—

From some constitutional idiosyncrasy, Mr. Goodrich was unable to eat potatoes himself; which fact makes his persevering labors in studying the habits of the plant, and originating new varieties, all the more remarkable. As early as 1846, his attention was called to the potato-disease. The result of his investigations was the conclusion, that the causes of the disease of this semi-tropical plant were the changes and intensities of the weather, the character of the soil, and the artificial mode of culture. The constitution of the potato thus became impaired, and transmitted its want of vigor to succeeding generations, each becoming more and more enfeebled. In 1848, he began importing from South America, the original home of the potato, some of the native tubers, and, from the seed of these, began reprodncing new varieties. In all, he originated some fifteen thousand seedlings. These he divided into seventy-four distinct families. After four or five years' trial of the different seedlings, he rejected those whose health, yield, and habits he did not like. Mr. G. died in the midst of his experiments, but not until he had established in public favor the Garnet Chili, Early Goodrich, Calico, Gleason, and Harrison varieties, which now stand at the head of the list with all well-posted and successful cultivators. These varieties can be planted with the expectation, that, under ordinary circumstances, they will escape disease, and yield remunerative crops of excellent quality. They will doubtless degenerate in the course of time, and an occasional reproduction from seed of a healthy parentage will be necessary. The degeneracy may be retarded, if not prevented, by a judicious selection of soil, and a cultivation in accordance with the principles of vegetable pathology.

We notice that some of our horticultural writers have suggested the idea of extending to the labors, or rather productions, of such men as Mr. Goodrich the protection afforded to authors by the law of copy-right, and to inventors by the patent law, and that very plausible arguments are advanced for such a provision. But as yet we think that farmers are hardly prepared for "patent potatoes,"

patent grapes, strawberries, wheat, rye, barley, oats, &c., or for patent horses, cattle, sheep, pigs, and poultry. But the question is already before the people, and very likely Congress will be called upon to take some action on the subject.

DOES FARMING PAY?

Having seen a number of inquiries in relation to the above subject, I take the liberty to give you an item that will show what a young man in this place has done.

He was born and brought up on a farm, and learned the trade from his father, who was called a thorough going farmer. This man started for himself in 1861, with $275 in money, which was all he was worth in the world. He bought thirty-six acres of old pasture land for $1025; bought his team and went to work.

He built a good substantial house and barn, with cellar under the whole, 32 by fifty feet, for the making and storing of manure. His neighbors said—"Do not make a cellar; if you do, you will lose all your stock with the cattle disease, and it will ruin the neighborhood as well as yourself." But he heeded not their advice, and his cellar has paid better than any other investment on his farm, unless it is underdrains of stone, which have been put in to the amout of over one mile. Neighbors shook their heads and said—"He will starve on that place;" but, by perseverance and plenty of work, he has made great improvements, and has also lived on the place.

He is a bachelor, and, of course, hires his help in the house as well as out doors when necessary, and does manage to make both ends meet. He keeps an account of all his transactions, and would be able to tell, if asked, what it had cost him to make a pound of pork in more than one instance; also, if there is any profit in the raising of poultry in large or small lots. An inventory is taken at the close of each year, and then he can tell at once what the profits and expenses have been for the past year, and this will help to form plans for next year with better results than if it were all mere guess work.

His farm was rented one year, while he enlisted in the army, but it was no improvement to the farm, or his pocket either, for his health was so poor that he was not able to do any work for more than a year after his return.

The past season he refused an offer of $4200 for his farm and his out lands (which have been bought by piecemeal since his first purchase of the farm,) will pay all his debts, and the personal property will bring at auction from $1200 to $1500 more, making over $5000 for five years' work, which I think is doing very well on a farm in this country. Now if one man can do this on a farm without a wife to help him over the rough road of life, and with all the drawbacks that a young man without money has to encounter, why cannot another do the same? It requires tact, energy, and industry to achieve success on a farm as well as in other vocations in life.—*D. T., West Springfield, Mass., in Country Gent.*

ASSORTING FRUIT.

Dr. Claggett of St. Louis said, "I wish I could impress upon fruit-growers the importance and profit of assorting fruit. Fruit will not only bring better prices if assorted, but depreciation of prices will be prevented. Too few shippers assort their fruit; such as do, get from one-third to one-half more for it than those who do not do so. Full one-third of the fruit found in packages had better have been given to the pigs. The market is overrun with packages of inferior fruit. We who are dealers have to assort it. If one-third of the fruit sent to this market were left at home, the other two-thirds would bring more money than the whole does now. It is every man's interest to leave imperfect fruit at home; if he does not, the buyer has to throw fully one-third of it away. If a dealer knows a shipper has a reputation for assorting his fruit, he can recommend his packages confidently without examination; but, so far as nine-tenths of the packages received from shippers are concerned, dealers know nothing about them that will warrant them in asserting the excellence of the fruit to a customer until it has been examined. I wish every shipper knew the value to him of a good reputation,—of a reputation that will sell fruit-packages bearing his brand at the highest market-price, without examination. Every fruit-grower should aim to get such a reputation."—*Am. Pomological Soc.*

THE CURRANT WORM.

About the middle of May they begin to appear on the lower leaves near the ground, and what afterward proves to be many hundreds may be found on a single leaf. They travel slowly until they attain considerable size, which gives ample time to destroy them before they have done much damage. By the 1st of June small black skins, with the worm's head attached, may be seen on the ends of the branches, and in a very few days no worms are to be seen. I have seen hundreds of worms on the top of a bush in the evening, and in the morning each one had left behind it its skin, and disappeared. Whether in one night the larva changes into a fly, unlike other insects, or whether it goes through the regular transforming process of a chrysalis' life in a cocoon, in the earth beneath the bush, I have not ascertained, but intend to remove a bush, sift the soil, and learn the facts, if possible. I placed three sizes of the worms, from one-third to fully grown, in a glass vessel, and put in with them some currant leaves:

each of the sizes immediately concealed themselves at the bottom of the glass under a cocoon. This leads me to think that they enter the earth as above conjectured; but why they should leave their old suits behind them on the ends of the branches seems a mystery. It is about two weeks since the larvæ were placed in the vessel, and it is now swarming with beautiful yellow flies, in size and shape somewhat similar to the house-fly, a little more slender, with large abdomen, and prepared to deposit an innumerable number of eggs, which they are now fastening upon leaves put in the glass for this purpose. We may therefore suppose that the eggs of the new installment are already upon the foliage, and I am watching daily for their re-appearance, which at the farthest will not be longer than a week, as they have been gone from the bushes two weeks; thus they appear and disappear three times during the season, and each time they come in greater numbers.

The bushes should not be allowed to touch each other; if they do, the larvæ will continue to eat and grow until they get to be an inch long. They do not in any case leave one bush and creep on the ground to another, but always leave when they reach the top, not being particular about their size or age, if the branches of another bush do not intermingle. I have had many bushes uninjured, with others standing on either side entirely defoliated, when they did not touch each other.—*A. J. Caywood, in New York Horticulturist.*

CHEMISTRY OF HAY MAKING.

The succulent grasses that clothe our fields with verdure are very insignificant vegetable growths in contrast with the forest trees whose huge trunks rise up from the hillside and the plain, and darken, with their dense foliage, unnumbered acres of our fertile lands. In the tiny stalk and leaves of the timothy, clover, red-top, &c., there are rich juices circulating, which have been drawn from the breast of mother earth. These juices are the very pabulum of life, and from them, indirectly, we draw our sustenance. If we subject to chemical analysis these grasses, we shall find them to contain all the essential elements of animal growth. But it is not our intention to follow this line of thought, however pleasing or attractive it may be. We wish to make a few brief observations upon the chemistry of curing hay.

Curing hay is, chemically speaking, a distillatory or evaporative process. It is doing with succulent vegetable substances, what the salt-maker does with his saline waters, or the sugar-maker with his saccharine juices. The object is to drive off surplus waters, which hold the valuable principles in solution; to get rid of worthless and interfering substances, and retain all the desirable ones. The sugar-maker may apply too intense heat or direct flame to his evaporating pans, and burn or spoil his products; so the farmer may heat his hay too much in the blazing rays of the sun, and greatly injure the rich nutrient principles upon which its value depends. Certain it is, we cannot control all the conditions upon which the production of perfectly cured hay depends; but we can control them much more decidedly than we do. A ton of well-cured or properly dried hay is worth more in the mow than two tons of that which is cut at an improper time and cured in an imperfect manner.

Grass is not generally cut and cured early enough in the season. The sugar, the gluten, and starch, are in the best condition for preserving, before the ripening of the seed commences. The great end and aim of plant life is to reproduce itself,—to perfect its seed. The periods of inflorescence and seed-bearing are attended with a large expenditure of costly material. The development of the flower to a blade of timothy, is a very different affair to that of one of the green leaves. The former contributes nothing to the general maintenance of the plant; the latter is mouth, stomach, and lung. Just previous to flowering, the vegetative power is most active, and large quantities of starch are being stored up ready for use when the pressing occasion arrives to form the seed. A tremendous struggle takes place in the plant, when the nutritive principle is dissolved by the aid of diastase, and transferred to the seed. As soon as it is over, signs of exhaustion appear, and the plant dies. The time to cut grass is before this culminating point is reached, when the nutritive principle pervades every part of the stalk and leaf.

Grass is generally dried too much. The ligneous part becomes hard and tough, and animals do not like it any better than we like over-baked bread. The nutritive portions are not so readily eliminated, and the waste is much greater in passing through the assimilating organs. It is not necessary to dry hay so thoroughly, in order to preserve it from putrefactive change in the mow. If the weather is clear and warm, it may safely be stored the same day it is cut, provided it is not cut in the early morning, while loaded with dew. If grass could be mown after the dew is gone, and spread upon a dry parcel of ground, four or five hours' exposure to sun and air will fit it for the barn. All moisture proceeding from dew or rain must be removed. Hay seldom or never spoils from fermentation of its own juices, unless the conditions under which it is stored are extremely unfavorable. The process of drying or curing in the mow proceeds slowly and advantageously if but a part of the natural moisture is evaporated in the open air. A pound of hay well dried in the mow, is much better than an equal amount dried in the fierce rays of the sun.

If farmers will observe more carefully, and learn a few simple facts in regard to the important labor of hay-making, they can secure

the crop more expeditiously, at less expense, and obtain it of far better quality. Let them *venture* more. Don't be afraid of spoiling hay by storing, if partially cured, and not wet from rain or dew. These suggestions are drawn from experience, and are worthy of regard.—*Dr. Nichols' Jour. of Chemistry.*

DUTCH BULBS.

The Dutch have long been celebrated for their cultivation of bulbous roots, especially tulips and hyacinths; and from March till June the district around Haarlem is carpeted with a succession of beautiful flowers, beginning with crocuses, and ending with ranunculi. The sandy soil of the district, which is derived from the dunes, is highly favorable to bulb-culture; indeed, some of the flowers grow on the sand-hill; and hundreds of acres of valuable land are, in consequence, devoted to flower-farming. In the proper season, as one drives along the roads in the neighborhood of Haarlem, he is surrounded on all sides by plantations of hyacinths and tulips in full bloom, forming a mass of color exceedingly varied and rich, while the scent exhaled is most delicious. Every house and villa has its bulb-garden; and for long distances the eye can feast on glorious masses of richly-hued flowers. In one of the *bloemestries*, there is a bed of tulips two hundred yards in length, which, in the spring-time, is resplendent with gorgeous color; and, in order to the better setting of them off, they are framed in a border of crown imperial lilies, and bridged over for effect every here and there with a wooden arch. It is a great pity that such a lovely flower as the tulip is scentless; Nature must have exhausted herself in the coloring. The hyacinth, however, exhales a delicate perfume, especially about midnight; and, at Haarlem, great beds of these favorite flowers, covered over with roofs of canvas to protect them from extreme heat or rain, may be seen, so arranged as to present the most vivid contrasts, or exhibit the finest harmonies of color.—*Once a Week.*

CULTIVATION BY HOGS.

From a report in the *Wisconsin Farmer* of a late discussion by the Oswego Farmers' Club, we clip the following:—

Capt. Barnes—I never yet wired or cut a hog's snout. Some ravenous specimens may require it, but by keeping them in the right place, I could always make their digging profitable. When a boy in New England, I knew a man who had a nice smooth bit of meadow, which he could not plough, as the ground was full of stone. It had had a coat of soil washed on from higher land, the points of stone that interfered with the scythe had been broken off, and it was often top-dressed with chips, dirt and ashes. Well, there came two or three dry season, the patch became sod bound, and the white grubs got into it, and it did not bear five hundred of hay to the acre. After haying the old man turned his hogs into it and they rooted it completely over. Almost every day some one would stop in the road and shout, "Your hogs are rooting your lower meadow all up." "Let 'em root," the old man would answer. In the fall he harrowed it well, and sowed on grass and clover, rolled as soon as frost was out in spring, and his meadow was as good as ever.

Dea. Osgood—And I have seen pastures that could not be ploughed, kept in good order by hogs. When stony pastures get full of brake, they dig after the brake roots, and a little grass seed sown on is all that is needed. Then in low, moist pastures they dig for angle worms, and keep the sod loose, and prevent moss and brake coming in. They are the destroyers of all worms that harbor in the ground. But what will you do in our tame grass pastures? They dig after clover roots, as well as worms and morning glory, and tear the ground all up.

Capt. Barnes—I give them a turn at my pasture, before I break it up; they take out the clover roots, and white grubs, and mellow the land. But one year I failed to break up a piece after it had been well rooted over, and it bore more feed the next summer than any other I pastured. I would rather turn hogs on my meadows in the fall, than cattle. It is a most wasteful and destructive practice to feed meadow short in the fall, as some men do.

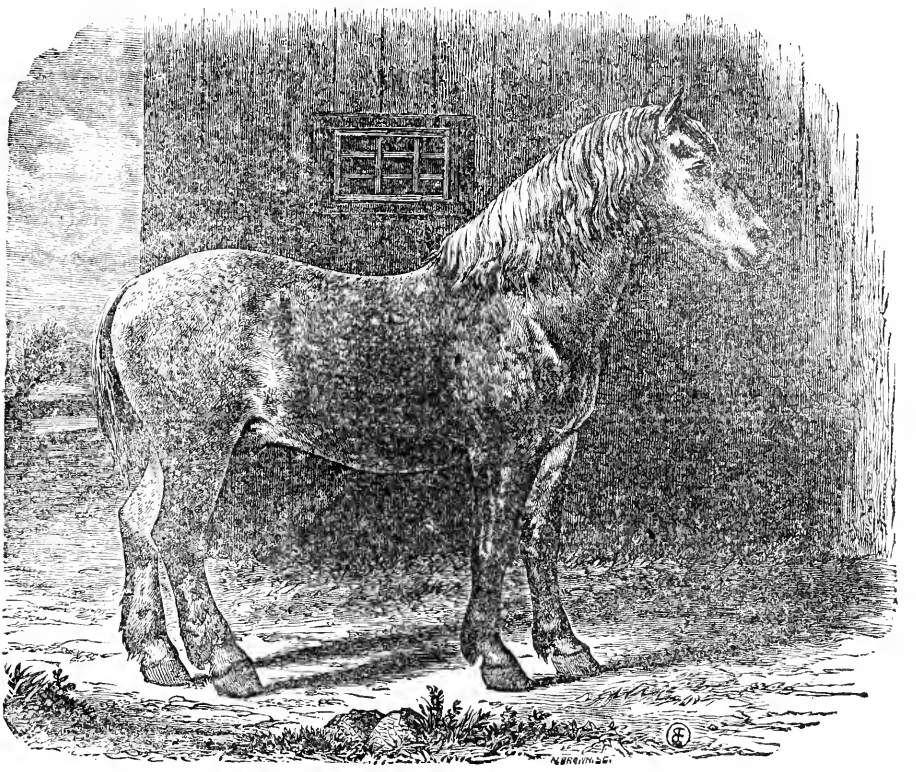
GREASING WAGONS.

But few people are aware that they do wagons and carriages more injury by greasing too plentifully than in any other way. A well-made wheel will endure common wear from ten to twenty-five years, if care is taken to use the right kind and proper amount of grease; but if this matter is not attended to, they will be used up in five or six years. Lard should never be used on a wagon, for it will penetrate the hub and work its way out around the tenons of the spokes, and spoil the wheel. Tallow is the best lubricator for wood axle-trees, and castor oil for iron.

Just grease enough should be applied to the spindle of a wagon to give it a light coating; this is better than more, for the surplus put on will work out at the ends, and be forced by the shoulder-bands and nut-washers into the hub around the outside of the boxes.

To oil an iron axle-tree, first wipe the spindle clean with a cloth wet with spirits of turpentine, and then apply a few drops of castor oil near the shoulder and end. One teaspoonful is sufficient for the whole.—*Rural American.*

—A bushel of redtop seed weighs about ten pounds.



THE PERCHERON HORSE "ORLEANS."

The above is a portrait of one of the two stallions which were imported by the Massachusetts Society for Promoting Agriculture in July, 1864, in connection with three mares of the same race. "Orleans" is of a reddish roan color, and at six years of age stood 16 hands high and weighed 1450 pounds, and is considered a perfect type of the Percheron Horse. For the use of the cut we are indebted to the courtesy of Chas. L. Flint, Esq., Secretary of the Massachusetts Board of Agriculture.

For the New England Farmer.

NEW PLAN FOR TOP-DRESSING.

Last fall I tried an experiment with which I am so well pleased that I take my pen in hand to write a short article for your valuable paper.

For several years past I have been thinking about the amount of manure lost every year by allowing my sheep to lie in the pasture nights. My pasture has been used for over thirty years, and as the sheep occupy the same resting places nearly every night, these spots have become like a barn yard, and I determined to contrive some plan to distribute these droppings over my mowing lot.

Commencing as soon as I got through haying,—and I think no man ought to do any haying after July,—I made a movable pen by nailing three boards, fourteen feet in length to three pieces of two-inch scantling, projecting at the bottom for stakes. For one hundred and ten sheep, I found it necessary to use two lengths of these boards for each side of my pen, and one length for each end. I used an iron bar to make the holes for the stakes, and fastened the tops with straps. I think a lighter and more convenient fence might be made, but as mine is, one man will remove the panels, one at a time, and set them in a new place in twenty minutes.

By keeping a small trough or two in the pen, and putting into them a little salt or corn, the sheep will learn in three days to run for the pen as soon as let out of the pasture.

Last fall they were yarded on the poorest part of my mowing. The first night they were put on a moss grown knoll. One night in a place is sufficient. The effect, as observed this tenth day of June, is wonderful. I am sure there is threefold more grass wherever the sheep were thus yarded than where they were not; it already being knee high and beginning to head out. Even on the old mossy knoll, the grass is a sight to behold, marking by its vigorous growth the exact space on which they were yarded.

Some may object that there is too much work and bother in this plan of top-dressing. But brother farmers is there not hard work in shovelling over, carting, and spreading manure, to say nothing of ploughing up the tough sward? And if we can make the sheep save all this labor, may we not afford to do a little tinkering for them? It is easier than shovelling manure, and besides I save much of the strength of the manure that is lost at the barn. If we finish up our haying in July, we have three months or more to follow this business, and I really believe that with a large farm, a large flock of sheep and conveniences for its prosecution, we can greatly improve our old mowings, and consequently the profits of farming. H. H. C.

Braintree, Vt., June 10, 1868.

WHAT FARMING IS TO BE.

It is evident to any thoughtful man that we have entered a new epoch in American agriculture. Our population increases rapidly, and the production of food does not keep pace with it. "I have just sold a two-year-old heifer for $60," said an old farmer. "I had no idea of selling her. She had run in the yard all winter, and I never fed her a handful of grain, but a butcher saw her and offered me $60 for her." He thought it a great price. I told him that a well-bred animal, with liberal feeding could easily be made worth $100 at two years old. It seems difficult for an old farmer to realize the changed condition of things. He is apt to think that a thing which did not pay when the country was new will not pay now. "Fifteen dollars for a calf!" exclaimed a city friend the other day. "I thought calves were not worth more than a dollar apiece. My father used to sell them for that. In those days agriculture was not appreciated How could it be, with calves a dollar apiece and wheat seventy-five cents a bushel? We have now high prices—perhaps a little too high—but they were necessary to place agriculture on its true foundation. Farming will now be as respectable in fact as it has hitherto been in theory. Let young farmers take a calm view of the situation. We are going to have a very different system of farming from what we have had.

Mark you, I am not finding fault with the old farmers. No man can respect them more than I do. They have done an immense amount of work and done it well. Their system was the best in the circumstances. But the "stump period" has passed, and is followed by the mowing machine, with the steam plow appearing in the distance. Virginia fences and bad roads are still found, but they, too, will soon belong to the past. Underdraining will improve the latter, and the high price of wood will banish the former. Labor is more abundant, and wages are paid in wheat less than formerly. The district school has a prodigious influence. Now let our young farmers bestir themselves. They must be "men of thought and men of action." In the older settled sections we have blacksmiths, and wheelwrights, and carpenters, and bricklayers, and saddlers, at no great distance, and it is no longer necessary for a farmer to be a "Jack of all Trades." His business is to cultivate the land; to look well to the state of his flocks and his herds; to attend to the thousand little details of his establishment. He must have a trained mind and skilful hands —must be able to work himself and direct others. He must plan work for all kinds of weather, and not do in summer what should be done in winter—should not work in the barn when the sun shines and make hay when it rains. He requires great energy, promptness, and perseverance. Much of his success will depend on getting his land in good order and sowing in proper season, and it requires no little forethought and good judgment to accomplish even this. It is a good deal easier to "work" than it is to think. The best general rule for a young farmer's guidance is to do first what he likes to do least.

Many people seem to think that it is the easiest thing in the world to manage a farm; while in point of fact it requires far more brains to be a first-rate farmer than to be a second-rate lawyer. The man who thinks that *because* he has studied agricultural chemistry he will make a good farmer, is a goose. If he has the necessary qualities for success as a farmer, and likes the business, he will probably succeed. If he has not, all the chemistry in the world will not enable him to "make farming pay." Chemistry will not teach him how to buy and how to sell. It will not get him out of bed in a morning. It will teach him how milk is formed, and why it turns sour, but it will not secure regular feeding and steady milking. It will teach him the importance of having *boiling* water to scald the milk-pans, but it will not enable him to have everything ready just when it is wanted. If he would make a good farmer without chemistry, a scientific education will enable him to make a still better and more successful farmer; but if he would not succeed in some degree without it, chemistry will not enable him to make farming pay.—*J. Harris, in Am. Ag.*

EXTRACTS AND REPLIES.

BOOKS.

With me, as with many of your correspondents, "Extracts and Replies" are usually looked over first; and scarcely any one, unless his attention has incidentally been called to the fact, is aware of the amount of varied, practical and speculative information contained in this particular column in a year.

Next in order, and sometimes first, with me the book list and notices are sought, and in those publications which have no Extracts and Replies department, the book list and reviews come first. But the point which is sought at this time is:—

Why are there no more notices of agricultural books, papers, periodicals and works which incidentally belong to this class in our publications specially devoted to agriculture?

Beginning about the middle of November, it is a continuous stream of holiday and juvenile books till fully up to February, in nearly all kinds of publications you may take up, and oftentimes, with so few other book notices, that one fairly dreads to look them over.

These, and such books, are good in their appropriate place, no doubt, but in agricultural publications it seems as though more prominence should be given to its own special and kindred literature.

Give such works as the NEW ENGLAND FARMER Monthly, bound, *Country Gentleman*, *American Agriculturist*, and many others not heard from, once a year, appreciative notices without overlooking the many valuable books which belong with them, and get them on to the table of the farmer, in lieu of so much trash as is sent broad-cast through the kindly notices and reviews of our agricultural press. Just compare our agricultural books and annuals with—well, I don't care—with the original Mother Goose Melodies, hifalutin boys and girls' books, novels, &c., and see if you do not say, with me, that agricultural papers are giving an undue prominence to the latter.

One of our religious papers, in speaking of one of the best of the juvenile class of books, very truly says: "Its style is somewhat inflated, and it has a general tone of boyish exaggeration throughout, which we suppose was the intention of the author, as he wrote it for boys. This, however, we cannot approve; for we think the youth of America pick up these ideas easily enough without having them put before them as examples in books intended for their use."

More is already written than was intended, and yet the subject is just beginning to well up. All probably have heard of the painter who wrote the name of the animal he had drawn under the picture, lest it should be mistaken for some other creature, so lest the reader may not divine the purport of this article, I will inform him that it was written for the good of agriculture and agricultural literature.

Farmington, Me., 1868. O. W. TRUE.

REMARKS.—In case of the painter alluded to, we suppose there was danger that the picture under which he wrote "horse" might otherwise have been mistaken for a cow. We don't think there was any danger of friend True's "drawing" being thus misinterpreted. We regret that he did not dip his bucket a little deeper into the "well" of his subject. As it is, however, he has given us a word in season,—a word that parents, as well as the conductors of agricultural papers, may well heed. The mind as well as the body craves food; but are stimulants less dangerous to the one than to the other?

Our correspondent probably knows why white sheep eat more hay than black ones. And a glance at any book-store or publisher's catalogue must suggest the reason why notices of new books on agriculture are less frequent than of those on miscellaneous subjects—including histories, biographies, travels, juveniles, fiction, &c. Still the increase of agricultural publications has been very great during a few years past, while the improvement in quality is even greater than in number.

SUMMER FALLOW.

I have a piece of run grass land, but no manure. I think of trying a little "newspaper farming" on it, by way of plonghing, summer fallowing, and seeding down to clover in the fall, to be turned under next season for the improvement of the land. Now I would like your opinion as to the best way of doing it, and whether you think it would pay. T. S. F.

Felchville, Vt., June 16, 1868.

REMARKS.—We invite the opinion of the farmers in New England on this subject. In England and in the Western wheat growing States, clover is more generally used and more highly valued as a fertilizer than it is in this section. It seems to be especially valuable to precede wheat in a course of rotation. We understand that our correspondent proposes to keep his land in grass. And the question is, can a crop of clover be economically grown and turned under as a fertilizer of grass land?

The *Country Gentleman* gives the following account of the way in which clover is used at the nurseries in Geneva, N. Y., as a substitute for manure in preparing the soil for the growth of trees.

"The comparatively small quantity of manure furnished by the village rendered the mode of enriching by clover an absolute necessity, and the excellent, healthy and vigorous growth of the young trees proved its great value. The crop is ploughed under when in full blossom; if done sooner, there is too much succulence and not enough substance; if later, the stems have become too hard and woody, and do not become so well pulverized in decay, nor diffused through the particles of the soil. Before ploughing, the crop is well harrowed, which not only lays the plants flat on the ground, but draws them in the same direction as the course of the plough, allowing the sod to carry its own crest of plants when inverted. A log chain attached to the forward part of the plough, and to the right handle, and hanging in a loose loop between these points, and dragging on the ground, assists in completely turning under the otherwise straggling plants. It is thought best not to turn them under with a very deep furrow; and rolling the furrows flat immediately afterwards, prevents the drying of the leaves and stems, and hastens decay and intermixture. As young trees requiry a good depth of soil, the sod is again inverted with a larger plough, or to a greater depth, after the lapse of several weeks.

Clover is generally too thinly seeded. There is

no expenditure more economical than the purchase of an abundant supply of clover seed. One peck per acre is not too much—we have found a half bushel to yield an increase worth much more than the additional cost of the seed. But a heavy seeding alone will not answer the purpose, unless the soil is in a proper condition."

YARDING SHEEP ON FIELDS AND PASTURES.

I notice in your issue of July 11th, an article headed "New Plan for Top Dressing," by "H. H. C.," Braintree, Vt. The course he recommends must result in enriching his fields at the expense of his pasture. Now, my dear sir, I am induced to pen this article that you, being a sentinel on the watch-tower of agriculture, may warn your thousands of subscribers against adopting his plan. Our pastures grow poor full fast enough, without taking from them that which belongs to them and giving it to other portions of the farm. The plan of "H. H. C." for a pen or yard is a good one, so far as that goes. But I think his location of it is extremely bad. I would suggest that he and all other farmers make a portable pen in their pastures, and never at night remove from it any of the stock kept there, except those you are absolutely obliged to. We may travel over the New England States and not find one old pasture in a hundred that will keep one-fourth the stock it did fifty years ago, owing to the system of robbery that has been carried on. Let it be stopped as far as possible, and at once, or soon we shall have no pasturing.

Many farmers may say, we cannot keep our tillage up unless we yard at night. This is a mistake. There are very many other ways to do this. The cheapest, easiest and best is my method advertised in your paper. The reason is my combination of chemicals is such that they grasp the fertilizing properties of the manure and hold it for vegetation, not allowing it to escape in the air. The chemicals are all fertilizers, and the combination increases their properties four-fold.

JOSIAH CLARK.

Manchester, N. H., July 13, 1868.

REMARKS.—What our correspondent says of the condition of our pastures will not be disputed by the farmers of New England. But we have no knowledge of his "combination of chemicals," except that furnished by his advertisement and by the statements of individuals and societies in his neighborhood, who have tested it.

SPECIAL FERTILIZERS FOR SEEDING DOWN.

GENTLEMEN:—I write to the FARMER for advice. All farmers, by occupation, are brothers, and I hope are willing to impart information to others. I have a piece of meadow in grass, about two acres, which has so run out that I want to plough it and seed it down. I have top-dressed it every year with compost manure, but still it needs seeding. Now the question is, what fertilizer shall I use? Barnyard manure is out of the question. I have a bed of peat muck, which I use quite extensively, combining it with other fertilizers. Wood ashes is good, but cannot be obtained in large quantities. Fish guano is good, but it is difficult to be got this time of year. What say you to the ammoniated Pacific guano? I want something that will enrich as well as stimulate. Will the FARMER or some of its valuable correspondents come to my help.

I wish to ask your correspondent, Mr. Harmon Northrop, if the revolving horse rake on wheels, will rake clean where the hay is very thin, and also what is the price. I wish advertisers would give the price of their machines when they so highly recommend them. I went to a neighboring town to see Chandler's horse hoe. I found the man and talked with him about it. I had got to go 100 rods or more to see it, but when he told me the price was $50, I said I did not want to see it.

ELIJAH GUNN.

Montague, Mass., July 13, 1868.

REMARKS.—How many such questions as that of our correspondent in relation to his meadow we could answer if we only knew of some cheap available substitute for barnyard manure! And how we could make our own farm shine, and how we could fill up the guant old "weasel-skin," if we possessed that knowledge! The scientific man, as well as the practical farmer, is seeking for such a substitute in the minerals of the earth and the gases of the air. The isles of the sea are explored, the bowels of the earth are mined, the crucible of the chemist is consulted,—but "what say you" to this or that panacea for the woful "goneness" that our soils complain of, is a hard question to put to the editors of the FARMER, and they hand it over to the "brotherhood." But first "gather up the fragments that nothing be lost." Are your cow-yards and pig-pens furnished with dry muck and other absorbents? Are all the "Pacific," "ammoniated" solids and liquids from the sink-spout and elsewhere made to leaven as large a lump as possible of your peat muck? If your meadow has been top-dressed every year, a very little manure harrowed in with the "seeding down" may, with the aid of the decomposing sod beneath, ensure a good "catch" and a good growth of grass. We have known a great improvement in the crop where no manure was used. But it is better to use a little than none, as a very small quantity seems to encourage wonderfully the the young grass in its first attempts to grow.

As Mr. Northrop only expressed his opinion of the rake alluded to, we think it incumbent on its manufacturers to advertise the public as to its cost and efficiency.

RECLAIMING A CRANBERRY MEADOW.

Mr. EDITOR:—I have two or three acres of bog meadow which are valuable as a cranberry meadow, and by the side of it I have much land of the same kind well adapted to cranberry culture—with the exception that it is covered with brush. How can I get rid of the brush? Some of my neighbors think that, after mowing and burning the bushes, the meadow must be dug over with a bog hoe in order to kill the bushes, as the surface is too soft and the mud too deep to bear up oxen and plough. I have been thinking of the following process: First mow the bushes close to the ground, in August, and as they get dry burn them. As the bushes are quite a heavy growth they will make a very hot fire, which will kill all the stubs to the surface of the ground; then as there is plenty of sand near by, and the meadow is flowed during winter, cover the surface with six or eight inches of sand.

My opinion may not be correct, but it appears to me that eight inches of sand pressed down with a roller would smother or prevent all sprouts from coming to the surface; admitting, however, that they do sprout and penetrate the surface, could it

not be covered with old hay or leaves from the forest, or shavings and be burnt over in August, annually, until the sprouts are all dead; and then set out the cranberry vines? I would be pleased to hear from my brother farmers on this subject. Those veteran pioneers, Capt. Sebina Small, of Harwich, and Dr. Miller of Franklin, Mass., might throw some light on this subject, as they have reclaimed swamp land and made it valuable cranberry meadow. Mr. Editor your opinion, too, is asked. CALEB E. PARMENTER.

Attleboro', Mass., Jan., 1868.

REMARKS.—A dirty swamp, such as you describe, was converted into one of the finest cranberry meadows in our knowledge. The process of reclamation was by flooding the land until all the bushes were entirely dead, then tearing them up root and branch, burning, spreading the ashes, levelling, and then setting the plants in stools. We have no doubt but the bushes would sprout and cover the surface, if cut as you propose; and covering with leaves, straw, or any thing else, and burning, would be a tedious and expensive process. It may require more than one summer to kill the brush by flooding, but if so, it will be cheaper than cutting it two or three times. If you cannot flood the land without encroaching upon your neighbors, and cannot obtain their assent to flow, then the only course left is to tear up the bushes and level and dress with sand in the best way you can. If, upon examination, you find sand below the surface, and within twelve inches of it, you will, probably, have no occasion to haul and spread it upon the surface.

WHITE SPECKS IN BUTTER.

From ten years' experience in butter making, I come to the conclusion that it is neither strong current of air nor excessive heat that causes the white specks. A strong current coming directly on the milk will break the cream and prevent its rising. Heated air will make the cream soft and oily. I am troubled about white specks only in warm, wet weather. Warm, damp air brings the white specks on the top of the cream. They do not originate in sour milk at the bottom of the jar. They may be seen by looking across the milk before skimming. At least, this is my opinion. My milk is set in a large airy room, having two large windows at the north, which are taken out during the summer; two at the west, and one at the south, and a door at the south covered by a veranda. The temperature of the room is regulated by blinds which are opened at night, and for a while in the morning, and closed during the day if the weather is warm. Our milk shelves are made by placing four hard wood scantlings, two inches and a half square, on two carpenter's "horses," which make a solid place for the rows of pans, accessible on all sides, and of a convenient height to strain and skim the milk without moving or lifting. In this way the air comes in contact with all the milk in the room. During the past week of extreme hot weather, no white specks have appeared, and with the use of ice when churning, which we think tends to prevent the specks, good butter has been made. Some pass the cream through a strainer to get out the specks. There is also now in use a cream grinder, or condenser, that takes them all out of the cream. We think it best to make cheese during the warm sultry weather of dog days. One great trouble with many dairies is that the milk rooms are too small by far, and without proper ventilation. Whoever takes care of the milk should regulate the temperature of the room. This is something that I always see to myself unless sickness or absence from home prevents. Where there are no blinds a frame to fit the windows and covered with musquito netting, or cloth for cheese bandage is by far better than nothing.

Fairfax, Vt., July 4, 1868. MRS. L. F.

RAISING CHICKENS.

Last year I let my chickens run with the hens and lost over one hundred. This year I let them run with the hens one week, then took brood after brood and put them together in a box, or house, about three feet wide by six feet long, and have not lost three. The box must be weather tight, the roof to pitch one way, shingled, and made like a scuttle, to take off pleasant days to dry the inside of the box. Under the eaves of this roof there should be a space for proper ventilation; and one or more lights of glass must be put in the box for the admission of light, &c.

I run a bar across about six inches from the floor, midway of the box, to which I fasten an old blanket and let it hang back to the side of the box where it reaches the floor, and is kept in place by a brick or two being laid upon its edge. Then at the end of the box there is a door to slide up, just large enough to let a half grown chicken go in to a yard as large as you please, with a fence about a foot or more high, made of boards, slatted at the top, and leave a place for the large chickens to fly out and in as they please, keeping the little ones in till they get older. Shut the door nights to keep rats, skunks, &c., from the chickens.

The first brood should be put under the blanket to learn them the way. After there are two or three broods, the blanket may be taken away, as the larger ones will keep the smaller ones warm enough.

The hens that you have taken the chickens from should be kept in a room for three or four days with a rooster and they will go to laying in a short time. I think this is better than to have a hen run all summer with three or four chickens, as they often do. Chickens must be kept dry. To avoid hawks, &c., keep a guinea-hen. I. JORDAN.

Franklin, Mass., July, 1868.

IMPROVEMENT OF STOCK—CATTLE SHOWS.

I have noticed in your paper that quite a number of farmers have written in regard to improving our stock,—horses, oxen, cows, sheep, hogs, and even down to hens. Now I think we do not make effort enough in that respect, particularly in the New England States,—I mean the majority of us farmers. I have always taken quite an interest in the improvement of stock, although my opportunities and means for making such improvements have been rather small, but I am hoping I may be able to do more in the future. But small farmers like myself need encouragement and information as to the best breeds, and the most economical means by which such improvements might be commenced.

When the State Fairs first went into operation, I looked to them for assistance in this direction, and met with some success, but I think none of our Agricultural Fairs have as yet arrived at perfection. It appears to me that they are susceptible of still further improvements. By some change in premiums and otherwise I think they might be made far more attractive to farmers, and especially to stock growers. The improvement of stock is a subject that requires much knowledge and much persistent and intelligent effort. We must give our minds to the subject, and it appears to me that our agricultural societies might be so

managed as to create a far greater interest in the matter, and thus be worth millions of dollars to the country. Will not our Fair men put their heads together and see what they can do to make their exhibitions more instructive and more attractive to the men, women and children who ought to be interested in these matters?

These inquiries and suggestions are made by one who has little book knowledge, and are written while tending the sap kettle at night, and are his first words for any paper. J. I. C.

Danbury, N. H., March 30, 1868.

CRACKING OF PEARS.

I have a very fine standard pear tree, (Flemish Beauty,) that for the last two years has not perfected its fruit. Has borne very full every year, and the fruit grows to its full size, but a few weeks before the time for the fruit to mature it cracks to the very core and falls off. Whoever will inform me of a preventive for this disease will greatly oblige A SUBSCRIBER.

West Mansfield, Mass., 1868.

REMARKS.—Fruit growers generally appear to know very little about the cause of the cracking of certain kinds of pears. Not long ago the question was propounded to the New York City Farmer's Club. One man said it was the want of clay in the soil; another stated that his pears on stiff clay cracked badly. One Dr. Langinschwartz suggested that it was caused by microscopic lice; while another "Dr." with a shorter name, had used the most powerful microscopes but could see no insects. A "Prof." thought the disease the result of want of materials in the soil to form a firm skin. One member named ashes as a cure; another had used ashes abundantly, which made the trees grow but did not prevent the cracking of the fruit. The usual remedy is to re-graft to Bartlett, Washington, Buffum, Anjou, Howell and other varieties which are never affected in this way.

We copy the following from a valuable paper on the "Diseases of the Pear," read by Thomas Meehan, Esq., editor of the Philadelphia *Gardener's Monthly*, at the meeting of the American Pomological Society, at St. Louis, Mo., last fall. Though somewhat lengthy, we think those who have been troubled, as we have, by the utter failure of fruit from this cause, will read it with interest.

"Of *cracking* there are two very distinct forms In one case, there are but one or two deep clefts, going right in to the core. In our region, Beurre Giffard and Onondaga are nearly worthless from this disease. I cannot, of this, either form any satisfactory theory of cause or cure.

The other form of cracking is the one well known to exist in the White Doyenne, and some other kinds. This I have very clearly traced to a parasitic fungus. About the middle of June, in distinct spots a little paler than the usual green chlorophyl, it can be seen beneath the skin of the leaves and young fruit. On placing these spots under a very powerful microscope, a cell-formed fungus can be distinctly traced, with the young cells in various stages of development. They destroy all the plant's cells with which they come in contact; but as the species seems to propagate only by cells, and not by threads and runners, like many, the damage from each nucleus does not extend far. However, after a couple of weeks, all these cells are destroyed, both of the internal tissue of the leaf and of the cuticle, and a small black spot is the result. The whole time occupied in the development of this fungus is not over three weeks. The spores fly off into the atmosphere, and are probably carried down into the earth by rains. No further development seems to take place that season. How these fungoid spores get into the tissue I have been unable to decide. The only way seems to be with the sap through the roots; but trees affected with this disease have been grafted with Bartlett and other pears, and no trace of the fungus has been found on them, though four years grafted. If the spores come through the sap, one would suppose it would as well circulate through the sap of a Bartlett as through that of a White Doyenne. We can only say, that there are delicate organisms in plants which we cannot fathom, except to know their differences by their effects. We know that the Bartlett, and White Doyenne have no two things exactly in common. These differences of organization it is which makes one the Bartlett and one the White Doyenne. Exactly what they are we cannot appreciate, but the delicate fungus may. There may be food for it in the Doyenne, but poison in the sap of the Bartlett. I leave this matter to future researches, noting here, that the fungus, after destroying the cuticle of the pear, of course prevents expansion, while the other parts, continuing to swell, draw away from the indurated part, and thus mechanically crack the pear.

This fungus is often found abundantly on the Seckel pear, but its skin being thicker, the injury does not penetrate deep enough to prevent the due swelling of the parts beneath; hence the Seckel cannot possibly ever crack from this fungus.

It is clear, from this theory of the disease, which I unhesitatingly advance as the true one, that no washings, waterings, scrapings, or external applications of any kind, can possibly have any effect. The only course I see is, for the cultivator to carefully watch his orchard, and when any leaves showing the pale blotches of this fungus appear, pick them off and burn them, before they have time to mature and scatter their spores for another season's crop. On very large trees this cannot be done, but in young orchards it might be more easily performed. I would also have all leaves which fall early with this disease burned as they fall. So extensive is this trouble of leaf fungus, that it seems almost puerile to recommend a remedy so disproportionate to the evil; but I can see nothing better."

BLIGHTED CHERRIES.

I herein enclose a lot of our plums. They are the common hardy red plum, and for several years have been subject to this sudden enlargement after blossoming. We call them puffs, they puff up so suddenly. I picked all these from a tree to-day,

and the branches are filled with them. On one twig there were twenty-three puffs and five sound plums. The puffs vary, as you see, from a half inch to one and one-fourth inches in diameter. We know of no cause or cure. Some wild cherries are affected the same way. Please give us your opinion of this development. The sound plums are about the size of marrow beans.

Irasburg, Vt., June 15, 1868. Z. E. JAMESON.

REMARKS.—We are unable to give any satisfactory explanation of the condition of Mr. Jameson's plums. We observe they have no stones in them. Is it owing to deficient impregnation? Is it a development of the ovary into a sort of fungus or smut in the absence of the stone or seed?

We notice that the editor of the *Canada Farmer*, whose attention has been called to the same singular condition of this fruit, is also unable to define or account for the disease.

BLEEDING OR WEEPING TREES.

The trunk of my Horse-chestnut tree is bleeding badly, and I cannot divine the cause unless it is the work of the borer. The bark appears to be broken in several places, and the sap is flowing therefrom quite freely. What can I do to prevent it? A. B.

July 20, 1868.

REMARKS.—We are unable to advise our correspondent, but hope some of our readers will do so. A similar inquiry was lately addressed to the editor of the *Maine Farmer*, in respect to what the writer calls the "weeping" of an elm tree. In reply the editor remarks:—"We have have seen an elm upon the grounds of Wm. R. Smith, Esq., in Augusta, that is troubled with the disease or habit of "weeping," alluded to by our correspondent. On the south side of the tree, about three feet from the ground, the sap oozes out and trickles down the bark in a constant, uninterrupted flow. When it first comes out it is quite clear, but as it runs down it is changed to a thick, brownish matter, about the consisteney of mucilage. The flowing of the tree in this manner was first observed a year ago last spring. It continued through the season, and again commenced this spring, although the quantity of sap that forces its way out is much less this season than it was last. The tree is something over a foot in diameter, is probably thirty years old, and has the appearance of a healthy, vigorous growing tree. This is the first and only instance of "weeping" in an elm tree that has come under our observation. The effect is probably caused by an over-supply of sap, which escapes from the tree in this manner, or the course of the sap becomes interrupted by some agency for which our knowledge of vegetable physiology is not sufficient to account."

SICK CATTLE—CHERRY LEAF POISON.

About three weeks ago, I first noticed that one of my yearlings was sick. One of the joints in the fore leg swelled nearly to the shoulder. The animal did not feed like the rest of the cattle. In breathing, which appeared to be labored and painful, it made a wheezing noise. A blue sort of film covered the eyeball so as to render it totally blind, and a yellowish, frothy, and very offensive matter was discharged from the mouth and nose. Hard bunches rose from the shoulder to the head under the hide, and the creature soon died. Another has commenced wheezing in the same way. If the editor of the FARMER or its readers can tell me the disease or its cause, and prescribe for it at once you will greatly oblige one whose stock of cattle is not large, and who wishes to arrest the disease before they all "go for it." AZEM NILES.

West Swanton, Vt., July 22, 1868.

REMARKS.—From the foregoing statement we have little doubt that the cattle were poisoned by eating cherry leaves—probably those on branches broken in gathering fruit, or otherwise, and more or less wilted. Articles upon the subject will be found in the Monthly NEW ENGLAND FARMER for 1867, at pages 494 and 534. In the one on page 534, Mr. E. French, of Braintree, Mass., gives an account of two cows which he saw that had eaten wilted cherry leaves. One died; the other was in great agony and would probably have died had she not been relieved by forcing about half a pound of the soft ends of a strip of salt pork down her throat till she swallowed it. His theory was that instead of poisoning, the leaves being wilted, tough and indigestible, choked the animal. We think, however, there can be no doubt of the poisonous properties of the wild cherry leaves. Doses of oil, fat or grease are recommended, as are also drenchings of water dashed upon the animal by the bucketful. But prevention is better than cure. Mr. H. C. Meriam, Lowell, Mass., has had cattle poisoned by eating the leaves on the cherry brought to the door-yard for firewood, and advises farmers to manage their cherry trees on the farm as carefully as they do the arsenic in their houses.

HORSE RACING AT FAIRS.

To the article in the FARMER of July 18, on this subject, I wish to add my hearty amen! The writer expresses my own sentiments, and I believe the sentiments of thousands who are interested in the proper management of our agricultural Fairs. Men of principle and women of respectability who are willing and anxious to take an active part in agricultural exhibitions, and who believe they ought to be made instructive and beneficial to themselves and their families, cannot now even visit them with a clear conscience. The "pure agricultural horse-trot" has opened the door to the horse-race, with its train of jockeys, gamblers, drunkards, and other baser specimens of shipwrecked humanity. To their performances the bulk of the money raised for premiums on agricultural productions, and a large part of the time assigned to their exhibition, are now devoted. "For the best speed of horses, one thousand dollars," "for the best pair of working oxen, twenty-five dollars," which I copy from a "List of Premiums" now before me shows the way in which the money goes that farmers contribute to promote agricultural Fairs, and which they pay at the gate as admission fees.

Let the programme be changed; but not to the exclusion of the horse show. That noble animal is just now acting too important a part in our farming operations for that. But what have farmers to do with a speed exceeding seven or eight miles per hour? Give more time and money to ploughing with two, three, or four horses; to mov-

ing heavy loads in the easiest and best manner, and to trotting half a mile or so, with a load of not less than 2000 pounds, &c. Some such change it seems to me would in a few years encourage and introduce a very different style of horse from that which is now so popular on the race course, and a very different system of breeding and training. The delicately formed, small limbed, light horses which are exhibited on our agricultural race courses are valuable only for their 2:40 gait.

Let us have more on this subject, and let it come from those who are more accustomed to handling the pen, and who are less nervous and excited on the subject, than myself. B. B.

Plymouth, N. H., July 20, 1868.

MACHINES FOR MAKING DRAIN PIPES.

I am greatly interested in the column of "Extracts and Replies." I find many things which are worth more than the subscription price of the FARMER. Yet there are some things which I do not find there, and that is why I trouble you with this communication.

Where can drain tiles be obtained and what is the cost? Can they be made at any brick yard? If so where could a machine for molding pipe tiles be obtained? Is such a machine complicated and costly, or is it simple and its cost moderate?

Roxbury, Me., 1868.

REMARKS.—Drain tiles, or pipes, can be obtained in Boston at several places. They can be made at any brick yard, but require an oven for baking them, such as persons have who bake earthen ware. Machines for molding the pipes are made at Albany, N. Y., and are not complicated or difficult to manage. We do not recollect the name of the maker. A dozen years ago, a machine cost about $150.

MANAGEMENT OF NEWLY PLOUGHED LAND.

When we break up new ground that is ploughed deeply and turned over smoothly, in which direction of the furrows shall we harrow and furrow for potatoes? And when the field is hard hill land and somewhat rocky, and of course is not well nor smoothly ploughed, how then shall we proceed? You will much oblige us by giving your opinion on these points. PUTNAM TYLER.

Marlow, N. H., May 22, 1868.

REMARKS.—As Mr. Tyler informs us, in a private note, that he is nearly seventy-five years of age, his great experience entitles him to give an opinion for the benefit of his brother farmers, rather than to ask ours. But as our opinion is asked, we will give it with all due deference to his superior wisdom. We should harrow lengthwise the furrows, and then furrow across them with a light plough. If the sod is thin and much broken, it makes but little difference which way it is worked.

HOW TO RID CATTLE OF LICE.

I have been a constant reader of your valuable paper many years. During that time I have seen a great deal in its columns concerning "Lice on cattle."

Several years ago, I had some heifers come home literally covered with lice. In less than a week they were communicated to my entire stock. I tried nearly every (so-called) remedy that I ever heard of, but with no beneficial effect. Being acquainted with the nature of sulphur, I sprinkled it on to the entire surface of both horses and cows, which thoroughly rid them of the lice; and I have never been troubled with them since. I have recommended it to many others who have tried many things in vain, and in every case it has been "just the thing." G. F. P.

Groton Centre, Mass., 1868.

WHITE SPECKS IN BUTTER.

The causes of white specks in butter are various, but the prevention with me is to strain the cream before churning, through a piece of cheese sacking or some other thin cloth. If the cream is thick, hold the corners of your cloth with one hand while you press the cream through the cloth with the other. Try it. A LOVER OF GOOD BUTTER.

South Wallingford, Vt., July 6, 1868.

TOP DRESSING GRASS LAND.

Your correspondent "Early Cut" has expressed ideas in regard to hay which correspond with mine. I wish to ask him how he applies his manure directly to grass land? If as a top-dressing, whether he would apply immediately after haying or late in fall or spring? Also with, say forty loads of manure, how much ground would it be economy to go over? SUBSCRIBER.

Sabattus, Me., July 18, 1868.

PARALYZED TURKEYS.

A friend of mine has a brood of young turkeys in a very singular way. They have lost the use of their legs. At first their toes turn in, then in a few days they are not able to stand. They eat and grow well, but cannot get about. Can you or any of your numerous readers tell what ails them, and what will help them. A. W.

South Hingham, Mass., July 19, 1868.

PLOUGHING IN CLOVER.

Will you give your opinion upon the question whether it is best to plough in clover green, or to turn the sod next spring, when the object is the improvement of the soil. E. SAWYER.

Northfield Farms, Mass., June 29, 1868.

REMARKS. — Plough in the clover green undoubtedly. The next spring plough again, or cultivate before seeding or planting.

A GOOD NATIVE HEIFER.

Having just read the statement in your last paper of the Tunbridge, Vt., Durham heifer, which produced seven pounds of butter in the first week of June, I am moved to say that I have a five-year-old common native heifer, from whose milk in the second week of June we made eleven pounds and one ounce of as nice and yellow butter as you ever saw. The heifer never ate a spoonful of any kind of grain in her life. LUTHER J. HOLT.

West Epping, N. H., July 10, 1868.

PUMPING WATER FROM A MUCK HOLE.

I have a deposit of meadow muck of the best quality, where former owners have dug holes, leaving a space between each, so that they got only about half the muck. These fill up with water, though not to the surface, and there is no outlet unless the water can be raised to the surface. I wish to get rid of the water in order to save the muck, and have but one hole. Can you or some of your readers tell me what kind of a pump would be best suited for the occasion?

Shrewsbury, Mass., 1868. MARK FARRAR.

REMARKS.—Will it not be rather too much like work to raise the water in a muck hole or swamp

by the use of the best pump in the world? Where the banks are sandy or gravelly a large amount of water can sometimes be got rid of by conducting it to a hole or well dug for its reception. But are you sure it cannot be drained?

AGRICULTURAL ITEMS.

—There are complaints of more than usual loss of lambs this season in New York.

—Five cows recently died in Belmont Co., Ohio, from drinking brine emptied from a meat barrel.

—A writer in the *Journal of Chemistry* says that a ton of tobacco exhausts the soil as much as fourteen tons of wheat or fifteen tons of corn.

—During the month of April nearly 5000 cattle were exported from Canada to Buffalo, the duties on them footing up $19,000.

—Green paint in powder scattered through the rooms of a house will expel all kinds of insects; so it is said.

—William P. Hayden informs the *Maine Farmer* that equal parts of garget root, alum and tobacco, steeped together, will cure the sniffles in sheep. It should be forced up the nostrils with a syringe.

—Some farmers who have had trouble in getting single men as hired help, are finding out that it pays to build plain, but comfortable cottages, for tenants, and hire married men.

—As we consume every kind of woolen fabric, from horse-blankets up to superfine broadcloths, so do we require every kind of wool, from the coarsest up to the finest.

—It is said an Ethan Allen colt, after having been pronounced worthless as a trotter, was sold in Boston, five years ago, for $120. The purchaser has recently been offered 12,000 for him.

—It is said that it takes 100 pounds of green clover grass to make twenty-five pounds of hay, while 100 pounds of witch or quack grass will make forty pounds of hay.

—Mr. Meeker, agricultural editor of the New York *Tribune*, recently stated that strawberries have not averaged over twelve cents per quart, in that city this season.

—The average life of a mowing machine is five years; some will use a mower or a reaper twenty years; but the average number of farmers buy a new machine once in five years.

—It is said that Bonner feeds his horses from a box sitting on the floor, as he believes it is natural for them to take their food from a level with their feet.

—Less than one year since a North Carolinian commenced a cheese factory. He has now 180 cows, and has made and marketed over 8000 lbs. of cheese.

—The Dixie *Farmer* publishes an article on the prevention of weevil in wheat. It is done by salting as the grain is put up in the bin—a half pound to the bushel.

—The Irish *Farmers' Gazette* says the subject of selling adulterated fertilizers attracts no little attention in that country, and adds that a large proportion of the Peruvian guano sold in Ireland is made up of chalk, clay, marl, powdered bricks and washed out phosphate guanos.

—Mr. Knox, the famous fruit grower of Pittsburgh, Pa., does not cultivate his strawberries deeply, but very slightly to kill the weeds. Manures freely, but does not believe in underdraining. Does not like to keep a bed over four years. Uses light coating of straw for mulch.

—Shirley Hibbard tells us that in London all the honey made by the city bees is more or less contaminated with soot. One cup of honey gathered in 1858 was so discolored with soot that it took two months to settle, and then the bottom of the jar was coated with a black deposit, although the honey itself became comparatively clear.

—The Arabs, the most careful of their horses of all people, do most of their horse-feeding at night. They say that feeding in the day time does not impart so much vigor and elasticity to the animals as night mastication does. Their saying is that "barley at night goes to the buttock—in the morning to the manure." They afford water too very sparingly during the day time.

—Since the railroad was opened through to St. Albans, there has been shipped to Boston from that place over 38,000,000 pounds of butter and over 18,000,000 pounds of cheese, which brought about $14,000,000. The sales of butter and cheese, in a single day, at St. Albans, often amount to from $20,000 to $30,000; and per year not less than $1,500,000.

—The *Economist*, (New York,) states that the imports of foreign wool at New York for the first half of the calendar year are only about half the quantity and value of those for the same period of last year. "For the first six months of 1867 we imported 13,000,000 lbs., valued at $2,233,000, against 6,700,000 lbs. this year (1868,) valued at $1,105,000."

—Up to June first, three cows belonging to Dea. Abiel Peabody, of Weston, Vt., which came in during the month of February, had produced 325 pounds of butter sold; two calves sold for $22; one calf raised and worth $25. The cows are a mixture of Durham, Devon and native blood. Mr. Peabody adds, as the result of his experience and observation, that "six good cows well kept will produce more than twelve common cows poorly kept."

—An Illinois correspondent of the *Country Gentleman* believes that the climate in the prairie sections is changing; that the heat is becoming more oppressive and the cooling breezes less frequent. Before cultivation, says he, "the sloughs remain

full, and cool the air; the sun does not get at the earth to heat it up to a boiling point, and the winds play over the surface and make the hottest days delightful. When these prairies are settled and cultivated, if the climate modifies, as I think it will, the heat in summer will be nearly insufferable."

—In the Monthly Report for April, of the Department of Agriculture, it is said, "It is worthy of careful mention and notice, that in every location where wheat suffered from freezing, those fields that were planted with the drill are comparatively unscathed, while the broadcast sowing is in a miserable condition. It is also found that thorough tillage enables the thrifty and well rooted plant to endure the action of the frost, while the carelessly sowed wheat is ruined."

—The *Maine Farmer* gives the following recent sales of thoroughbred stock in that State: from the Short Horn herd of Hon. Warren Percival, Cross Hill, are the following: Yearling bull "Prince," 7125, to Clinton Howe, of West Sumner; yearling bull "Royal Turk," 7240, to Willard Lothrop, Esq., of Leeds; bull calf "Roan Prince," and yearling heifer "Sunrise, 2d" and "Pink," to S. N. Briggs and Brother, of Livermore; and two two-years-old heifers to Joseph Miller, Esq., of Waldoboro'.

—Mr. E. B. Slocum, Grass Lake, Michigan, gives the New York Farmers' Club the following plan for milk shelves: Erect a post, say four inches square, in your milk room. About two feet from the floor, nail one lath on the post in a horizontal direction; then on the opposite side, nail another lath the same way, letting the lath extend far enough from the post, to set a milk pan upon each end. Immediately above and close to these laths nail two more laths in a similar manner, but in opposite directions. You will then have a tier which will hold four pans. Eight inches above this, then eight inches still farther, and so on. One post can hold twenty-four pans.

—An Erie county correspondent of the *Ohio Farmer*, says that in consequence of the drought last year, short keeping with little grain during the winter, and exposure of the sheep to many long spring rains, the wool clip is generally light, many estimating the average yield per head fifteen to twenty-five per cent. less than last year, but the staple is more valuable, looking white and clean and unusually free from oil. Evidently farmers are improving in putting their wool in better condition for market. But the prices offered by the buyers, from thirty-five to forty cents per lb., is not satisfactory to the sellers, and the larger lots are not generally disposed of.

—All wrinkled peas are superior to, and more delicate in flavor than those that present a full and perfect form; like sugar corn, the saccharine matter which they contain causes them to shrivel when dried.

PRESERVATION OF FORESTS.

The earnest manner in which our correspondent presents "the other side" of this subject in another column may strike some of our "standard authors" differently from what it does the writer of this article, who was among the first "crop of children" raised in one of the new settlements of an interior town in New England.

At the time of his early recollection there were but few framed houses in the neighborhood, although from the elevated out-look of his home, it was one of the amusements of a cold winter's morning to count the ten or a dozen columns of smoke that rose from as many "openings" in the almost universal forest which clothed the adjacent hill-sides and valleys. For a distance of some three miles on one road, which he most frequently travelled, he can now count on his fingers ten such log houses without a single framed one. The district school house was a deserted log "camp" or hut. There was not a wagon or even a cart owned or used in the whole district. Hay and grain, corn and potatoes, were drawn on sleds. Marketing was mostly done in the winter season, as in summer the roads were little better than bridle-paths. Butter was carried to the store and grog brought home on horseback. The sight of a wagon, with which some pioneer drover or persevering pedlar occasionally worked his way thus far up the stream formed by the mountain springs, was an event in the life of the young folks, that caused more excitement than the passage of a caravan with music and elephants would now.

We have recently visited the scene of these recollections. It was sad to find that even here we were a stranger and in a land of strangers. The country itself seemed changed. The mountains were higher and closer together than formerly. The "flats" were less flat, less broad, less long. The "big brook" was smaller and more crooked, and had got out of place, at many points. The old mills that once stood on its banks had been washed out clean, or crumbled piecemeal. The forests had been driven towards the summit of the hills, taking with them the mosquitoes and fleas, and we believe a large share of the seeds of the summer fevers which formerly prostrated hard-working men and women. The log houses are no longer seen; but com-

fortable and in many cases tasty farm buildings occupy their places. Carts, wagons, and even the family carriage, now roll over good roads, where we remember sloughs, and rocks, and roots, and "sharp pitches." Where we once followed the sturdy mower with a "sharp stick," boys now scratch their heads as they stand with "nothing to do" but watch a machine that not only cuts the grass but spreads the swath. Great changes, real and imaginary, were presented to our eyes. The actors of the past were gone. We followed them to a neatly walled graveyard, where on marble and slate —both the product of the surrounding hills— we read a brief biography of most of these early settlers. They "rest from their labors and their works do follow them." Were they good or bad? Did they benefit or curse the land? Shall we approve or condemn?

But we noticed other changes. On some of the land from which the primitive forests were removed since our recollection, there is now a thrifty "second growth," which has already produced "saw logs" and sugar orchards. Indeed many of these hill farms are now devoted to pasturage and the growth of wood. Even in the vicinity of Boston, it is a mooted question with the oldest inhabitants whether the amount of wood is less now than it was fifty or one hundred years ago.

Wood seems to be the natural product of our New England hills. Our cleared lands manifest a strong tendency to revert, not to a barren desert, but to a tangled forest. Bushes and wood are continually encroaching on pasture and cultivated fields. And to our minds there is little danger that the hills of New England will ever become as destitute of vegetation as are those of Egypt and of other countries, whose soil and climate are unfavorable to the growth of forest trees.

Effects of Improved Culture.—Columella, in his fourth book, *De Re Rustica*, tells the story of a certain Paridius, who had a farm planted with vines, and he also had two daughters. Of his farm, he gave one-third to the man who married his eldest daughter, but by increased attention to cultivation, he received as large a product as before, from the two-thirds which he had reserved to himself. Afterwards, on the marriage of his second daughter, he gave away half of the remaining land, and in a short time, he found by still greater improvements in culture that his income was in no respect diminished. From this, Columella very naturally infers that as much attention and labor was bestowed on the remaining third, as had been previously bestowed on the whole farm. Is it not true, at the present time, that if the manure and labor now expended on the whole farm, were expended on one-third of it, the crop, in a majority of instances, would be in no respect diminished? We have yet much to learn respecting the capacity of the soil.

THE LEAF.

The fibres of the leaf which spread out from the base, are prolongations of the vessels of the wood; and beneath them, forming the covering of their under surface, are similar prolongations of the inner bark. The green exterior portion of the leaf is a continuation of the outer tissue of the bark in a thin, porous form. The pores or mouths in the green portions are an essential part of their structure. The leaf of the common lilac is said to contain not less than 120,000 pores to the square inch. They are most numerous on the under surface. The leaves spread out their broad surfaces to imbibe gaseous food from the atmosphere. Under the stimulus of light, they continually absorb carbonic acid from the atmosphere. In the vessels of the leaves, this is decomposed into carbon and oxygen. The carbon is retained and the oxygen thrown off. During the darkness, oxygen is absorbed, and combining with the carbon in the vessels, is thrown off in the form of carbonic acid, but much less is thrown off in the night than is absorbed in the day. Hence in the Arctic regions, where the sunlight is never absent during the summer, and there is no darkness to interrupt the absorption of carbon, we can understand how vegetation pushes upward with almost miraculous rapidity; and in regions where the days are very long and the nights comparatively short, we see why the wheat and corn spring up and reach maturity in a few weeks.

Twenty-five hundred gallons of air contain about one gallon of carbonic acid gas. To find and absorb this small quantity of gas, the tree spreads out its thousands of feet of leaves, which are constantly in motion in the ever moving air, and thus the ponderous trunks of

the forest are built up, atom by atom, from the atmosphere.

On a single oak, seven millions of leaves have been counted. Now if each square inch contains 120,000 pores, and each leaf four square inches of surface, it may not be difficult to show in figures the number of pores on the leaves of the oak, but who can grasp the idea, or form in his mind any adequate conception of such a number? But this is but one of the trees in the forests that spread over the surface of the earth at this moment, and which have sprung from it since the creation. And every blade of grass and grain and every shrub and weed is equally busy during its growing season, in drawing its substance from the fleeting wind.

MANAGEMENT OF MANURE.

There may be nothing new in the management of manure described in the following paragraph, which is part of an article in the New York *Tribune*, detailing a visit to the farm of S. M. & D. Wells, of Wethersfield, Conn., but how many there are who don't happen to have a supply of dried peat or muck on hand when they need it. This is the season to lay it by in store:—

The Wells Brothers' manufacture and management of manure is the important subject. They have a spacious stable, containing forty stalls, the ground surface of which is cemented. A supply of dried peat or muck is kept on hand, and a wheelbarrow full is placed daily in the gutter behind each row of eight cows. This absorbs all odors and moisture, and is easily shoveled out the following morning, through a small door, into an enclosed shed, which also has a cemented bottom. Thus nothing is lost by leaching or other waste, and cleanliness is secured. The manure thus obtained is of excellent quality, and the brothers have proved by experiment that the addition of muck not only doubles or triples the quantity, but really makes a better fertilizer than pure stable manure. That which is not demanded for the onion beds and other ploughed ground is used as top dressing for the meadows. This is considered the best way of applying it. It is put on with a liberal hand, and the result is easily perceived. Last spring a portion of one field was top-dressed, and it will cut two or three tons to the acre—the other part was not top-dressed, and will produce less than half that amount. The brothers do not approve of fancy manures, as a general thing. They are convinced that no fertilizer pays in the end, the effect of which cannot be perceived for three or four years afterward. They once applied Peruvian Guano, and received a crop of 60 bushels of shelled corn to the acre; the next year they planted potatoes in the same field, without further manure, and did not get enough to pay for digging, though the season was favorable for their growth.

—Lima beans often rot in the ground. An almost sure remedy is to grease them.

For the New England Farmer.

PRESERVATION OF FORESTS.

So much has been said and written in regard to the importance of preserving the woodlands, that it almost seems a virtue to talk of the beauty and usefulness of forests.

Your correspondent "H." in the FARMER of July 4th, says, "forests perform a threefold purpose; first as a means of renovating the soil; second their value for timber and fuel; and third their influence on our climate."

It seems to me that the earth is designed for a habitation for men; and not specially for wild beasts, birds of prey, noxious reptiles and insects. While it merely affords such creatures a home, it is just starvation and death to the human family. In this view, the forest is our enemy, to be overcome before we can live surrounded by those reliable supplies of food and comforts essential to civilized life. When we consider the labor and hardship of the pioneer's life, is it not strange that any one should think by uttering the warning cry, "Woodman, spare that tree!" that he is manifesting a refined taste, and a praiseworthy and far-seeing interest for the welfare of his fellow beings? If the fact is admitted that this earth was designed for man's habitation, and that his mission is to subdue and replenish it, is it not his duty to clear away the forests? Can we return to the wigwams and tomahawks of the past, and live in the woods? "But the soil becomes exhausted," it is said. Not by cultivation, but by mismanagement, I reply. "The climate changes." And so it does, but for the better, I am prepared to respond, and will cite the history of new and old countries in proof of my assertions.

Look for a moment at the claim of renovating the soil by growing forests upon it. Is it not utterly impracticable? The whole crop is removed on clearing; nothing being allowed to rot or decay upon the ground or incorporated with the soil, and usually fire burns up most of the leaves and vegetable mould that has accumulated; so that, in reality, besides stumps, that impede cultivation, you have only the value of a few loads of vegetable mould, and a few bushels of ashes left as the result of this system of improvement. It is besides an exceedingly slow process, as it requires many years to practice such a rotation. It is moreover a costly way, because the land is worth money, and money at the interest it now commands will double in from eight to twelve years. Calling it ten years, and land say at twenty dollars per acre, planted now to trees and cleared in 42 years, in which time "H." has seen saw logs grow, it should be worth three hundred and twenty dollars per acre; and then we lose the annual income, which if cultivated would average twenty dollars per acre, or to allow liberally for labor expended, call the loss of income only $10 per year, and we have $420 to add to the $320. So your

timber should be worth over $700, to let you out without loss. It seems evident, therefore, that raising saw logs would be unprofitable for a poor man.

Here in Vermont where woodland is worth from two to forty dollars per acre, a good sugar place is considered the most valuable of all our forests. Now there are but few sugar places where the trees will average fifty per acre. These trees will yield about 100 lbs. of sugar in a season, worth $12. Now the produce of an acre of tillage land should be very much higher. Woodland when already grown is the most unprofitable of all land, and how much more unprofitable to own it while growing, in a country where there are taxes to pay and folks live by eating.

After a field has at length yielded a crop of wood, it will require good management to clear off the wood and stumps in such a manner as to have the land in as good shape as it was before the trees were planted, and we should be too old to perform the necessary labor of clearing and managing it, and our children would probably do as we ought to do, if living on land that requires such a course of improvement, that is, sell it or give it away, and move to a country where the Creator has provided a soil that will yield some return for man's labor.

In regard to changes of climate caused by the clearing up of forests, I wish individuals in different sections of the country, would candidly state what such changes in their respective localities have been. At this time, so soon after the clearing has been done, it could be ascertained whether the climate has not in every case changed for the better. We should not presumptuously charge folly to the Almighty. As man was created to till the earth, it seems natural and just to expect that obedience of that law should not imperil his health or happiness.

Here in northern Vermont the favorite locations for early settlers were upon the hills, because the frosts were less heavy, and crops more certain. The high lands were visited by breezes that purified the air and dispersed the fog and miasma that seemed to linger in the valleys. The valleys were also interspersed with swamps, muck beds, &c.; but after the hills were cleared the low land became dryer and now proves to be the most productive of any in the region.

Fever and ague never prevailed here to any great extent; but consider the peril to the health of a laborer who begins a clearing in a valley where the trees stand one or two hundred feet high around his little opening of perhaps five acres. The sun sending its hottest rays upon the earth, blackened by recent burning, and no breath of air stirring. The rain comes in torrents in summer. The snows falls deep in winter.

Honor to the sturdy pioneers, who, notwithstanding the adverse climate and somewhat uncertain crops, cleared up the land and let in the sun to dry up the pestilential damps, and allowed the breeze to cool and equalize the temperature as it wafts them away.

The changes of climate occasioned by clearing up the forest are not to be deplored, but accepted with thankfulness, as the labors of the farmer are more surely crowned with success. I have read that in some sections of the West and in California, where the rains were formerly very abundant at certain seasons, followed by droughts, now occasionally showers come in the dry season, showing a favorable change in climate. As evidence of the possible productivness of lands without forests, we can look to the most fertile regions of the West,—the extensive prairies.

The value of wood for fuel, building and fencing purposes is very great; but a few acres are enough on each homestead. If forests are necessary to a country, the State should own and exempt from taxation, a certain number of lots in each town, and keep them,—as men insure their buildings, lives, or erect lightning rods on buildings,—to ward off some calamity that may possibly happen.

Z. E. Jameson.

Irasburg, Vt., July 18, 1868.

BUYING AND SELLING WOOL.

We are heartily glad to see the wrangle that is going on in many sections of the country about buying and re-selling wool. Conventions of wool-buyers meet and resolve to buy wool only under the one-third-shrinkage rule, and wool-growers, either in individual or associated capacities, denounce such action on the part of the buyers as "outrageous" and "obnoxious." Some parties have carried on the talk about gum, and grease, and tar, and lamp-black, and "pitch-tops," till an outsider might suppose that the men engaged in the business of raising thoroughbred merino sheep were the biggest set of rascals in the country; indeed, that any process of breeding and care which showed result in the growth of more than four pounds of wool upon one sheep in the same year must be, of necessity, fraudulent. On the other hand, we hear it said that the buyers combine for the sole purpose of keeping prices at the very lowest ebb.

Some writers are calling upon the producers to hold on to their wool, and not sell or consign it to any men who are guilty of taking part in a scheme to rob them of a just compensation for their products. The strain of talk upon this latter point seems especially sensible, when we remember that most of the wool grown in the country is produced by men who *must* sell at some price, and that urging them to hold on to their wool is equivalent to telling them to put no bread or meat on their table. It sounds well enough, like much talk on other matters, but which is very difficult or impossible to put in practice.

We say we are glad to see this war of words go on, because each party will learn something of the other, and in the end both will be benefited. There have been many hard words said on both sides, and many times utterly without foundation. This is the easiest thing imaginable in all controversies. The weakest man can give hard accusations, and as a general rule this element in a man's writing is a test not less of his strength than of honesty.

Now it is only when we refer all such matters as those above alluded to, to a general principle, that we can get a clear understanding of facts about which fierce and rancorous disputes are carried on.

The simple fact in regard to this whole question of unmerchantable wool is just this and nothing more:—*The producer has put into the market what would bring him the most money.*

When men found that fleeces which contained 60 per cent. of waste matter would sell for the same price per pound as those that only contained 45 or 50 per cent. they made haste to raise them,—that's all. Many a man who has taken the utmost care to have his sheep well and thoroughly washed, and then shorn as soon as well dried, has been compelled to see his wool sold for the same money as another man who has only half washed his flock, and allowed them to run twenty days in a June sun before shearing, because buyers have exercised no discrimination.

The buying of wool has been carried on in such a manner as to encourage the production of large fleeces, large in pounds only, till the natural reaction has taken place, and now the buyers turn round and accuse wool-growers of fraud. If the wool-clip of this country had been purchased on the same principle that regulates the sale of butter and cheese and corn and wheat, or any other production of the farm, we never should have had this low snarling about combined injustice on one part, and cheating and fraud on the other.

If the grain dealers should adopt the practice of paying the same price for wheat that contained 20 per cent. of foul seed that they did for a pure article, the market would soon be filled with that class of dirty grain; and on whose shoulders would rest the blame?

The desired end of all the producer's labor is *money*, and he will always put into the market that which will give him the best return. And when he has obtained 10 per cent. more for his products than they are worth, because it was bought "by rule," does it look like justice, or even common decency, for the buyer to turn round and accuse him of fraud when the purchase was made with open eyes.

When only *wool* was salable, that was the only thing the wool-grower put into the market, that is, wool with its natural and unavoidable amount of waste material; but when it was found that grease and dirt would sell for 45 cents per pound, that commodity was offered in large quantities, and so it will always be, and no conventions or resolutions will ever alter this law of trade.

If, then, the wool-buyer will buy his wool as the grocer buys his butter and cheese, we shall soon find a rivalry among the farmers to produce the *highest priced-wool* as fierce and more lasting than has been the big-fleeced mania. No more fleeces will be found in market containing from two to five pounds of what would be called manure if seen elsewhere, tied up with a quarter of a pound of rope-yarn. There will be no more hard accusations, no more flings about tar and grease. The clothmaker can have just such wool as he will pay for, and in just the condition he desires. This he may depend upon to the end of time. As soon as he deviates from strict, discriminating justice in his purchases, the producer will be certain to follow his example. It is as natural and inevitable as that the seed should produce its fruit, or the tree its shadow.—*Dr. Henry Boynton, in Mirror and Farmer.*

MUTTON SHEEP.

Dr. Miles, Professor of Agriculture in the Michigan Agricultural College has been making some experiments in feeding grade Merino sheep, grade South Downs, and grade Cotswolds. The Merinos and Cotswolds were lambs, and the South Downs, yearlings. The former two, therefore, give results that are strictly comparative; the latter, not. These grade lambs were from common Merino ewes crossed in the one case with a thoroughbred Vermont Merino ram, and in the other with a thoroughbred Cotswold. "What do you mean?" I asked Prof. Miles, "by common Merino ewes?" "The ordinary kind of sheep in this section, such sheep as could have been bought here last fall for 75c to $1 a head." The lambs were shut up in pens Dec. 13, and were fed corn and clover hay for 23 weeks, or till the 15th of May. At the commencement of the experiment the two grade Merino lambs weighed 125½ pounds, (one 70 pounds, the other 55½ pounds). The two grade Cotswolds weighed 158 pounds, (one 86 pounds, the other 72 pounds.

The Merinos eat 325 pounds of hay, and 219 pounds of corn, and gained 36½ pounds. The Cotswolds eat 398 pounds of hay, and 369 pounds of corn, and gained 67½ pounds. A little figuring will show that it took 1,572 pounds of hay and corn to produce 100 pounds of increase with the Merinos, and only 1,136 pounds with the Cotswolds.

Professor Miles has figured up the amount of food consumed for each 100 pounds of live weight. In the twenty-two weeks, the grade Merinos, for 100 pounds of live weight, eat 231.81 pounds of hay, and 168.13 pounds of corn, and the grade Cotswolds, 212.82 pounds of hay, and 186.43 pounds of corn. The Cotswolds eat more corn and less hay in proportion to live weight than the Merinos; but the total

amount of food consumed in proportion to live weight is almost identical. Thus the Merinos consumed 399.96 pounds, and the Cotswolds 399.25 pounds, or a little over 2½ pounds of food per day for each 100 pounds of live weight.

It is very evident, therefore, that for the production of mutton the grade Cotswolds are far superior to the Merinos. It is equally clear, too, that by the use of thoroughbred Cotswold or South Down rams we can soon get a very useful class of mutton sheep from common Merino flocks. And at present the wool from these grade Cotswolds is worth full as much as ordinary Merino, and a good deal more than that of fleeces which are more than half yolk.—*J. Harris, in American Agriculturist.*

WEANING COLTS.

When a colt is about four months old, if he has had proper care and training, and if the dam is to be used in harness, or if she is breeding again, he is old enough to be weaned. Supposing, as most farmers are obliged to do, that the mare has had to work more or less since dropping her foal, and that the colt has been allowed to follow the dam when at work—the attachment between the two has become very strong. If separated entirely and at once, and if the mare is nervous and high-strung, she will perhaps refuse to work, act frantic, kick and do everything else she ought not, and would not do, but for the separation. On the other hand, put the colt into ever so good a pasture, feed him grain and do everything you may—he will run up and down by the fence—perhaps try to scale it, &c., to get to the dam, until he has run off every bit of flesh on his bones. Now, what's to be done?

We would place the mare in a stall wide enough for her and the colt, then we would halter the colt and tie him so that he could get to the manger but not reach to the teat. It may be necessary also, to change somewhat the halter of the dam, so that she cannot turn sufficiently to allow the colt to suck. Water the colt freely, but the dam as little as possible, for a few days at least, If possible feed the colt a double-handful of oats twice per day for two or three weeks before you attempt the weaning. Increase the quantity of oats a little at weaning time, even if you withdraw the *extra ration* by-and-by.

Standing by the side of his dam he will be more quiet and after a little forget his teat. The mare, also, will leave him more readily in the stable while she labors, especially when she finds him on her return. To facilitate the drying up of the milk in the mare, take a little soft soap and smear it over the udder. It may be necessary to draw out some milk first for a few times, to ease her distress. After a few days, especially if the mare is again breeding, milk will not flow very readily and be diverted naturally to the embryo foal, and, although the mare may call her colt she will refuse to let him suck. If possible, the colt should have the best of pasture and the company of other colts of his own age, and the daily allowance of the oats, or a handful or two of meal mixed with wheat bran should be given every day.

The latter years of our life on the farm, we never allowed the colts to follow to the field, but kept them in a loose box in an underground stable during the day. When the mares came home and were watered at night, the colts were allowed a play spell and also at noon while the dams were feeding. The colts kept in better flesh and gave a great deal less trouble at weaning.—*Rural World.*

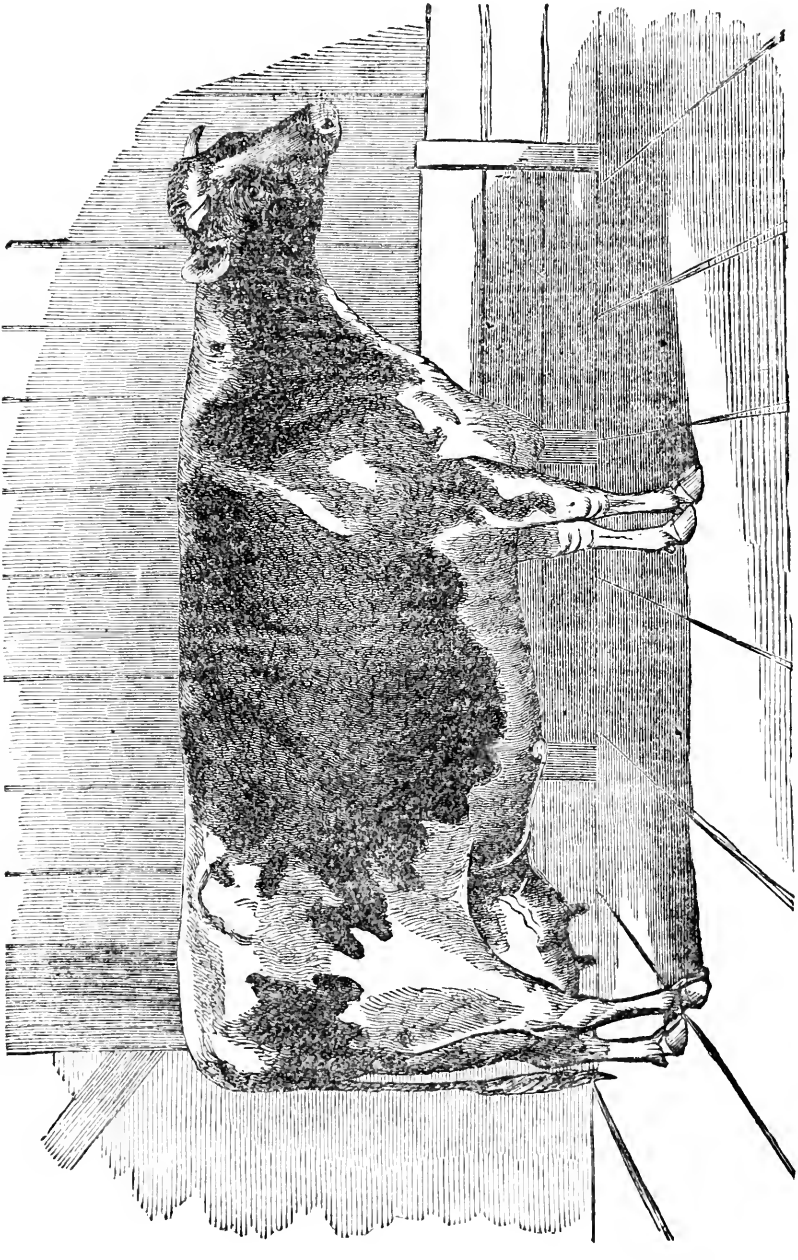
AYRSHIRE CATTLE.

The *Boston Advertiser* gives an account of the attempt to introduce Ayrshire Cattle on Martha's Vineyard, made by the Agricultural Society of the Island some five or six years since, at the suggestion of Sec'y Flint of the Massachusetts Board of Agriculture. In 1863, three Ayrshire bulls were purchased by the Society, and several heifers by individuals. Since then various purchases have been made, a premium of $75 being annually offered for the best Ayrshire bull brought to the Island. There are now, as is stated in a communication from the President of the Society, "twenty-seven head of thoroughbred Ayrshires, while the grades can be counted by hundreds. The cattle have proved hardy, thrifty, and remarkably gentle, while as dairy stock they have answered the most sanguine expectations of the Society. The grades are a marked improvement on the native stock, and partake largely of the excellent qualities of the Ayrshire. So well satisfied are the farmers with this breed that each year witnesses an increasing number of fresh importations, and the herds of mongrel stock are fast disappearing before the thoroughbred and grade Ayrshires."

PEAT ANALYSIS.—Two samples of peat from C. P. Williams' farm, at Charlestown, R. I., have been analyzed at the Harvard Scientific School with the following results:—

	Sample No. 1.	*No. 2.*
Moisture	26.00	26.05
Organic Matter	48 09	46.07
Ammonia	3.12	3.15
Chloride of Sodium	.16	.24
Lime	1.48	1 56
Silica, Alumina, Magnesia, Iron & Loss	20.34	21 85
	100 00	100.00

The analysis shows about six times the amount of ammonia found in common yard manure, and only needs the addition of wood-ashes and bone-dust to make an exceedingly valuable fertilizer. It is strange that farmers will let such mines of wealth lie unused upon their farms. Mr. W. uses about a thousand loads a year, and is bringing up a run-down farm to a high state of fertility.—*American Agriculturist.*



THE HOLSTEIN OR DUTCH CATTLE.

DUTCH CATTLE.

After reviewing the controversies of other writers upon the origin of this breed of cattle, Mr. Allen, in his late book on American Cattle, remarks, "We are content to let the matter rest on the one indisputable fact, that the improved Dutch cattle of the present day, in many of their characteristics, do possess so great a resemblance to the Short-horns, that no wide stretch of imagination need be exercised to *presume* that the progenitors of each—many centuries ago—may have been traced to a common ancestry. In our history of the Short-horns, we have alluded to the probability that they were, at a very early day, originally derived from the neighboring continent; and they may have descended from the same common ancestry to which the present improved breed of Holstein, and Holland, trace their lineage."

Mr. Allen then alludes to importations of these cattle by Hon. Wm. Jarvis of Weathersfield, Vt., and by H. Le Roy, Esq., of New York, as early as 1820, and 1825, which were crossed with the common cattle, but in a few years the pure blood became lost. Of Mr. Chenery's importation he says, "these animals were procured from the best dairy herds in the vicinity of Beemster and Purmurend, in the north Province of North Holland, with a special care to their sanitary condition, and their possession of all the highly esteemed qualities of their race, and are the only *herd* of pure bred Holstein or Dutch cattle known in the country, except their descendants, which may be in some other hands."

"Their *surpassing* excellence appears to be in their milking qualities, coupled with large size, and a compact, massive frame, capable of making good beef; and in the oxen, strong, laboring animals. They are almost invariably black and white in color, spotted, pied, or mottled in picturesque inequalities of proportion over the body. The horn is short, and the hair is short, fine and silky. The lacteal formations in the cows are wonderful, thus giving them their pre-eminence in the dairy.

For the dairy, the qualities of the Holsteins must be acknowledged as remarkable. The Short-horns, as in many instances of trial, have hitherto acknowledged no superior; yet they have now, in these new strangers to our soil, to say the least, found most formidable competitors, and an opportunity is here offered, by those who cultivate them for the dairy, to test their long acknowledged good qualities by comparison. The Holsteins have been long bred and cultivated with a view to develop their lacteal production to the utmost; and that they are quick feeders, and physiologically constituted to turn their food readily to milk, must be evident.

As a beef animal, their merits have been, as yet, but partially tried in the half-breds, or grades from the Holstein bull, on the natives, or other cows of different breeds. So far, however, they are claimed to be satisfactory.

As a working ox, they will probably rank with other heavy cattle of like quality—better in their grades with the lighter or more active breeds, no doubt, than in the thorough breds—as with the Short-horn crosses. We consider Mr. Chenery's importation a decided acquisition to the cattle interests of our country, and trust they will become widely known and distributed."

Our cut represents the imported Holstein or Dutch cow, "Texelaar," imported and owned by Winthrop W. Chenery, Highland Stock Farm, Belmont, Mass. She received the first premium in her class at the fair of the Middlesex Agricultural Society in 1864, and at the Fair of the New England Society in 1865, and won the Sweepstakes—Society's Silver Medal. Mr. Chenery says that "Texelaar" has produced 4018 lbs. 14 oz. milk in nine weeks, or an average of 63 79-100 pounds per day for sixty-three successive days, her largest yield in one day being 76 lbs. 5 oz—over thirty-five quarts.

THE HORSE AT FAIRS.

As we have never assumed the responsibility of doing the thinking for our readers or correspondents, we have no hesitation in publishing the communication of Mr. Lang upon this subject, although we may not assent to all his positions and conclusions.

In objecting to the "trials of speed" at agricultural fairs we do not understand that either Mr. Smith or Mr. Howard would deprive horsemen or horses of their right to the privileges and advantages of the exhibition.

The "agricultural fair" and the "horse-race" are old institutions. Until within a few years past they have been entirely distinct. They have been patronized by different classes. The character of each and of their concomitants have become well defined and clearly understood. The question at issue is upon the union of these two distinct institutions—the "horse-race" and the "agricultural Fair,"—and not upon the exclusion of the breeders of any kind of stock.

We admit that the gentlemen of the horse race show a disposition to be very courteous and accommodating to the managers of the agricultural Fair. They are willing even to abandon their time-honored vernacular, by substituting "horse-fair" for "horse-race," "premium" for "purse," "track" for "race course," &c., &c. Still we frankly confess that we have serious apprehensions that here

are elements that will not blend into a harmonious whole, but that one or the other of the ingredients will predominate, and that the result will be either a horse race or an agricultural fair.

BLACKBERRIES.---MILKROOM.

I think I shall have over a thousand quarts of blackberries this season. But as a distance of 10 miles by wagon and 170 by rail is too far to carry them to market, what shall I do with them? If you advise me to make brandy, wine, jelly or preserves, please send me some reliable receipts, and answer through your paper as *early* as possible.

I have recently come in possession of some land in the west part of this town, and in looking round among over 20 families, I have not seen your paper. Put me down as one of your subscribers, beginning with the number for July 1.

I am about to make some alterations in the house. I would like to know how and where to construct a milk room so that it will answer the purpose the year round. J. S.

Barnard, Vt., July 20, 1868.

REMARKS.—Although we were brought up in a blackberry country, we are sorry to confess that we cannot tell our correspondent how to work up his superabundance of fruit profitably. He and his family are probably as well posted as ourselves in regard to the various domestic uses to which the blackberry is applied. Is it not possible that by the use of modern ventilated crates and baskets, with present high prices, the small fruits may be transported further than they have been in years past? A blackberry syrup, made as follows, is regarded by many as almost a specific for summer complaints:—To two quarts of the juice, add one pound of loaf sugar; half an ounce of nutmegs; half an ounce of cinnamon, pulverized; half ounce cloves, and one-quarter an ounce alspice. Boil all together for a short time, and when cold add a pint of fourth-proof brandy. From a table spoonful to a wine-glass, according to the age of the patient, till relieved, is given.

Your question in relation to the milk-room is one of greater importance than most farmers are aware. The location and size of this important room is too often decided by the arrangement and convenience of other rooms. Generally it is too small, and often it is used for storing other things which affect the air and injure the milk, cream or butter. If people who complain of the great amount of poor butter in the market, were to visit the milk rooms of many farmers, we think the wonder would be rather how their wives contrive to make so much that is fair to good, in such close, narrow and poorly ventilated places as the milk is set in—sometimes immediately adjoining the kitchen, or in cellars far from clean and sweet. In the FARMER for July 18, you will find some valuable hints on this subject by Mrs. L. F., of Fairfax, Vt. In a communication to the FARMER, November, 1866, Mr. A. W. Cheever, of Sheldonville, Mass., one of the most intelligent practical farmers in this State, and one who obtains "fancy prices" for his butter, says that in consequence of making repairs on his milk rooms, he used his dwelling-house cellar for milk during the summer months. Although the windows were kept open for the admission of pure, fresh air, Mr. C. remarked, "I am satisfied I shall not try that experiment again unless I am obliged to. I find I have lost as much as 15 per cent. of the cream by letting it rise in a cold room. Then it takes twice as long to churn sweet cream as it does that which is sour and thick as cream will be if kept in a warm place. Mr. Jason Tower, a very successful butter maker of Franklin, Mass., has kept his milk on the first floor above the cellar all through the hot months for several years past, having a slat floor to allow some circulation of air between this and the cellar room below. He thinks his upper room a little too warm during the hot months of July and August, but he has been able to make a considerably larger amount of butter per cow during the season than I have, although other circumstances do not seem to be much in his favor."

In his work on Milch Cows and Dairy Farming, Mr. Flint says:—"In very large butter-dairies, a building is devoted exclusively to this department. This should be at a short distance from the yard, or place of milking, but no further than is necessary to be removed from all impurities in the air arising from it, and from all low, damp places, subject to disagreeable exhalations. This is of the utmost importance. It should be well ventilated, and kept constantly clean and sweet, by the use of pure water; and especially, if milk is spilled, it should be washed up immediately, with fresh water. No matter if it is but a single drop; if allowed to soak into the floor and sour, it cannot easily be removed, and it is sufficient to taint the air and the milk in the room, though it may not be perceptible to the senses. In smaller dairies, economy dictates

the use of a room in the house; and this, in warm climates, should be on the north side, and used exclusively for this purpose. I have known many to use a room in the cellar as a milk-room; but very few cellars are at all suitable. Most are filled with a great variety of articles which never fail to infect the air."

Will not some of the excellent dairymen or women among the readers of the FARMER, who are satisfied that they have a well-planned milk-room, give our Barnard correspondent and "all other inquiring friends," the information that he seeks, and they need, on this too much neglected apartment of our farm buildings?

IMPORTED STOCK.

We learn by the *Record and Farmer* that Peter Le Clair of Winooski, Vt., has purchased a number of superb imported cattle as follows: one Ayrshire bull, Sir Walter Scott, 35 months old; two 2-year-old Ayrshire heifers; one Ayrshire heifer, one year old; one Ayrshire calf, and a splendid Short-horn Durham bull, sired by the famous "Sweet Meat" Durham bull. The mother and one of the two-year-old heifers were purchased by Mr. Stevenson, editor of the *North British Agriculturist*, of Edinburgh, out of the herd of the late Mr. McFerlande Blairnaraid, one of the most noted stock raisers in Scotland. Mr. Stevenson pronounces the mother to be the best blood in the west of Scotland, and says she could not be matched anywhere.

Within a few months past we have noticed the purchase of several other lots of thoroughbred cattle by the farmers of the rich grazing country of the Champlain Valley, and believe that this section will soon become as distinguished for its cattle as it has long been for its horses and sheep. Indeed, the stock from the "Lake country" is already very popular with the butchers at the Cambridge market.

ONIONS AND ONION SEED.

In an account of the farm of Messrs. S. M. & D. Wells, Weathersfield, Conn., by a correspondent of the New York *Tribune*, we find the following statement of their management of the crop for which Weathersfield has a national reputation.

Beside raising vegetables for home use and green fodder for the cattle, these brothers grow annually two or three acres of the best onion seed in the market. Half a ton to the acre is the expected yield, and it brings from 75 cents to $1.50 per pound. Great success has been attained by them in the culture of this crop. In the first place the soil must be remarkably rich, and the richer the better. If kept at the proper height of fertility repeated crops may be produced on the same ground. The Wells Brothers continue to plant onions in a bed which has been used for the same purpose for at least eighty years, and they have found that the finest and longest-keeping specimens come from the oldest gardens.

Their favorite patch is manured each season at the rate of thirty cart-loads per acre. The soil is not less than a foot in depth. Their practice is, as soon as the frost is out, to use a sub-soiler which goes two feet deep. A little later to put in a plough which goes down about four inches, then make the surface smooth and mellow, and plant as early as possible in rows from eighteen to twenty inches apart. For this purpose the Weathersfield drill is recommended for cheapness and efficiency. The cultivation commences about three weeks after the seed is sown, and one of the great principles is to keep the onions perfectly clean. Generally three times weeding will be sufficient, and the crop need not receive attention after the tops shade the ground. The harvesting is done in September, and the best way is to make heaps of forty or fifty bushels each, covered with straw and leaves in the field for a month or more. Six hundred bushels to the acre is a large return, but under the most favorable circumstances 800 bushels can be produced.

For next year's crop it is well to ridge the ground in the fall, and split the ridges in the spring. For new land the best plan is to begin two years ahead and pave the way with corn, and afterward a crop of potatoes. The best manure is that obtained from cattle stalls. Occasionally, if the young blades look pale, a top-dressing of Phœnix guano may be profitably applied. The surest crop is the red Weathersfield, which is large, hardy and strong. For raising seed the same richness of land is required, and the same strict attention to cultivation. The onions are set as early as possible, in rows, forty inches apart, at the rate of 250 bushels to the acre. They can be freed from weeds by the use of a horse hoe. When the tops are ripe enough they are clipped off, dried under shelter, threshed out, and run through an ordinary fanning mill.

CHAPPED HANDS.—Take three drachms of camphor gum, three do. white beeswax, three do. spermaceti, two ounces olive oil; put them together in a cup upon the stove where they will melt slowly and form a white ointment in a short time. Anoint your hands on going to bed, put on a pair of old gloves, and they will soon be well.

For the New England Farmer.

THE HORSE AT AG'L FAIRS.

MESSRS. EDITORS:—I have read with interest the portion of the essay of John M. Smith, Esq., of Sunderland, Mass., copied in your issue of July 18th, upon Horse Racing at Fairs. The subject of the essay, "*The Management of Agricultural Fairs*," is a fruitful one, and I hope to meet with the work in due time.

I also wish to be allowed to express a doubt as to the propriety of accepting in full the inference to be drawn from the quotations referred to. That trials of speed are liable, and often do, take too prominent a place in the exhibitions of agricultural societies, admits of no doubt, and their regulation requires more judgment and care on the part of the managers of such societies than any other part of the exhibition. Yet I am unwilling to believe that it is best to lay aside these trials because they are sometimes badly managed.

Let the breeder of horses answer the following questions in his own mind.

Will a fast, well trained horse bring a better price in the market than one trained and capable of only ordinary speed?

What difference is there in the market value of two finely formed horses of equally good blood and physical qualifications,—one of good fair gait, and the other capable of great speed?

I think there is no question about the market value of speed, other qualifications being equal. If the faster trained horse brings the highest price in the market, why is it not for the breeder's or trainer's interest to show to the public these characteristics, especially in the representative horses of a breed, just as it is for the interest of the sheep breeder to exhibit his Spanish or French Merino, South Down or Shropshire Down, because the wool or the mutton of these breeds bring more than ill bred sheep?

If the public are to be taxed to raise money for a State to expend in the encouragement of agriculture and agricultural shows, why should not all interests be properly protected,—that of the breeder of horses as well as of the breeder of sheep or cattle?

Very few of the people who cry against trials of speed at agricultural shows are aware of the amount of money invested in horse stock, which is benefited by good training and the trials named. The trials of speed are just as legitimate to show bottom, style of gait and training, to perform in company, as trials of draft are in respect to oxen or team horses, or of horses at the plough or mowing machine.

Were horses only wanted to trot on time, and were their market value as great for that purpose, then the suggestions to that end of Mr. Sanford Howard, in the article referred to, might be of weight.

The same gentleman, (and I have the greatest respect for his opinion,) says: "It must be evident that the offering of premiums for mere speed, if it has any influence at all, tends to the production of horses in which the more useful properties are found in an inferior degree." I grant that trials of speed tend to the production of speed; and when breeders are foolish enough to sacrifice the other "useful properties," it may injure such stock for the road, the plough, or general use. But I must differ from Mr. Howard's premises altogether. There is no need of sacrificing any good quality to add speed and confidence in the noble animal, which he takes on, in these trials, as much as the school boy does in a laudable emulation to excel in his studies by public awards and exhibitions. I should be sorry to mislead any reader, but twenty-five years' of experience in breeding and observation, in which I have endeavored to produce the best animals possible,—combining all the characteristics desirable for the gentleman's horses, leaves me confident that speed can safely be added without injuring the other valuable qualifications. I am fully aware that, to a large class, the fine bay, sixteen-hands carriage-horse is the "sine qua non." To the farmer, the horse of all work, —strong and substantial,—is requisite. By the drayman, the horse that approaches the Clydesdale, Percheron or Norman horse, is chosen. Yet, for all this, high speed, especially if good size and color is added, brings altogether the highest price in market, and suits another class. If, then, speed is demanded, why not train it, show it, encourage it?

Again, Mr. Howard writes: "The green horse of the rural districts, unaccustomed to the strange sights and sounds of such occasions, cannot act naturally, and stands no chance with the trained nags of perhaps lower speed." Then why not train them and accustom them to such "sights and sounds" as they will be obliged to meet all their lives about the cities, where they are most likely to be placed? If a horse is green, let him be placed among his class of green horses, which are of little value until they are trained.

And this brings me to a point which is just what I desire the reader to consider. Twenty years ago, in the State of Maine, the money to be made in the sale of horses or in rearing them, was small in comparison to what is realized at the present time. The reason is obvious. Our best animals, of the incomparable old Messenger stock, went to Boston and New York, where their speed was developed, and where they were sold for five times the amount they brought here. Now, thanks to agricultural societies, any farmer has the privilege of showing his horse and causing him to be trained in the company of others, and to get in his own hands an approximate value of his animal, instead of giving it to outsiders, who will train him to speed.

Again, Mr. Howard writes: "Most persons who have witnessed such contests must have proof that the race is not always to the swift."

I admit this. and feel the annoyance as much as any one, that such exhibitions of speed admit of such chances for deception. That there are many dishonest jockeys, I do not question; nor do I doubt that their action, and that of equally dishonest owners, brings much obloquy upon these trials. Nor do I suppose it can be wholly avoided. Still I do believe there are advantages enough to be derived from speed trials at agricultural meetings, if properly conducted by the managers of such associations, to make the breeding of a fast horse a profitable undertaking, and the occasion a pleasant, proper and profitable one.

And although we are "welcome to the unqualified condemnation" of the editor of the *Canada Farmer* for such trials of speed at our agricultural shows, I cannot believe that such condemnation will frighten the managers of our New England fairs into the adoption of such measures as will dissuade the thousands of farmers and breeders within her limits from demanding a fair and judicious share of the public funds devoted to such fairs for the encouragement of that class of breeding in which they are interested; a claim as equitable as that of the cattle breeder, sheep breeder, and mechanic.

As to "whirly-go-rounds," "side shows," &c., it may be as well to have them inside as outside the grounds, where they have a right, and will attract those who wish to examine. I do not wish to be understood as upholding side shows, unless they are of a proper character for amusement or "instruction." But if they will add to the innocent amusement and instruction of a day or two, and at the same time increase the general fund, I am willing to receive them. And as the public is not forced to sustaim them, I doubt not they will suffer them.

According to the statement of our Canadian visitor, who attended the New England show at Concord in 1865, "Nothing was lacking in good order. No intoxicating drinks were allowed to be sold upon the ground, but the objectionable features were trials of speed and side shows." I am aware that trials of speed are not as common in Canada as in the States. But in England, a country that assumes to lead her colonies and the rest of the world, trials of speed are not only occasions of more excitement and interest than all their other exhibitions together, but the staid citizen, the church-goer, and statesman, as well as the tradesman and artisan, make it the occasion of welcome recreation. I have visited the fair grounds of England and France on many occasions of great interest, and may be allowed to say that as far as the morality of such occasions is concerned, I see nothing to make us ashamed of "sober New England."

In conclusion, allow me to express my conviction that the success of agricultural fairs depends upon a judicious unity of all agricultural interests in one show. Catering to the various tastes of all classes, an interested crowd is called out from all departments of life. That there are many who do not care for trials of speed, I do not doubt. There are others who are not interested in swine, cattle or sheep; and others who are not interested in agricultural tools and machinery,—yet each department, well represented, makes an occasion of great interest. Let not the trials of speed overshadow or take too great prominence, but allow them to have such place as shall ensure success; and let the management be such as shall give confidence that the rights of all will be respected and guarded, dishonest jockeys and gamblers notwithstanding. And when such get the reins or on the stand, and it is apparent, let no false delicacy allow them to injure the success of a show.

I cheerfully grant that the great experience of Mr. Howard, and the opinion of our Canadian friend should be fully considered, from their stand point. But let the breeders of horses be heard also.

The New England Agricultural Society has been of the greatest benefit, by stimulating among the people of the New England States a laudable desire to excel in all her varied agricultural interests, and I hope it may not be induced to throw aside its trials for speed; nor can I believe these trials have injured any other interest. Truly yours,

T. S. Lang.

North Vassalboro', Me., July 27, 1868.

For the New England Farmer.

SEEMING INCONGRUITIES.

Said an acquaintance recently, "What is the benefit of continually reading agricultural papers and books, and hearing addresses and discussions, when they contain so much that is contradictory? Some say. phosphate of lime or flour of bone is excellent, indispensable; others declare that equal parts of oyster shells and sand ground together, would produce as much benefit on their land. A few years ago in setting out trees or a vineyard, deep trenching and high manuring were recommended; now it is shallow planting, with little or no manure. One man plants his seed potatoes whole, another cuts them into small pieces, while a third class plant small potatoes, and each claim to have good success. In some localities grass is cut while in bloom, while in others, good farmers say, let it stand until well ripened. Here are some men extolling Jersey cattle, while their neighbors declare they would not farm if they were obliged to keep them. One nurseryman would advise you to buy certain trees or vines; another, only a few miles distant, assures you with equal positiveness that his favorites cannot be surpassed. And so it is, for and against, through all the operations of the farm, and the whole catalogue of fruits and animals. Frequently after searching for information

upon a subject, I am as perplexed and undecided as when I began, and I have almost resolved to discard all reading and advice and rely solely upon my own experience."

Such are no uncommon remarks. And it is not surprising that the mass of diverse and conflicting opinions and statements found in our agricultural periodicals should be a source of bewilderment and discouragement, and that the novice, in his endeavors to learn the truth, is sorely perplexed and often mislead. At first thought, the diffusion of science among the tillers of the soil may seem only to have added confusion to blindness, and to have caused men to take more ultra views and to differ more widely than formerly. Such, however, would be a hasty and unfair conclusion. True science does not thus delude her followers. The apparent want of harmony constitutes no argument against the benefit to be derived from its application to agriculture, nor against book-farming, so called; for men are generally more careful of what they commit to paper, than of their statements in ordinary conversation and discussion. The study of the natural sciences awakens a spirit of investigation, and farmers of the present day are thinking as farmers of no other age have thought. Although the laws of nature applicable to agriculture are plain and simple, yet they cannot be applied with that precision that they can be in the case of the manufacture of cotton cloth or shoes, where a few rules definitely laid down, and all under the control of man, can be observed. In farming every step, every operation, must be modified to suit circumstances; and these ever varying circumstances, under which men act or view a subject, give rise to the great diversity of opinions which unfortunately prove a stumbling block to some.

Massachusetts presents a good illustration of the subject. To one unacquainted with her physical geography, the varied and mixed husbandry here pursued must seem complicated and undesirable, if not unprofitable. He must be not a little puzzled to understand why intelligent cultivators, living in close proximity, should obtain such diverse results, and maintain opinions, and adhere to practices so different. Every theory appears to be rife and to have its supporters; every fruit and vegetable its advocates; every animal its admirers. Yet all this is easily understood when her peculiarities of soil and climate are well known. Probably no other State of its size in the Union contains so many elements which favor a varied husbandry and diversity of practice. Although the extent of latitude is limited, the climatic influences to be taken into account are great. Through the peculiar conformation of the coast, a large portion lies fully exposed to the sea and is tempered by its breezes; while the broken and uneven surface everywhere, gives elevation and depression, aspect and exposure to bleak winds. Add to these the nature of the soil as regards its natural warmth, and humidity of the atmospheres and we have causes fully equivalent to a variation of two or three degrees in latitude. Often killing frosts strike some portions of the farm earlier than other portions. The variety of soil is also great; three and four kinds, each requiring distinct treatment, are frequently found on the same farm. All the various branches of stock farming are successfully pursued within her small limits; the rearing of young, preparing for shambles, keeping cows for butter, for cheese and for milk alone. Thus all the popular breeds find favor in different parts of the State. Certain fruits flourish finely by the sea side which cannot profitably be grown in the middle and western sections of the State. Some succeed better upon our hills than in the valleys or plains. Hence it often happens that men cultivating adjoining lots obtain very different results with the same fruit, and one will condemn what the other praises. I think it safe to say that a larger variety of fruit is raised within her borders than in any other State with the same extent of latitude. With this great variety of soils and crops, whatever may be the season, more than a partial failure rarely occurs.

Thus the seeming incongruities arise from a subject being seen under different circumstances or influences; and if at times men recede from a position which they find is untenable, it only shows they are willing to be taught, and it cannot be inferred from a few retrograde movements that there is not real progress both in the cause and in its followers.

So far, then, from refusing to read or listen to the experience of others, it is all valuable; for in this enlightened age success cannot be ascribed to good luck, to fortune, or to some mystical charm, but is simply conformity to the laws of nature, and failure is the result of nonconformity. Every plant requires just the right kind of soil and atmospheric influence for its successful cultivation, and the profit of any animal depends upon certain conditions which ensure its full development and easy maintenance.

It is the part of science to show the true cause of success and failure, and to shed light where men have hitherto groped in darkness. The enthusiast, stimulated by finely wrought theories, may ride his hobby into ultraism, and the superficialist may send forth his imperfect statements and hastily drawn or forced conclusions to the perplexity of those not well grounded in fundamental principles. But these extravagancies and falacies do not discourage the thorough student of nature, for he quietly discerns between truth and error, and at once seeks to harmonize all apparent discrepancies, knowing that true science can never contradict itself. It is only when men depart from immutable laws, and are guided by their own reasoning and wishes, that their teaching appears incongruous. N. S. T.

Lawrence, Mass., July, 1868.

THE BLUEBERRY.

We have often thought that something might be done in the way of cultivating this useful berry, which can be served upon the table in so many palatable forms. Talking with a farmer from a neighboring town, the other day, we were interested by his experiments in raising blueberries. He commenced by burning over an unproductive field many years ago, and now annually sends to market from three to six thousand boxes. Large numbers go to Boston, and the two principal hotels in this city have taken each seventy-five boxes per day during the season. He burns over his field once in two or three years, and sows each fall two or three bushels of the dried berries.

He pays five cents a box to pickers, and some women earn from $1.00 to $1.25 per day; the berry season is a holiday time with the pickers, and gives the women who spend the rest of the year in sewing for the ready-made clothing dealers, a healthful vacation. Our informant said he had paid $300 a year for the gathering of his blueberry crop, and he found it as profitable as any other crop raised on his large farm. In favorable years, the blueberries had a long season; he had sent them to market as early as the 5th of July and continued up to the 15th of September.—*Portland Transcript.*

LAMB AND GREEN PEAS.

A few weeks since we published a simple prose statement that the hay seed which was scattered into the wool of some sheep belonging to Robert Batchelder, of Salisbury, N. H., while feeding them in the winter, had sprouted on turning them out in the spring, and the sheep were bearing about with them a crop of grass two inches in length. This story probably reached the poetical editor of the New York *Mail* on one of our late hot days, and this is the way he tells it:

This is the most interesting story that ever we have seen, concerning some New Hampshire sheep who are wearing of the green. 'Twas related by a person on whose honor, we rely, he never hack-ed cherry trees, and—shouldn't tell a lie. Robert Batchelder, this was the shepherd's name, and he pastured twenty-eight sheep on Salisbury plain. But when the leaves had fallen, and November winds were chill, why out on the open wold they couldn't get their fill. So Bobby kindly put them in a well protected shed, with hay enough to feed them, in the mow up over head. And the seed it sifted down and it lodg-ed in their wool, and there it did remain, till the April moon was full. And then out went the mutton, all in the rain, you know, and, in less than twenty-one days, the seed began to grow; and it grew, and it grow-ed like the bean in fairy song, and now the grass upon their backs is more'n two inches long. And, it is expected, that, later in the year, red, fragrant clover blossoms will appear. The moral of this sheep tale is clear to every eye, that by judicious management, if a person cared to try, he might, with little trouble, and with aid of rainy weather, have his lamb and green peas growing up together.

EXTRACTS AND REPLIES.

FALL CATERPILLARS.

Having been a reader of the FARMER for several years, I see you answer all kinds of questions, but I am not sure that one whose schoolhouse was a ship's forecastle, whose pen was a marline-spike, and whose ink-stand was a bucket of slush, will be allowed to "heave up" a query. But I should like to ask how to expel a new sort of web caterpillar, that commences on the ends of the branches of my young orchard?

FAILURE OF SCIONS.

I wish also to ask why scions have not taken as well this year as usual? Did the warm weather that we had in March cause the sap to start too soon?

CANCER IN A COW'S EYE.

Can you or any of your readers tell me what to do for a cow that has a sore in her eye that appears like a cancer? JACK.

East Jay, Me., July 21, 1868.

REMARKS.—A college education, of which our correspondent informs us he is deficient, is not a necessary qualification for admission to our list of correspondents. Nor is it a requisite to usefulness in life generally, however convenient and advantageous it may be to those who possess it. In relation to your web caterpillars, we know of no other way to expel them than to pick off the leaves on which they first appear, or if they get too large a web, cut off the end of the branches to which they are attached, and crush the worms under foot. Undoubtedly you knew that could be done before you asked for an easier way, and perhaps will hardly feel that our advice is worth asking for. We have kept our own trees clear by hand picking; but if any of our readers know of a better way we shall be glad to publish it.

This insect is comparatively new in this section. The first description of it ever published was in the NEW ENGLAND FARMER of August 22, 1828, written by the late Prof. J. W. Harris. He gave it the name of Fall Web-worm. The moths which lay their eggs on the leaves, near the end of a twig, appear in June and July, and the eggs hatch in July and August. The young caterpillars at once begin to build a shelter for themselves, by covering the upper side of the leaf with a web. A labor in which all hands engage. Having erected their tent they feed in company beneath its shelter, devouring only the upper skin and pulpy portion of the leaf, leaving the framework and lower skin of the leaf untouched. As they increase in size

they enlarge their web, carrying it over the next lower leaves, and thus continuing downwards till a large portion of the branch is covered, with a dry, brown and filmy foliage. These caterpillars, when fully grown, measure more than one inch in length; their bodies are slender, very thinly clothed with hairs of a greyish color, intermingled with a few which are black. The general color of the body greenish yellow, dotted with black; there is a broad blackish stripe along the top of the back, and a bright yellow stripe on each side. In September they leave the trees, disperse and wander about, eating such plants as happen to lie in their course, till they have found suitable places of shelter and concealment, where they make their thin and almost transparent cocoons, composed of a slight web of silk intermingled with a few hairs. Here they remain in a crysalis, till transformed to moths, as before stated, in June and July. Such is Mr. Harris's description of what we suppose to be the caterpillar that you wish to expel. Please watch them and let us know whether we are correct in our supposition.

As to the failure of scions, we believe that it has been more difficult to graft apple trees for several years past, than it was formerly. There appears to be less vigor and vitality, or rather, perhaps, a greater want of hardiness in the apple tree than there was when apples were a sure crop. The cause of this general debility is not known. We had not before learned that the present season has been particularly unfavorable. Will others give our correspondent their views on the subject?

Without a more definite statement of the character of the sore on your cow's eye, we cannot venture to offer any opinion as to the proper treatment. We should hope it was not cancerous.

TO PREVENT WINTER KILLING OF STRAWBERRIES.

Will you please inform me through your columns of Extracts and Replies, the best method of preventing strawberry vines from winter killing?

Methuen, Mass., July 22, 1868. E. F. S.

REMARKS.—As a winter protection, as furnishing a clean bed for the fruit, and as a dressing for the soil,—three birds with one stone,—we have applied leaves and woods mould with very satisfactory results. One bed of considerable size thus treated, fruited well for three years, and bore some for a year or two afterwards, by merely pulling up the stronger weeds. In his Small Fruit Culturist, Mr. A. S. Fuller says:—"In many portions of the country a winter protection to strawberry plants is very beneficial, if not positively necessary. Some of our most successful growers in the Northern States never fail to protect their plants, and without doubt they are amply repaid for the expense incurred. For my own part I never have had a full crop without giving protection, and never expect one. The embryo fruit buds are formed within the crown of the plant in autumn, and therefore it must be apparent that sudden transition from heat to severe cold will very much weaken if not wholly destroy them. In sections of the country where the plants are covered with snow during the entire winter, other protection is not so important as where there is little snow, but continued freezing and thawing. It is not expected nor is it desirable to protect the plants so that they shall not be frozen, but merely to shade them, and prevent their being affected by every little change in the weather. A covering of straw, hay, leaves, or any similar material, to the depth of one or two inches will usually be sufficient. Every one ought to know, if he does not, that frozen plants thawed out in the shade are less injured by frost than when fully exposed to the light; and this is another reason why strawberry plants should be covered in winter, because, if the weather should be very changeable, they will be less liable to injury than when fully exposed to light."

SELF-HEAL.—*Prunella Pennsylvanica.*

As the time has arrived when farmers get poisoned with ivy, I send you my remedy, which I have never known to fail in a single instance. It is a plant which grows in all our fields and by our road-sides. I have not learned its name, therefore I enclose a specimen.

The stalks and leaves should be pounded and the juice rubbed on the parts affected.

Maine, July 13, 1868. RICHARD.

REMARKS.—The plant enclosed was recognized by Mr. Joseph Breck, author of the New Book of Flowers, to whom it was shown, as the *Prunella Pennsylvanica* of most botanists, and is familiarly known as "Self-heal" or "All-heal." In Darlington's book on American Weeds and Useful Plants, the name is derived from *Die Braeune* the German word for *quinsy*, for which and for other throat diseases it has been considered a cure, and he spells it "BRUNELLA, *Tournef.*" He says it appears to be distributed over the four quarters of the globe, but he judges it is not a native here. Its ancient reputation for healing wounds, he thinks is not sustained in modern times. We might attempt a description of the plant sent by our correspondent, but as it is somewhat wilted, and as we have no great skill in that line, we copy the rather scientific language of Mr. Darlington, hoping that with the aid of a good dictionary our readers will be able to recognize the plant, if they do not know it by the common names of "Self-heal," or "All-heal."

Stem 8 to 12 or 15 inches high, erect or ascending, somewhat branched, especially at base. *Leaves* 1 to 3 inches long; *petioles* half an inch to 2 inches long (those of the radical or lower leaves often 3 to 4 inches long); the *floral-leaves* bract-like, orbicular-cordate, sessile, with a short abrupt acumination, the lower ones conspicuously acuminate. *Cymules* 3-flowered, crowded into compact imbricated oblong terminal spikes. *Bracteoles* none. *Corolla* violet-purple (rarely pale purple or nearly white), smoothish. Common in fields, roadsides, open woodlands, &c. Flowers from July to September.

Calyx tubular-campanulate, about 10-nerved, reticulately veined, bilabiate,—the upppr lip flat, dilated, truncate, with 3 short-teeth—the lower lip bifid, segments lanceolate. *Carolla* with the upper lip erect, vaulted, entire—the lower lip depending, 3-lobed, middle lobe rounded, concave, crenulate; *tube* a little contracted at throat, inflated below it on the under side, with an *annulus*, or little ring of short hairs or scales, near the base within. *Filaments* 2-toothed at the apex, the lower tooth bearing the *anther*. *Perennials* with few-flowered *cymules* clustered in imbricated spikes or heads.

TRIMMING BOX HEDGES.

What is the best method of propagating, and manner and time of pruning. A. S. B.
Guilford, Vt., 1868.

REMARKS.—The Box is a delicate European shrub, and may be pruned to any shape to please the fancy. Mr. Copeland recommends that they be trimmed in August, that they may make a new growth before winter. It is easily propagated by cuttings, but it is well to protect the young plants in dry weather and in winter by a light mulch. There are several varieties, among which are the Dwarf and Tree Box. It was customary in the old English gardens to clip Box trees into the shape of beasts, birds, and other fantastical forms. In his Book of Flowers, Mr. J. Breck, says:—"I noticed in an old garden, a few miles from Boston, a small parterre, which was laid out in the year 1794; the beds were all edged with box, which had for more than 60 years, been regularly trimmed. The edging was about six inches thick, and at least four feet high. The sides were smooth and the top even, without any break in the foliage from the ground to the top. Great attention had been given it by the old lady who was in possession, that it might remain as it was at the time of her husband's decease, many years before. The beds of various shapes were small, so that no plants could flourish, and the only thing of interest about this strange arrangement was, as a relic of olden time. If Box is used for edging, it should, in all cases, be kept low, by regular trimming every year, and kept down to the height of not more than four or five inches; and when it becomes too thick, should be taken up and re-set."

POTATO SLUGS.

Seeing in the papers of the day frequent reference to the potato bug, which has vexed the western fields, I would like to inquire through your paper, whether the depredations in our vicinity are the same. For several weeks the potato vines about here have been infested with something which seemed to be either a bug or a slug without wings, of a yellowish brown, very slow of motion, many of them with apparently excresences or bunches of a dark green color on their backs, which seemed to me to be the germ or egg of a second crop of the same disgusting things. As far as my observations have extended, they have chiefly confined their ravages to the Sebec potatoes, a car load of which was sold here last spring for planting. Perhaps these are more susceptible to disease, being very early and delicate. I noticed that these potatoes had the appearance of being diseased before planting, and it may be that to them we shall be indebted for another enemy. I have seen no potatoes of this variety that were not attacked by these bugs. The vines themselves seem to show the effects of their work in different ways, some hills appearing to have stopped growing and to be diminishing in size; others falling down wilted and decayed, and most of them having very much the appearance that they had when the potato rot was prevalent, with the addition that the ends of the vines are eaten off. Since writing the above, I find that my Orono potatoes are affected slightly in the same way, but not seriously as yet. Can you give us a description of the potato-bug, or tell whether this is the same? W. P. L.
Newburyport, Mass., July, 1868.

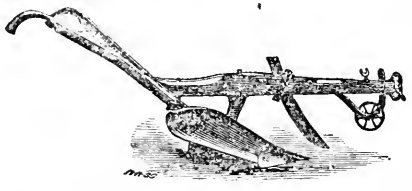
REMARKS.—The "disgusting things" which infest your potato vines are a very different beetle from that which is making such fearful havoc in the western fields.

Yours is the three-lined leaf-beetle, *Crioceris trilineata*, of which Mr. Harris gives the following description and history. "This beetle is about one quarter of an inch long, of a rusty buff or nankin-yellow color, with two black dots on the thorax, and three black stripes on the back, namely, one on the outer side of each wing-cover, and one in the middle on the inner edges of the same; the antennæ (except the first joint,) the outside of the shins, and the feet are dusky. The thorax is abruptly narrowed or pinched in on the middle of each side. When held between the fingers, these insects making a creaking sound like the Capricorn-beetles. They appear early in June on the leaves of the potato vines, having at that time recently come out of the ground, where they pass the winter in the pupa state. They eat the leaves of the potato, gnawing large and irregular holes through them; and, in the course of a few days, begin to lay their oblong oval golden yellow eggs, which are glued to the leaves, in parcels of six or eight together. The grubs, which are hatched in about a fortnight afterwards, are of a dirty yellowish or ashen white color, with a darker colored head, and two dark spots on the top of the first ring. They are rather short, approaching to a cylindrical form, but thickest in the middle, and have six legs, arranged in pairs beneath the first three rings. After making a hearty meal upon the leaves of the potato, they cover themselves with their own filth. The vent is situated on the upper side of the last ring, so that their dung falls upon their backs, and, by motions of the body, is pushed forwards, as fast as it accumulates, towards the head, until the whole of the back is entirely coated with it. This covering shelters their soft and tender bodies from the heat of the sun, and probably serves to secure them from the attacks of their enemies. When it becomes too heavy or too dry, it is thrown off, but replaced again by a fresh coat in the course of a few hours. In eating, the grubs move backwards, never devouring the portion of the leaf immediately before the head, but that which lies under it. Their numbers are sometimes

very great, and the leaves are then covered and nearly consumed by these filthy insects. When about fifteen days old they throw off their loads, creep down the plant, and bury themselves in the ground. Here each one forms for itself a little cell of earth, cemented and varnished within by a gummy fluid discharged from its mouth, and when this is done, it changes to a pupa. In about a fortnight more the insect throws off its pupa skin, breaks open its earthen cell, and crawls out of the ground. The beetles come out towards the end of July or early in August, and lay their eggs for a second brood of grubs. The latter come to their growth and go into the ground in the autumn, and remain there in the pupa form during the winter."

FALL PLOUGHING.

In connection with an article on this subject in another column, we wish here to direct attention to a series of ploughs which are adapted to all soils. We allude to Holbrook's National Prize Medal Ploughs, one of which is represented by the cut.



These ploughs do a quality of work which no skill in spading can equal. Six sizes are made. Four of the large sizes are arranged for two mould boards—one for sod and one for stubble ploughing. A skim or forward plough can also be attached to either of these large sizes for "Michigan," or sod and sub-soil ploughing. They are manufactured and sold by F. F. Holbrook & Small, 10 South Market Street, Boston.

MAKING PICKLES.—CANNING TOMATOES AND CORN.

Please inform me, if possible, through your paper, how cucumbers are pickled for market, also how tomatoes and green corn are canned in tin cans, and oblige SUBSCRIBER.

Shelburne, July 30, 1868.

REMARKS.—Large space would be required for full answers to these short questions. As to pickles for market we believe they are generally preserved in salt, and then put into vinegar. We will try soon to get a full account of the process from some of the pickle-makers in this vicinity. In the mean time we copy the following from the *Country Gentleman:* They should be one-third grown. Cut them off with scissors, leaving about half an inch of stem—if cut with a knife it will displace the vines, and if pulled off by hand, a small torn place will be made, where decay will commence. Wash or rinse each one in a vessel of water, and without wiping, lay it in the tub, cask or jar, intended for the cucumbers. Put in just enough salt to imbed them without interstices. The water on them will make a strong brine, or rather mixture of brine and salt, in which they will keep months and years, and in this state they are sold. They are afterwards make into pickles. Many, however, who raise cucumbers sell them in the city as they are picked from the vines.

As to canning corn, we believe that the drying process described in another column will be found the safest, surest and easiest.

The canning of tomatoes is done by scalding and peeling the tomatoes, throwing them into a kettle, —iron will do if not rusty—bringing them to a boil and allowing them to remain about five minutes; then take the kettle off the fire, fill up the cans and solder on the caps. That's all. But how many fail in their attempts at canning? And why? Simply because they don't understand the trade. It is very easy to tell on paper how to make good butter, but not quite so easy to learn. In the first place, good tight cans are essential. If there is any defect here, the labor is lost. Then the proper cooking, heating, filling, &c., are conditions that imply skill and experience. And lastly comes in play the exercise of the art and mystery of the tinker's profession. How many cans of fruit have been lost by imperfect soldering! After the soldering iron, the solder, the rosin, &c., are all made ready, the following directions for doing the work are given, by a correspondent of the *Country Gentleman*:—"In filling up the cans, if any of the juice is spilled into the gutter wipe it out with a dry cloth. Having adjusted the cap, sprinkle a little powdered rosin around the edges; then taking the hot iron drop three or four little globules of melted solder around the gutter and pass the iron around till all is fast. The heat of the iron, together with the hot tomato, will cause a considerable escape of steam during the process, and if it has to force its way out under the edge of of the cap, it will be difficult to make the solder stick. It is best, therefore, to punch a hole in the centre of the cap for the escape of the steam. The hole can be stopped by a drop of solder after all is tight around the edge."

MILDEW ON GOOSEBERRIES.—TRIMMING WHITE PINE GROVES.

Can you give any remedy for mildew on gooseberries? What is the best time for pruning white pine groves? A. S. B.

Guilford, Vt., 1868.

REMARKS.—As the gooseberry in this climate suffers from heat and drought, the cultivator should guard against their effects, by choosing a cool, moist soil, by deep cultivation,—some say two spades,—and by thick mulching. A writer in the New York *Horticulturist* planted in rows three-and a-half feet apart each way and trimmed to single stems. Early in November, after pruning the plants and dressing the borders—digging in plenty of stable manure,—he hauled several loads of tan and covered the bed six inches thick, and there it remained all winter and "still remains." The re-

sult was the healthiest bushes and the finest fruit he ever saw. The north side of a fence,—all the better if whitewashed,—is considered a good location. Mr. Cole recommended salt hay, sea weed or any other litter, for mulch, with two quarts of salt to a square rod, around the bushes. Lime and sulphur incorporated into the surface soil are said by some to be good against mildew. A slight sprinkling of wood ashes on the young leaves is also thought to be beneficial.

At page 82 of the present volume of the MONTHLY FARMER you will find a practical article by B. F. Cutter, of Pelham, N. H., a gentleman of large experience and extensive observation. He would trim while the circulation of the tree is comparatively dormant, say from November to February. Mr. Cutter's article appeared in the WEEKLY FARMER of December 28, 1867.

CURRANT WORMS.—TRANSPLANTING AND SOIL FOR CURRANT BUSHES.

I have some currant bushes, which have been rather neglected, and this summer there suddenly appeared a formidable army of currant worms. I at once applied a mixture of lime, wood ashes, and plaster, as recommended in the FARMER, with perfect success. One thorough application routed the main body, and a second dose disgusted the most inveterate lover of "greens," in the shape of currant leaves, and sent them probably where the NEW ENGLAND FARMER, with its timely suggestions, is not found.

Will not removing the old wood, dividing the roots, and transplanting to a new place, tend to keep them free from this pest, and also improve the fruit in size and flavor? When is the best time to do this, and in what kind of soil do they thrive best? RUSTICUS.

Southboro', Mass., Aug. 3, 1868.

REMARKS.—The currant being very hardy grows in almost any soil and under almost all circumstances. But it does best in a rather heavy, deep and rich soil, and with good cultivation. If transplanted, as you propose, in the fall, they may bear some next season. Cuttings, although they will not bear as soon as those transplanted, are preferred by some. Suppose you try both plans for an experiment. Cuttings may be put in the ground either in the fall or spring. If set in the fall, cover with straw or other mulch, which may be removed in the spring. Take good strong branches of this year's growth, six or eight inches long, cutting them smooth just below a bud.

COTTED OR FELTED WOOL.

An "Old Subscriber" inquires in the FARMER of August 1, the cause of matted or felted wool. Having often thought of this subject when shearing the few specimens I have met in taking off more than a thousand fleeces, I respond by giving my opinion.

It is caused by a lack of oil or yolk in the wool; a secretion that shows itself plainly on those sheep whose wool is most valuable for felting purposes, as the merinos, and appears less as the wool is coarser, and almost disappears in wool that approximates to hair. If the sheep, either from sickness or poor feed, has during the growth of the fleece, ceased to secrete yolk or oil, the wool, becomes dry, and the friction of the wool as the sheep moves about among the flock, as it feeds from the rack, and, if it is afflicted with ticks, as it rubs itself against the wall or fence, causes the wool to felt. It is said that every fibre of felting wool has minute hooks upon its surface, visible through a microscope, that interlock, or catch together, in the felting process. When there is abundance of yolk in the wool these fibres do not entangle as the sheep moves its head from side to side, or as it presses its way among the flock. Besides sickness and poverty, there is sometimes another cause. A heavy drenching rain or a thorough washing will take out this yolk, and if followed by cool weather, the wool will sometimes, though rarely, dry so as to felt on a fat sheep.

Usually at shearing time, say the middle of June, the sheep has begun to gain, and the wool begun to grow, so there is loose natural wool, a quarter of an inch long, under the matted fleece. It is fortunate for the sheep and the shearer when this is so, for to cut through a cotted fleece is a work requiring patience and time. To avoid raising such wool, keep the sheep fat or thriving, then the wool will grow continuously and not felt.

Wool sometimes looks yellow when it is not cotted, and buyers dislike it. This yellow appearance is sometimes caused by imperfect or superficial washing. The wool is so saturated with water that the yolk and dirt are all afloat among it, but instead of continuing the washing till these are removed, the sheep is let loose and the dirt settles to the skin, which causes the fleece to appear worse than if unwashed. The yellowness is sometimes in stripes down the sides, although water had soaked through the wool and run down on the body. But all yellowness in the wool cannot be accounted for in this way. Some sheep kept well sheltered and unwashed will shear beautiful white wool, while other sheep in the same flock have fleeces very yellow. I cannot explain this.

Irasburg, Vt., Aug. 3, 1868. Z. E. J.

A FUNNY NOTION

Of some people is, that editors are so excessively belligerent that a very slight rubbing of their ears is sufficient to engage them in any quarrel. A correspondent, who has not pluck enough to write his own name, wishes us to publish "in good shape" certain accusations against certain tavern keepers for exorbitant charges. If our friend was green enough to pay double price for a "breakfast and horse-baiting" we should feel inclined to "pitch into" him, rather than attempt to disfigure the "mug" of one who holds that a thing is worth all it will fetch, were we disposed to shake our "death maul" in the face of either party. But we don't train under any captain that is ashamed of his flag.

Moral.—Don't write anonymous communications.

DRIED GREEN CORN.

A lady whom we regard as one of our best neighbors and as a model house-keeper, remarked to us the other day, that she had never seen her process of preserving sweet corn for winter given among the cooking receipts which she had read in the FARMER or in other papers, and that she thought it was not so gener-

ally known as it ought to be. She remarked that her family were quite fond of it, and would be very unwilling to do without it, when fresh vegetable food is as scarce as it generally is during our long winter season. Late in the season when sweet corn becomes plenty, she boils a kettle full at once, cooking it just as for table use. The kernels are then cut from the cob, placed on tins, and dried by the stove. It might be dried in the sun, but as her cooking stove furnishes good conveniences, she has never tried that plan. When sufficiently dry it is tied up in cloth bags, to keep out insects, &c., and kept in a dry place.

To prepare it for breakfast, if she has plenty of milk and thinks there is no danger of its souring, the corn is soaked over night in cold milk. But if there is danger of the milk souring it may be heated before being pouring upon the corn. If milk is scarce, the corn may be soaked in milk and water, or even in clear water. Milk, however, adds much to its palatableness. In the morning, it is put upon the stove and warmed and then buttered and salted to taste. In her family, she says it is as much the standard dish for Sunday breakfast, as pork and beans ever were for dinner. It is also often called for, and always welcomed as a luxury, at other meals.

For the New England Farmer.

FALL PLOUGHING.

Without elaborating the many strong points in favor of Fall Ploughing, a few of the more prominent benefits may be briefly stated as follows:—

1. August and September is a good time to turn over bound-out sod land and manure and re-seed it at once to grass, obtaining a crop of hay the following year.

2. October and November is an excellent time to break up sod land for planting the following spring.

3. The weather is then cool and bracing and the team strong and hearty for the work; while the weather in the spring is more relaxing and team less able; and spring work being always hurrying, it saves time to despatch as much of the ploughing as possible during the previous autumn.

4. Sod land broken up late in autumn will be quite free from growing grass the following spring; the roots of the late overturned sward being so generally killed by the immediately succeeding winter that not much grass will readily start in spring.

5. The frosts of winter disintegrate the ploughed land, so that it readily crumbles in fine particles in spring, and a deep, mellow seed-bed is easily made. The chemical changes and modifications resulting from atmospheric action during the winter, develop latent fertility in the upturned furrows, which, together with the mellowing influences, materially increase the crop.

6. Most kinds of insects are either wholly destroyed, or their depredations materially checked, by late fall ploughing, especially the common white grub and the cut worm.

7. Corn stubble land may be ploughed late in the fall, and thus be all ready for very early sowing in spring, thereby going far to insure a good catch of grass; the roots of the new seeding getting hold well, or being well established, before the droughts of summer come on.

8. Most land in New England needs deeper ploughing than has generally been practiced. Where the subsoil is fine grained, and unctuous, and close, or where there is a hard pan of good quality, deep ploughing may be at once resorted to, with decided advantage. Where the subsoil is poorer, the ploughing may still be advantageously deepened by degrees, say an inch at each new breaking up. But in by far a majority of cases, deep ploughing may be practiced at once—indeed it may be the *rule*, with safety, while shallow ploughing may be the *exception*. Plough say nine, ten, eleven or twelve inches in November. The subsoil turned up will grow several shades darker by spring. The frosts and atmospheric influences of winter will mellow the soil. The inorganic elements and all latent fertility will be made more active for benefiting the crop. In spring spread the manure and plough it in or otherwise work it in or mingle it with the soil to the depth, say of four inches, or a little more or less, and you have the very best attainable conditions for realizing good crops. Deeper ploughing may thus be practiced than would at all times be safe or expedient, if the ploughing is delayed till spring. H. F.

August, 1868.

TROTTING HORSES IN MICHIGAN.—The President of the Michigan State Board of Agriculture, in his Address to the members of the executive committee at their annual meeting in Detroit, makes the following remarks on this subject:—

"The desire to breed fast running, and fancy trotting horses, without regard to other qualities, has had the effect of lessening the value, and lowering the standard of horses in this State. In my opinion, we should encourage the introduction of horses of fair size, weight and action that are so desirable in the first class carriage horse."

—The Marshall, Iowa, *Times*, speaks of one farmer in that section who has 120 acres, and of another who has 40 acres in white beans.

Ladies' Department.

DOMESTIC ECONOMY;

OR,

HOW TO MAKE HOME PLEASANT.

BY ANNE G. HALE.

CHAPTER XIV.

FOOD AND ITS PREPARATION.

To say that the happiness of a household depends largely upon the diet of its members, may seem a strange assertion to some of my readers; but those who have noticed the dejected countenances, no less than the feeble frames, of dyspeptics, have heard from these victims of indigestion querulous accounts of the effects of innutritious and unwholesome food, or have themselves experienced the inertia, the stupidity, the melancholy, resulting from a thoughtless choice of viands, or the mistakes or misfortunes of the cook, will be ready to acknowledge that improper food affects the mind as well as the body. And those who are observant of such matters will be quick to see that the vivacity, the cheerfulness, and the hopeful enthusiasm that are needed to carry us easily along the rough and uncertain paths of daily toil and trouble, are more frequently helped and promoted by the elevated tone of the system induced by a wise regimen of food for the body, than by any mental bias or moral discipline.

But nothing save close attention and careful practice can qualify any one to furnish the table with nice and at the same time healthful and economical dishes. And while all housewives are aware how important is the duty of preparing and providing proper and palatable food for the family, they know well how difficult and unsatisfactory the work is,—there are so many variable appetites, and such a diversity of tastes, to cater for: no wonder that blunders are made, and waste incurred in attempting to suit them all, and the strength and patience of many a good woman exhausted—to say nothing of her regrets for misused time. Hoping to obviate these defects, or to expedite or simplify her labors, every housekeeper is eager to avail herself of the experience of others in these matters, so that the cookery-book and the thousand and one receipts of ladies' magazines and albums are in constant requisition. But these are daily receiving additions from the fastidious and the whimsical, and young housekeepers, instead of gaining help from them, are too often bewildered and perplexed by their elaborate rules, and in following them find the labors of the kitchen increased and their ideas of economy set at defiance.

The truth is Americans cook too much. Everything that we eat must be baked, boiled, stewed, or fried,—sometimes served in all these ways,—or disguised with spice, grease, or sugar, till the most nutritious qualities of all articles that come under the head of food are either lost or changed into something delcterious. If a reform in this could be effected not only would our dyspeptic friends soon regain health, and vigor, but hours and hours now spent by the overtasked and anxious housewife, in great discomfort, by the side of blazing ovens, and over scorching and steaming ranges and stoves, would be redeemed for loftier purposes.

The readiest way to bring about such a change is, undoubtedly, to bring up children on plain, wholesome fare; keeping their natural taste for such food clean and hearty, by allowing them a reasonable variety. Give them different kinds of good, light bread, with plenty of fruit, fully ripe, —either in its natural state or now and then simply stewed or baked,—honey, or maple syrup, and they will never want rich cake or pies or preserves. Pickles, "the Yankees' sweetmeats," forbid, as if they were poison. Fresh vegetables, too, boiled, or baked, with only the seasoning of a little salt, or a trifle of nice butter, and a moderate quantity of good, but simply cooked, animal food; plain broths, or soups, in plenty, but not gravies nor sauces; puddings, also,—light and good—not rich. All these things children like, and they are healthful. A little plain cake or gingerbread occasionally does not come amiss, to be sure,—and is not to be censured—so far as health is concerned. Still, fruit is far preferable; and is, in the end, more economical, when we take into consideration the time and strength of the housewife. Its free use affords her great relief from anxious and wearisome labor, and its nutritive qualities being so high—superior to many kinds of animal food—it ought to be considered as much a regular article of diet as bread—no meal should be deemed complete without it. Those who are in the habit of loading their stomachs with cake and pastry, have no idea of the refreshment afforded even by so simple a repast as good bread and well-ripened apples or pears, peeled and sliced-tomatoes, peaches, cherries, currants, and all sorts of berries, are most delicious accompaniments to the bread; eaten raw, with the addition of sugar, if you choose,—and form a dish fit to set before a king.

People are beginning to see the value of fruit for this purpose. When it is considered an indispensable article of daily fare, one strong chain of woman's servitude—in the shape of cake and pastry making—will be broken. Till then we must have the old recipes of butter and sugar and spices and eggs, with their bewilderments of weights, and measures, and "thingfuls;" and aching arms and shoulders and wrists, from pounding, and crushing, and sifting, and beating, and whisking, and

stirring. So these papers on cookery must include directions for these things. But we will begin with the most important of all food, *bread.*

In the outset let me say, *it is always the best economy to cook well!* and no good cooking can be accomplished without good materials. Inferior, impure, unripe, carelessly prepared, or too long kept groceries, besides trying the patience of both cook and consumer, are neither nutritious nor healthy;—get only the best. These are not always the highest priced. Fancy names or brands and showy wrappings cost high, and too often help to sell a poor article; avoid them,—look for less pretentious things, and when you have found the right quality of goods, note its peculiarities and be satisfied with nothing else in all future purchases.

Don't buy new preparations unless you have full confidence in those who recommend them.

Having chosen your groceries well, keep and use them with care and prudence. "A place for everything and everything in its place," important rule as it is for every room in the house, is doubly so for the store room and kitchen. No little waste is occasioned, even by good managers, by carelessness here. Be sure that salt or sugar is not suffered to remain in a damp closet; spices, seasoning herbs, tea or coffee, uncovered, or in the glaring sunlight; lard, butter, cheese, molasses, or syrup in the heat; flour, meal, rice, sago, and such, things, neither in heat nor dampness. See also that all kitchen ware and utensils are made clean after usage and placed so as to keep so till wanted again.

Use crockery or stone ware for mixing or for holding food; it is stronger than potter's ware, and there is no danger of poison from the glazing, as there is in that. Iron stew-pans and kettles are better than copper or brass; in fact, copper and brass are so difficult to keep from canker—which is poisonous—that they ought to be banished from the kitchen. Nothing is so good, however, as the yellow crockery, or the porcelain-lined cast-iron ware for stewing and boiling; sheet-iron, if tinned, or the common tin ware, gives a disagreeable flavor to acids, though it answers for other things, and is very suitable for baking pans. Keep wooden utensils where they are not damp, nor yet warped with the heat. Keep butter and lard either in stone pots or oaken firkins—pine imparts its flavor to such things, and the glazed ware gets saturated and rancid with them. Bread retains its moisture and sweetness in stone pots, or closely covered tinned ware—stone is best.

Raised or leavened bread is in most common use. Unleavened, or quickly raised bread, is convenient at times. This comes under the head of johnny—more properly *journey*—cakes. The name is said to have been given them from their resemblance to the unleavened bread of the Jews, which is still used by them in commemorating their hasty departure out of Egypt before their long journeyings in the wilderness. It is the only kind of bread in use at the present day among wandering tribes and half-civilized nations of Asia and Africa; among the gipsies also of Southern Europe and the peasantry. It is merely pounded or coarsely ground wheat, millet, or barley, mixed with water, and baked flat and thin in their rude ovens of heated stones. From these came the black bread of Prussia, Sweden, and France; the bannocks and oatcakes of Scotland; the hoe cakes of our Southern States, and our Yankee fire-cakes and johnny-cakes; which are made of scalded Indian meal, sometimes of Indian and rye, or of wheat—meal or flour—with occasionally a little saleratus as a slight leavening power, and, for a change, a small quantity of shortening—cream or lard,—and as a luxury a spoonful or two of molasses, when a sweet cake is desired. These are baked—the hoe cakes upon the metal of a clean hoe, in front of blazing pine logs; the johnny cakes before a clear fire, on a piece of board or the gingerbread-tin of the farmer's wife; the fire cakes in the old-fashioned Dutch oven, hung over glowing embers,—the lid or cover of the *kettle* called *oven*, holding hot ashes and coals so that both sides of the cake are baked at once; a great improvement this upon the turning and slipping of hoe and johnny cakes to finish the work.

Since the general use of stoves some persons, intent on keeping up old names, make what they call johnny-cakes, delicate mixtures of superfine meal, and flour, and milk, and eggs, and shortening, and spice, and cream, and—I dare not enumerate all the other "ingrejiencies," as the old cook calls them in Douglas Jerrold's story, where, in her potato pudding, one potato did service with dozens of eggs and bottles of wine; this new-fashioned johnny cake being something after that style—and these are baked in the stove oven, and because of the name considered simple and wholesome. *Economical* they certainly are not, either in cost of original materials, in cost of time for compounding them, or cost of money for medicines to correct indigestion—which surely follows their consumption. Let us reject such things, libels as they are on good, healthful, substantial food, and if we do not care for the real, old-fashioned johnny cake take the modern biscuits when leavened bread is not available.

Leavened bread pre-supposes a raising power,—yeart, barm, or emptyings, as it is called in its liquid state—turn-pikes, yeast cakes, or yeast flour, in its concentrated and dry form. The dry, or hard yeast, is the most economical, and can be kept much longer than the liquid. To make this, put six quarts of cold water to a quarter of a pound of hops and two cups of wheat or Indian bran, and boil it till there is left but three quarts. Strain the liquid, while boiling hot, upon four cups of flour, with which has been mixed a tablespoonful of salt, in a wooden vessel. When it is cool, add to it a pint of barm, or liquid yeast, or two yeast cakes broken up. Keep it in a warm place, and the next day, if it foams strongly thicken it with Indian meal till it can be moulded with the hands. Then roll it into sheets a quarter of an

inch thick, and cut it in squares of one and one-half inch. Spread these on a table in the sunshine where there is plenty of air, turn them every morning till they are perfectly dry, then pack them in boxes, away from heat and dampness. Some persons break these cakes and keep them thus, in the form of meal or yeast flour, but they retain their virtue better packed whole.

Six hours before you wish to make bread take one of these squares and dissolve it in a pint of lukewarm water; afterward stir in flour enough to make a batter, and set the mixture in a warm place. At the same time sift your flour for the bread; and keep it in a broad pan, in the sunshine, or by the fire, till the yeast is foaming highly. Then take for six loaves—a foot long, four inches wide, and five inches thick when baked—two quarts of flour, to which has been added an even teaspoonful of salt, twice that quantity of lard and two even tablespoonfuls of sugar. Pour upon this slowly, stirring it constantly—so that it shall be smooth—two quarts of boiling water. Let it set till cool; if the flour swells so that it is stiff, add warm water till it is of the consistency of batter. Pour in your yeast, and thicken with flour till it is as stiff as you can mould it with your hands. Cover it with a deep pan, throw a cloth over it, and set it in a warm place. If made in the evening it will be ready to bake in the morning.

Brick, or house ovens, vary so much in size and capacity for retaining heat that it is impossible to give any definite rule for heating them; but to bake bread well, hard wood should be used,—and the same for meat, beans, and thick loaf-cake—soft wood answers very well for everything else. The ovens of stoves and ranges should be hot enough to hiss loudly at a sprinkling of water if bread is to be baked, and the heat kept up till it is done; for loaves of the size mentioned above, this will be one hour. If the bread scorches, set a pan of cold water with it, or lay clean paper over the loaves.

Two hours before you intend to bake your bread you must begin to knead it. If it has stood long enough to get "changed"—has lost its sweetness—mix a teaspoonful of saleratus in a cup of warm water, and work it into the dough,—generally it will need but half that quantity. Then take a chopping knife, or a sharp case knife, and give the dough a great many cuts with your right hand, while you roll and pull and press it with your left. Continue this for half an hour, occasionally changing hands,—for it is tiresome work to keep up one movement with the right hand so long; then shake a little flour upon your moulding board, and there cut and chop each loaf as you mould it for its pan—at least five minutes. Have your pans well greased with lard or nice beef fat. Let the loaves rise till they are very light, setting them near the fire for this purpose; then prick them in three or four places, rub them over lightly with lard, and sprinkle cold water upon them and place them in the oven. At the end of an hour—or just before,—prick them deeply with a broom-straw;—if no dough adheres to the straw the bread is done. Stand the loaves on end, and throw a dry cloth over them,—if they have had a very hard bake dampen the cloth. After two hours set them in an airy place till they are thoroughly cold, (having removed the cloth,) and, finally, shut them from the air in stone or tin vessels. Never *keep* bread wrapped in cloth, damp, or dry. When bread becomes stale dip the loaf in cold water for half a minute, and place it in the oven, between two pans, that it may be entirely covered—for half an hour;—it will then be as moist as new bread; buns, gingerbread, and sponge cake may be renewed in the same way. (A few words ought to have been said about choosing flour: Good flour when held tightly in the hand is easily compressed into shape, dough made of it works clean in kneading, and is elastic and buoyant.)

To make brown bread: for one large deep loaf take two quarts of Indian meal and one of rye, two tablespoonfuls of molasses, a large pinch of salt, a small teaspoonful of saleratus or soda, and water as hot as your hand will bear. Mix it with a spoon till it is all alike, and add a tablespoonful of yeast, or a piece of white bread dough as large as a teacup; make it as stiff as you can stir it, pour it into a well-greased cast-iron pan, smooth the top with a knife, and cut two gashes across it; set it in a warm place for four hours, then sprinkle the top plentifully with water, and bake it eight hours,—it is very nice steamed in a tin pudding-pan in the dinner boiler for the same time. A quart of boiled squash or pumpkin if mixed with the dough improves it, or the water in which these vegetables and green corn are boiled. Thirded bread, using flour, rye, and Indian,—and making in the same way, is very nice.

Wheat bread should be in every family. It is best when new, though it is quite palatable when wet and re-baked, as mentioned above. For this, take one quart of wheat meal—unbolted—a pinch of salt, quarter of a yeast cake dissolved in warm water, and if you please a tablespoonful of sugar—it is good enough without it, though; mix it as stiff as you can stir it, with warm water; let it rise over night; mould it with water into flat pans, and bake it fifteen minutes in a brisk oven. Small loaves or cakes are best. Tear them open when eaten—cutting makes them heavy. In making any of these varieties of bread, milk may be substituted for water, but it requires longer time for rising, though the bread is more tender for its use.

Butter-milk, or sour-milk, makes nice bread or biscuits if used when new,—it is very unhealthy after standing a few days. No one who has examined it with a microscope at the end of that time would ever wish to touch it. Take a quart of flour, sift into it a teaspoonful of salt and the same quantity of cream-tartar, then rub in a tablespoonful of lard or butter; mix this with a pint of

sour or butter-milk; then dissolve a large teaspoonful of saleratus or soda in warm water, and stir it in. If you wish for a loaf, mould it with water into a bread-pan; if biscuits, shake flour upon the moulding board—enough to move and handle it easily—roll it to the thickness of half an inch, and cut them with the cover of the dredging-box and bake immediately—for fifteen minutes,—in a quick oven. Sweet milk, with the addition of another spoonful of cream-tartar, the other ingredients remaining the same, makes very nice biscuit; water, with cream, or a trifle more of shortening, may also be substituted to good advantage.

HOUSEHOLD ECONOMY.

CONTRIBUTED FOR THE NEW ENGLAND FARMER.

Cold Starch.

I have not seen anything in your paper among the receipts, that speaks of the manner of making cold starch; but I have a way of my own that I think is a little saving of starch. I take a teaspoonful and a half of starch, and a piece of fine salt, the size of a bean, to a teacup of cold water; this does nicely for collars, shirt bosoms and cuffs, &c. After using, let it settle, then pour off the water, and let the starch dry in cup.

Colebrook, N. H., 1868. SAPHENA.

Lemon Pie.

Grate one-half the outside of one lemon; to the juice and pulp add one cup of water; one of sugar; three tablespoonfuls of flour; use the yolks of three eggs, reserving the whites for frosting, which is to be put on when the pie is cold. Bake with one crust and brown the frosting in a moderate oven.

Corn Beer.

To two quarts of shelled corn add five quarts of luke-warm water; one pint good yeast; one pint of molasses; two tablespoonfuls essence of wintergreen. Let it stand in a cool place through the day, bottle at night, and drink in the morning.

"Mary Morrison's Fruit Cake."

Three cups of butter; four cups of sugar; six large eggs; five cups of flour; one-half cup of molasses; one-half cup of milk; two pounds of raisins; two pounds of currants; one-half pound of citron; two wine glasses of wine or one of brandy; one teaspoonful of saleratus. Bake four or five hours. Will keep six months. EMILIE.

West Campton, N. H.

Sponge Cup Cake.

Two cups of sugar; three of flour; one of milk; one-half cup of butter; four eggs; one teaspoonful of soda; two teaspoonfuls cream-tartar; flavor with lemon.

Citron Cake.

Four eggs; one cup of butter; one of milk; two of sugar; three and one-half of flour; one teaspoonful of soda; two teaspoonfuls of cream-tartar; one-half pound of citron.

Lemon Cake.

Three cups of white sugar; one of butter; one of milk; four of flour; five eggs; one teaspoonful of soda; lemon; two cups currants.

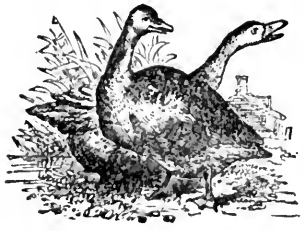
Railroad Pudding.

The receipt for railroad pudding, contained in the Sept. number, 1867, may be very much improved by adding one cup of raisins chopped fine, and eating with a nice sauce.

MRS. REUBEN D. PULSIFER.

Stetson, Me., 1868.

REMARKS.—We are much obliged to our correspondent for the commendation bestowed on the FARMER. We shall endeavor to retain her good opinion. We have several communications on file for this department of our paper.



THE
NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

NEW SERIES. Boston, October, 1868. VOL. II.---NO. 10.

R. P. EATON & CO., PUBLISHERS, OFFICE, 34 MERCHANTS' ROW. MONTHLY. SIMON BROWN, S. FLETCHER, } EDITORS.

SOCIAL INFLUENCES.

OCTOBER is the pioneer of Winter with us here in New England. It admonishes us of the advancing forces that are to possess the land. It gives us a foretaste of the short days and long evenings, which it is as much our duty to improve as it was to make hay when the sun shone. During the busy season we have little time for social gatherings, neighborhood visits, or mental improvement, and there is danger that the habit thus formed will follow us into the more leisure season of winter. Probably no class of American citizens neglect social and intellectual intercourse to so great a degree as do farmers in the more sparsely settled portions of our country. This tendency to individual or family isolation should be carefully guarded against. Men are, by their very constitution, social beings. Instinct draws them together. Their natural condition is that of society. In social life man finds his most rapid and complete development. The life of the hermit is an unnatural life. The mind of the solitary is always narrow and contracted. His faculties become enfeebled, and his intellect dwarfed.

It is only in society that the faculties, moral and intellectual, can have full play. Those who have tastes, interests or pursuits in common, naturally associate together. Thought suggests thought. The mind is quickened, and men learn to observe and reason. Ideas, perhaps crude and indefinite, are thrown out, discussed, compared, and assume definite form and shape, and become principles and rules of action. An idea originating in one mind, becomes common property, and is added to the available stock of knowledge in the community. But not only are the intellectual powers and resources increased by social intercourse, but the taste and the manners are improved, kindly feelings are called out and strengthened, and the heart and the life are made better by it.

We have been led into this train of remark by observing the effects of Farmers' Clubs, and other associations for mutual improvement and assistance. We do not refer particularly to increase of agricultural knowledge or improvement in agriculture among the members, but to their intellectual, moral and social improvement. Young men who had never been accustomed to write, or to speak in public, in a short time have become able to

do both in such a way as to interest others, and do much credit to themselves. We have often listened to essays in a Farmers' Club, by hard working farmers, that were worthy of a place in any of our agricultural journals. Young men learn to preside in meetings, and conduct them in an orderly way,—an accomplishment of no small value. Improvement in manners, and in the courtesies of life and language, that results from such associations is in many cases strongly marked.

An impulse is given to individual effort,—a desire for knowledge is awakened, and new sources of knowledge are sought out. Men read for a purpose, and with a keener perception of truth. They comprehend better what they read and distinguish more readily the true and the practical, from the false, and the impracticable. They learn to have opinions of their own, and to defend them with substantial reasons, and that, too, in the use of intelligible and courteous language.

The Good Templars' Lodges, in which thousands of young men and women meet weekly, primarily to promote the cause of temperance, and secondarily to strengthen each other's hands in every virtuous work, and in which mutual improvement in literature, music and science are not neglected, and social intercourse is cultivated cannot fail to exert a refining and elevating influence upon all who belong to them. Not only will the principles and habits of temperance be promoted and strengthened, but purity of life and language will be promoted as well. Coarseness and vulgarity will be avoided and become distasteful. Kind feelings and mutual confidence will be increased. Habits of forbearance and charity will be formed which will carry with them an abundant reward. Persons from different stations in society are thus brought into more intimate relations, and learn to understand each other better, and to have more regard for each other. The reflex influences from such associations, to say nothing of their primary objects, richly repay the time and efforts of those who unite in them.

To all such social enterprises, especially to those in which the ladies unite, we are always ready to say "God speed." Their effects cannot be otherwise than good. Even if they do not effect much for the objects for which they are ostensibly established, they indirectly accomplish much for the benefit of the individuals engaged in them.

But such organizations are more likely to do something effectively to advance their leading object than occasional meetings of the same parties for the same objects. The latter are held together by looser bonds, and feel less responsibility, and act occasionally, and spasmodically. But the frequent and regular meetings of well organized associations, in which work is assigned to each and all the members in their turn, who are held to their duties and obligations, uniformly prove more efficient instrumentalities for promoting any good object. Steady work applied to the promotion of any good cause and enlivened by the exercise and cultivation of the social affections, are among the best means of advancing the good of both society and individuals.

USE OF SAND FOR BEDDING STOCK.

It has become quite common among farmers to use sand as a bedding for their animals. It is spread each day upon the floors and cleaned away with the droppings of the stock on the next day.

Two reasons are urged to sustain this practice:—first, to secure a softer bedding than the bare planks, and, second, to absorb the liquids that fall into it.

Not much thought has, probably, been given to either of these reasons. It certainly is true that is makes a softer bed than the planks, but it is very doubtful whether it makes a *warmer* one. On this point there are some excellent statements in a late number of the *Country Gentleman*, which we give below:—

There is in one of your late numbers a description of a pattern farmer, and among other things it is said of him that he is the first farmer in Eastern Massachusetts that introduced sand as bedding for stock. Sand has been used for bedding a long time in the section I live in, and the longer it is used the less it is liked. Sand is a very cold article. There is nothing colder, and being very soft, the animal sinks deep into it, thereby bringing a large part of the surface of its body in contact with this cold substance. The writer of this has seen it tried in the case of horses with almost ruinous consequences, and therefore concludes that if it is absolutely ruinous to horses that are worked, it cannot possibly be a very good thing for neat stock, though of course they feel its effects in a much less degree.

Suppose a horse has been on the road all day, hauling timber from the woods, and comes in at night somewhat fatigued and thoroughly warmed throughout the whole system. After

eating his evening meal he lies down upon a bed of sand an inch thick, in order to relax all his muscles and give them rest. What follows? If you recollect how rapidly the heat is abstracted from your hand when you take hold of a piece of iron or marble in a cold day, you can not doubt what follows. The sand is much like the marble or iron, and as is said above, "is a very cold article." The operation that then goes on, is, for the animal to communicate its heat to those portions of the sand which come in contact with its body, and the sand passes it along from particle to particle, in some measure, still farther off. This process goes on until the outside temperature of the animal and the sand are the same. Instead of communicating heat it abstracts it, and that in no small degree.

The second reason for using it is, to absorb the liquid droppings and prevent their being wasted. It does prevent their running off in some measure, but probably not much as an absorbent. Sand has little or nothing of the property of peat to *absorb* liquids; but its particles being small and coming close together, prevent liquids from flowing away with any facility, and being aided by the vegetable portions of the manure these are held back and preserved. This is better than nothing, and where it is used as a top dressing on low lands has a decided and permanent effect in improving them. For all uplands, however, with the exception of those which are quite clayey, one cord of good peat would be worth more than many cords of sand. Next to charcoal, peat has the largest absorbing power of any substance which is at the command of the farmer in any considerable degree. Even on high, rich loams, it will produce the happiest results when properly prepared and applied,—and on sandy land it will work a complete revolution.

In hot weather, we can see no objection to the use of sand as bedding, for animals not heated by labor.

CATTLE DISEASE IN ILLINOIS.

The Champlain County, Ill., correspondent, (B. F. J.) of the *Country Gentleman*, writing Sept. 2, says that the important fact of the report of Mr. Ranch, principal Health Officer of Chicago, who has the official charge of the sanitary condition of the Union cattle yards at Chicago, is that any and all sick and infested cattle *may* and *do* infect other cattle. He also states that the "Canadian Commission" sent to Illinois to report on the cattle disease, were not long about their investigations, and went home, as he learns, convinced that the Spanish fever (so-called) is really the true *rinderpest*. He says:—

> Cattle continue to die, and it is now generally believed that sick native cattle will infect healthy native cattle. I have a valuable cow at home which has never been exposed, and I am now so convinced that she might take the disease from sick native cattle, that I would not trust her six hours on the street or public road for half her value. I am told by physicians of character and standing, that *post mortem* examinations reveal the fact that there is *violent* inflammation and extensive lesions of the *duodenum*, in every death following the prevailing disease. This is the prime pathological fact; other organs are more or less affected, but the *duodenum* always and distinctively. Therefore our physicians conclude that the disease showing a parallel development, it probably has an origin not unlike that of typhoid fever, and that its treatment should be in a manner similar to the treatment of that disease. The losses will, I am convinced, be equal to the highest estimate I have made, viz.: 150,000 head of cattle; those of Champaign county threaten to amount to half a million of dollars.

Diseases so often change their character or type on change of location and other circumstances that we have feared some new developments of this Spanish fever. We are not prepared, however, to endorse the conclusion of the Canada commission, and hope that the fears expressed by the writer as to native cattle transmitting the disease will prove groundless.

REPORT OF THE WHEAT CROP.

A gentleman in this city deeply interested in all that relates to our industrial advancement and prosperity, wishes us to suggest to the different postmasters throughout our State, that they collect from the farmers in their own towns the amount of wheat each has raised the present season, and send the same to us that it may be published in our columns. The plan strikes us as one that can be satisfactorily accomplished without much effort, and we hope farmers will endeavor to tell their postmaster, when calling for their paper, how much wheat they have grown the present season, and are sure they will gladly send it to us for publication. What town shall be first to report?

We copy the above from the *Maine Farmer*. The thought is a good one, and we hope the farmers of that State will give attention to it. A similar course in our own State would prove of value, and we hope to receive returns from all parts of the State, or from any of the New England States.

Our old and steadfast friend, HENRY POOR, Esq., of New York, in speaking of the cul-

ture of wheat in New England, says:—"We look to the agricultural press to enforce and complete this wofully neglected branch in New England farming. The New England States are not long to remain the workshops of this country. Material genius and skill are scattered broad and wide through this diversified land, and are being daily developed. Cotton and woolen machinery, and all the arts applicable to the wants of man, are not to be confined within the borders of our little loved New England. Hence the *home farm*, with *better cultivation and less acres in tillage* may grow every cereal and vegetable for the wants of the people—saving their millions and millions of dollars in corn and wheat, and at once become independent of West and South for for their bread. They must allow their forests to increase, so valuable, so useful, so beautiful; not wantonly burn and destroy them for the sake of clearing another piece of land to raise "a patch of rye"—where, perchance, a railroad may pass through and a village spring up, doubling and quadrupling the value of the whole township.

Reduce the cultivation one-half,—get the product of four acres from *two*,—save the great expense of *labor*, and the farmers will begin to learn an alphabet they have been unfamiliar with heretofore."

For the New England Farmer.

THE GARDEN IN OCTOBER.

Generally, throughout the New England States, the growing season for vegetables has come to an end, and little remains to be done in the garden except to gather and preserve the ripened crops, clearing up, making provision for future operations, &c. As severe frosts often occur during the month, it is unsafe to leave vegetables of any kind in the ground, or otherways exposed. As fast as the crops are removed, clear the ground of weeds or other rubbish, and add all suitable material to the compost heap; burn all others, and dig over the soil to remain exposed to the beneficial effects of frosts during winter.

Generally, among farmers, there is too much neglect of little things, which might be done at comparatively leisure times during the fall and early winter, thinking that spring is soon enough for all such work. When spring comes, there is the oat ground to plough and sow, and a multiplicity of other work to be done, and the garden not being cleared or prepared to be manured and ploughed, is frequently left for a convenient time, till many of the advantages of an earlier spring start are lost. The great advantage of a good garden is its earliness, furnishing a variety of salads, greens, vegetables, &c., early in the spring, when the appetite craves a change from winter food.

Asparagus.—Now is the time to make new beds, rather than to wait till spring. Spade up the ground, at least two spits deep,—better deeper,—working in a plenty of good lasting manure the whole depth. A sprinkling of salt throughout the soil of the bed will be beneficial. Plant two-year-old, or very strong one-year-old roots, a foot apart each way, covering the crowns four inches deep with good fine soil, then cover with three or four inches of coarse manure, for winter protection.

Beets.—If any remain in the ground, pull and twist off the tops, and after drying put them in the cellar, packing them in sand or dry loam in barrels or boxes, to keep fresh for winter use.

Cabbage and Cauliflower.—Sometimes these may be safely left till the last of the month, or even into November, but where they have completed their growth it is better to harvest at once, as they are apt to crack, and the heads decay. Young plants, for early spring planting may be set in cold frames to be wintered over.

Carrots.—Pull, top, and after drying, store in the cellar, packed in sand, as advised for beets, before freezing weather, as a light freeze injures them very materially.

Celery.—Continue earthing up, on clear days, after the dew is off and the plants and ground are dry. Use care not to let any soil fall between the stems or leaves, as it will cause them to rust and spoil.

Cold Frames.—Put them in readiness for wintering cabbage, cauliflower, lettuce, &c., for winter and early spring use, and planting.

Currants and Gooseberries.—Make cuttings, where desirable, before hard freezes, prune and thin, if not before attended to. Transplant, dividing old bunches, and set the younger shoots. Plant in rows, five feet apart, and three feet apart in the row. They do better set where they can be worked all around freely, instead of setting close beside a fence. The currant pays for *good* culture as well as any fruit we have.

Grapes.—Gather as they ripen, handling carefully not to bruise, or rub off the bloom. For winter keeping it is better to let them hang on the vines as long as safe from frost, or other accidents, and as you gather cut out all defective berries. A variety of ways are recommended for keeping them fresh, but whatever plan is pursued they should be kept at an even temperature, where they will not gather moisture, and in the dark.

Lettuce.—Late sown may be transplanted into cold frames, for winter use; or seed may be sown in the cold frame for wintering over and early spring transplanting.

Parsnips.—Dig and top what may be de-

sired for winter use, and preserve in the cellar, packed in sand or soil, as directed for beets. As frosts rather improve than injure the parsnip, it is better to let the main crop remain in the ground till spring, and then dig before they begin to grow.

SEEDS.—Select the best, as they ripen, and after well drying store them away in labelled paper bags, boxes, &c., in a dry, cool place.

TURNIPS.—Store, feed or market early varieties. Rutabagas and other late kinds will grow as long as the ground remains open, but should be harvested in season to prevent being caught by the freezing of the ground.

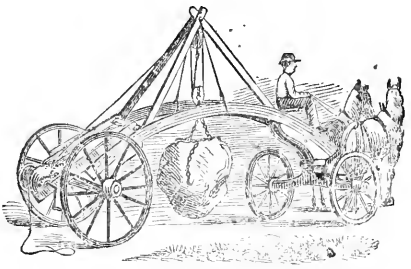
TRENCHING.—This is important, when properly done, and this month, or any time before the ground freezes up for winter, is a good time to do it. It is seldom advisable to turn the upper soil down and bury it with a mass of cold, comparatively barren earth, but the loosening up and mixing in of manure with the subsoil, to the depth of two feet or more, and bringing a small portion up, works advantageously, often renewing an exhausted surface soil; and the deep working furnishes a greater range for the roots of plants, from which to draw their food, while the soil thus worked is less liable to be injuriously affected by either drought or wet, the loosened earth acting similar to a sponge in absorbing, holding and imparting moisture as demanded by vegetation. W. H. WHITE.

South Windsor, Conn., Sept., 1868.

IMPROVEMENT OF LAND WITH SHEEP.—Mr. Nathaniel P. Atkinson, who was doing business in Montreal in 1812, being an alien, was ordered out of the country on the declaration of war between the United States and Great Britain. On leaving he went directly to Washington City, where he paid $180.80 for 52 Spanish sheep, which had just been imported. He put them on a farm in Elm Grove, West Virginia, where he has remained ever since—some 56 years—engaged with good success in raising fine wool, In a communication to the *Planter and Farmer* he says:—"With sheep and clover I can make any land productive, unless it has the barrenness of the sands of Sahara."

—The *Utica Herald* complains that the public are kept in ignorance of what the State Commission for the investigation of the causes of abortion in the cows of the dairies of central New York are doing, and calls upon the New York State Agricultural Society, which has the custody of $5000 appropriated by the last Legislature, to show what is being done with the money and what progress is being made in this very important work.

EXTRACTS AND REPLIES.



STUMP EXTRACTOR AND WALL BUILDER.

The above apparatus, manufactured by Messrs. Packer & Fish, Mystic River, Conn., is an ingenious and exceedingly effective combination of mechanical powers, by which an immense force can be exerted in taking out stumps and rocks. With a single yoke of cattle, rocks weighing five tons and upward are lifted from their bed without any digging around them. The arrangement is such that after being taken out they are easily transported by the same team without change from the carriage, and deposited upon the wall or elsewhere in the position wanted. In this way masses can be handled which otherwise could not be made available without great expense. The price of the machine can be realized in a few days by the saving of labor, where there is even a moderate amount of this work to be done. One should be owned at least in every neighborhood where fields need clearing. It would pay well for a party to own an apparatus and clear land by contract. Full particulars as to prices, &c., can be had by addressing the patentees as above.

WHITE SPECKS IN BUTTER.

I have read with interest the articles about white specks in butter, and I fully agree with Mrs. M. E. C. and Mrs. S. S. Pearce, spoken of in the FARMER, of July 4, that it is caused by the cream standing too long. The milk that settles in the bottom of the dish sours, and a part turns to whey, and a part becomes hard like cheese-curd. In hot weather I churn every other day, and avoid the trouble. But if it so happens "that I go a visiting to-day and churn to-morrow," and thereby get white specks in my butter, I wash it in cold water, working it well with a paddle; it don't hurt the butter, although I don't wash it at other times.

I think that S., of August 22, is right about striped butter, and that she is a careful dairywoman, and churns often, for she don't seem to know what speckled butter is. R. H.

Kent County, R. I., Sept. 8, 1868.

SINGULAR DEATH OF A COW.

Last Sunday morning while one of my neighbors was looking at his cows which were feeding as usual, one of them threw up its head and commenced to roar as cattle sometimes will at the smell of blood. The creature soon commenced moving around in a circle of some five rods in diameter, which she continued for three hours, when she fell down apparently exhausted and died. The verdict of some neighbors who made an examination of the animal was that "she died of horn ail

on the brain." If this disease is common in any part of the country, we shall be very much obliged for any information as to its cause and cure.
East Jay, Me., Aug. 26, 1868. JACK.

REMARKS.—All parts of the animal are subject to disease,—the brain, heart, and other "vital parts," as well as the bones, flesh and skin. The veterinary books recognize several distinct diseases of the brain. One is called *entozoic*. This is caused by a minute animal, similar to worms in the intestines, eye, &c. Dr. Dadd says those which infest the brain consist of a parent sac, or membranous tunic, from which, externally, germination takes place. The symptoms of disease produced by these parasites is described as follows in his *Diseases of Animals:*—

In their early state, they take up but little room, and do not occasion any very marked symptoms; yet, if the animal could only speak, we might be informed that it was the subject of headache. As the parasite or parasites increase in size, they produce pressure on the brain, which makes the animal appear giddy, confused, nervous, and desirous of separating itself from the herd; and it is in consequence of these peculiar symptoms making their appearance, when no other form of disease is present, that the term sturdy is applied, which is simply used to denote the presence of cerebral parasites.

When once these parasites have fairly taken up their abode in the cranial cavity of an ox, I fear there is very little help. I recommend prevention rather than attempts at cure. The preventive remedies are as follows: Salt, sulphur and charcoal, equal parts. This is a specific for all parasites. About a table-spoonful of the mixture, given occasionally in the food, will prevent the germination of many forms of parasites.

In relation to another form of disease called inflammation of the brain, the Dr. says:—

The affection is generally sudden in its attack, and is often accompanied by symptoms of phrensy, and the animal sometimes becomes frantic, and decidedly mischievous; soon however, alterations in the structure of the parts take place, as softening, effusion, etc., and then the animal dies.

In regard to the treatment, I must confess that it is much easier to write about it than accomplish it. In cases when delirious fits occur, accompanied by convulsions, which make it dangerous to approach the animal, I have no remedies to offer; the case is beyond the reach of art. I may, however, add, that the terminations of this disease are different. They depend on the intensity of the malady, and the structural susceptibility.

The disease is generally treated with a view of counteracting inflammation: cold water to the head, active cathartics, and counter irritation on the region of the spine. The causes of a disease of this character are often obscure, yet I have known it to occur as the effect of prior disorder in some other part of the body. I examined the carcase of an ox, a short time ago, that died of what the owner termed *"mad staggers."* I found the brain highly congested, and several adhesions between it and its membranes; there were also large patches, intensely red, on the lining membrane of the third and fourth apartments of the stomach. I was informed by the owner that the animal died twenty-four hours from the time of its first attack. The disease probably originated on the digestive surfaces, in consequence of the irritating nature of the food—mouldy hay and tough cornstalks, with a sprinkling of damaged meal and brewer's grains.

The symptoms of symptomatic disease of the brain are as follows: dullness, loss of appetite, staring of the coat; and, if the animal be a milch cow, diminution in the quantity of milk is observed; the extremities are cold, and the animal grates its teeth. The respiration is at first tranquil, and the pulse slow but full. The patient will frequently be seized with a kind of epileptic fit, which lasts but for a few minutes, during which time some of them will exhibit the most violent symptoms, such as bellowing hideously, pawing the earth, and running at anything within their reach; they will also break out into profuse perspiration, and press their heads forcibly against the wall, even to such an extent as to break off their horns. Many are seized with violent tremblings and twitchings, and towards the latter period of the disease, the respiration becomes extremely laborious, the jaws are firmly closed, convulsions succeed each other rapidly, and death shortly closes the scene.

Treatment.—In the early stages of this affection, the animal should be drenched with the following:

Linseed Oil	4 ounces.
Lime Water	4 ounces.
Powdered Ginger	4 drachms. Mix.

The rectum is to be emptied, by means of clysters composed of salt and warm water, and the whole length of the spine should be rubbed twice daily with a portion of the following:

Linseed Oil	1 pint.
Spirits of Hartshorn	2 ounces. Mix.

Should the animal improve, a few doses of the following will complete the cure:

Powdered Goldenseal	2 ounces.
Carbonate of Soda	1 ounce. Mix.

Divide the mass into six parts, and give one night and morning, in a pint of cold water.

From the foregoing, our correspondent will see that his description of the symptoms in the case of his neighbor's cow, and of the examination after death, are hardly sufficient to enable any one to decide upon the specific character of the disease which resulted in the apparently sudden death of the animal.

THE JAPANESE WHEAT, A MILLET.

I send you a stalk of (so called) "Japanese Wheat," from seed received from Mr. J. D. Rice.

The seed was sown about the first of June, and when I wrote you, June 27, I had seen no signs of vegetation. July 10 it began to come up, and I have a luxurious growth, as per sample, which I enclose. Now, what is it?

The yield of seed is abundant, as you can see,

although cut before matured, and I should judge the straw to be equal to four tons per acre or more; but it seems so hard or woody that it cannot be worth much to feed.

I give this information to correct any impressions which may have been formed in consequence of my former statement injurious to Mr. Rice.

Montpelier, Vt., Aug. 28, 1868. A. D. Arms.

Remarks.—The sample sent is quite different from the Hungarian millet which has been disseminated by the Agricultural Department. Mr. C. L. Flint, Secretary of the Board of Agriculture of Massachusetts, to whom we showed the "Japanese Wheat," thinks it is a variety of the millet known as the "Italian." The general term millet is applied to a large number of seed bearing plants, and includes, we believe, broom corn, and the "sorghums," or Chinese and Italian Sugar Canes, as well as many smaller varieties used as forage plants.

The stalk of Mr. Arm's sample, including the seed head, is about four and a half feet in length, and must be hard fodder. The head is over ten inches in length, and is a compact cluster of little bunches, or sub-heads, of seeds, yielding many thousand fold. It has somewhat the appearance of barn-grass. Mr. Joseph Breck who examined this specimen remarked that he has seen a variety cultivated, that in rich land would grow twelve feet high. The seeds were fed to poultry, but the other portions of the plant were of little value.

MANURING MOWING LAND BY SHEEP.

I am following my new plan of top dressing. This season, I began July 29th, and have already gone over half an acre thoroughly. The sheep are becoming tamer and more easily managed, as they are used for this purpose. It has been objected that this plan robs the pasture. But as our sheep lie in the pasture night and day during May, June, and July, and are there now all day, I think the pasture gets its share of their droppings, all in fact that is needed to keep them from running out for want of manure. The fact is our pastures are bound out by manure, brakes and thistles, and the only way to improve them is by ploughing. Did you ever know of any one ploughing up an old pasture and having to manure it the first year for a crop? We all know that such land yields big potatoes, corn, oats or anything. If any one doubts the policy of this plan, I will invite them to call and see for themselves the first of July next.

I have a new kind of fence or hurdle, which I think is an improvement on that previously used, and which was described in the Farmer of July 11th. I now use three boards four inches wide, with end and centre posts one and one-half by two inches, with two braces three inches wide, meeting at the top from each lower corner of the panel.

Braintree, Vt., Aug. 24, 1868. H. H. C.

YOUNG TURKEYS DYING OFF.

I wish you would ask your subscribers if they can tell me what it is that makes my young turkeys die off? I tried to find out last year through your paper, but could not get anything satisfactory. I had thirty-five the first of August that came out June 1st, and they have died about one a week since. They are about one-third grown. The first I notice is, that one looks dull and keeps two or three rods behind the flock, eats but little and continues to grow more dumpish, and about the third day he dies. I examined the last one and found he appeared all right, except he had yellow spots on his liver. I wish you would get a little information on this subject if you can.

Shrewsbury, Mass., Sept., 1868. G. E. H.

Remarks.—We trust that some of the turkey-raisers of New England will give "G. E. H." information on this subject that will enable him to save the remainder of his flock. The information will be valuable to thousands of others as well as to him. Mr. N. B. Butler, of Hamilton, has skill and great experience in turkey-raising; perhaps he can throw light upon the matter.

The books which we have consulted give no clue to the difficulty which you mention, and nothing in our own pretty large experience enables us to throw light upon it. If they ramble in wet grass early in the morning, or continue to do so late enough in the evening to go to roost with wet feathers, we should be inclined to impute their sickness to that cause. Look carefully about to ascertain whether they have access to any food which would be injurious to them.

DROUGHT IN NORTHERN VERMONT.—THE POTATO CROP, &C.

We are still suffering from the effects of the most protracted drought ever experienced in Northern Vermont. In fifteen miles north we see no water near the highway; our wells and springs are nearly all dry, and our fields look scorched on dry soils. I noticed in a late *New York Tribune* the statement, that potatoes in Vermont were a three-fourths crop; in this vicinity ordinary early, and late, varieties will not now average over fifty bushels to the acre, and without rain they will make little, and in some districts, no improvement. On four adjoining farms we are growing the "Early Rose," and its extreme *earliness* and productiveness have given us a large yield. In the same fields, and with similar culture, the ordinary varieties have failed. I have already harvested forty bushels from twenty pounds planted, and think other plots in the vicinity will yield still better. About the 10th of July I found some of the "Rose" sprouting in the hills, and having time to mature another crop, I tried every conceivable plan to make the newly sprouted potato grow and produce. My experiments proved an entire failure.

What are the conditions necessary to the growth of new potatoes? If only age and maturity are necessary, why is it that half-grown potatoes sprout as early in the cellar as mature ones? How soon can they be grown after harvest?

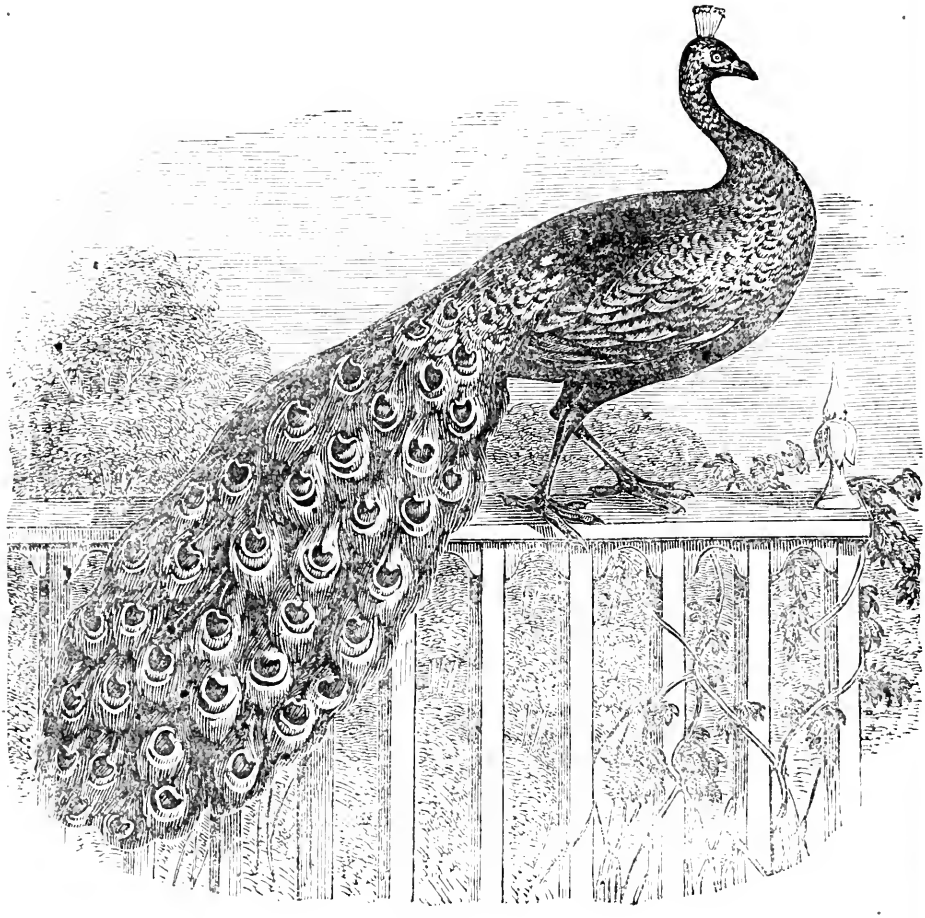
O. C. Wait.

West Georgia, Vt., Sept. 1, 1868.

SWEET FERN FOR IVY POISONING.

As the plant recommended by your Maine correspondent for the cure of ivy poison may not be known, or within the reach of all who may get poisoned, I will say that a wash made by steeping sweet fern leaves, has been used in my family and neighborhood for many years with entire satisfaction. It should be applied as soon after the disagreeable effects of the poison are felt as possible, and I have never known a few applications to fail of effecting a speedy cure. S. M. Caswell.

Fitchburg, Mass., Aug. 24, 1868.



THE PEACOCK.

"Handsome is that handsome does," is an old proverb that did not probably originate in the Peacock family. With an outward beauty to challenge admiration, they are said to be vicious gluttons, relishing young chickens, ducks, and goslings, full as well as grubs and worms. Indeed they have been charged with having "the plumage of an angel, the voice of a devil, and the stomach of a thief." But they are good-looking, therefore,

"How rich the peacock! what bright glories run
From plume to plume, and vary in the sun!
He proudly spreads them to the golden ray,
Gives all his colors, and adorns the day;
With conscious state the spacious round displays,
And slowly moves around, a waving blaze."

This most magnificent and beautiful of all the feathered race, says Mr. Bement, is supposed to have been originally a native of India; but they have long been introduced into Europe and this country as ornaments to the mansions of gentlemen farmers. Peacocks are said to be at present found in a state of freedom upon the islands of Java and Ceylon. The earliest mention we can trace of the peacock is in the Book of Job. The history of King Solomon is an evidence of the antiquity of the peacock, and also the choice of the goddess Juno, who selected this for her favorite bird, from its gorgeous and brilliant plumage and majesty of demeanor. It is asserted by the ancient writers that the first peacock was honored with a public exhibition at Athens; the rumor of the arrival spread all over Greece; from distant parts the rich and the noble took

their journey to the classical city, to pay handsomely to be spectators of that beautiful phenomenon and wonderful paragon of the feathered race. Going to look at the peacock was not only an expensive, but an aristocratical entertainment. Peacocks are not worth the attention of the farmer on the score of profit, but as they perch of the tops of buildings, &c., may save watch-dogs.

FOUL ROAD-SIDES.

So long ago as 1855, a committee of the Jefferson County Agricultural Society, N. Y., made the following remark in a report to the Society:—

"The uniform neglect of overseers of highways to see that the laws be faithfully executed relative to the destruction of noxious weeds upon our roads, makes it incumbent upon those owning lands through which they pass, to perform this duty."

We know not that we have in this State any law making it the duty of highway surveyors to root up and destroy Canada thistles, wild cherry trees, and other noxious weeds and plants, which spring up on our roadsides; but such an addition might be made to the law, specifying the duties of such surveyors, and we think public opinion would enforce its execution. We would, therefore, respectfully call the attention of the Agricultural Committee of the Legislature to the subject. Such a law faithfully executed, would be of great advantage to the farms and orchards over the whole Commonwealth. Such nuisances are found in almost every town to a greater or less extent, and might be easily removed by the surveyors at very little expense. Not only would breeding places of destructive insects be thus removed, but the appearance of the highways would in many instances be much improved. Many farmers now attend to this matter, and the traveller may determine the extent of their farms on the road, by the clean and neat appearance of the road-side border. But perhaps on the very next farm these nuisances are allowed to intrude themselves. This is very discouraging to those who have taken pains to free their own farms from them. Were attention paid to this subject it would lead to better habits with respect to other incumbrances that are now too apt to be allowed to accumulate by the sides of the highways, such as stones, logs, brush and decayed lumber. When farmers have once acquired the habit of keeping the streets clean and neat, and begin to take pride in their good appearance, they will naturally look to the condition of their yards and the surroundings of their dwellings, and a general clearing up of old lumber, stumps, broken wheels and decaying sleds would take place, which would not only improve the appearance of many farms, but would add to their market value.

Until it is made the imperative duty of surveyors to attend to this, it is important that every farmer should attend to the roads that pass by or through his own farm.

THE LARGEST FLEECE OF WOOL.

Among five fleeces of wool which were shorn and cleansed under the auspices of the Union Wool Growers' Association of Ontario and Livingston Counties, N. Y., last spring, that of a three-year-old Merino Ram belonging to J. C. Short of Livonia, was reported as weighing 24 lbs. and 2 ounces, when taken off—the growth of 11 months and 21 days, and when scoured 9 lbs. and 3 oz. This being about one pound heavier than that of any scoured fleece on record, much doubt was expressed as to the correctness of all the statements. Dr. Randall having obtained the affidavits of weighers, scourers, and of neighbors acquainted with the parties, expresses the opinion, in the *Rural New Yorker*, that there can be no reasonable doubt that all the parties connected with this scouring test acted in good faith throughout. He says:—

The only possible loop-hole we can see for an error, is in respect to the perfectness of the scouring. That Mather & Sons scoured the wool as well as they usually do for their "manufacturing purposes," we entertain no doubt, and probably of the two, better, as they say they took "particular pains." We are not familiar with their mode of scouring or its results. But we do not know why it is not a thorough one. If it is not, the fact can and ought to be shown. If any expert questions the proper cleanliness of the wool, he, as we have already said, can have the opportunity of examining a specimen of it, which we have in our possession. We use the qualifying word "proper" avisedly. No wool is scoured absolutely clean by manufacturers. It is scoured only as clean as utility requires in the manufactures to which it is applied,—and this in the case of "fine cloths," &c., is approximately clean. Wool scoured clean enough for such fabrics—as clean as the skilful manufacturers of such fabrics usually scour their wools—is the standard aimed at in all these scouring tests.

If Mr. Noble's ram has beaten the field, among Merinos, we believe he has still further beaten all other breeds, the proportion of wool to carcass being taken into account. We have heard much

of late of the "enormous" shrinkage of "greasy Merino wool." We have been told that while the wool of certain other breeds shrinks only 15 to 25 per cent. in cleansing, that of the Merino shrinks 60 or 70 per cent. Well, what of that, providing the Merino yet carries the greatest proportion of wool (*cleansed* wool) to meat? The scouring tests of the past have sufficiently demonstrated this fact.

CLOVER AS MANURE.

In an article published in the Report of the Agricultural Department, a Mr. Wolfinger says, the cheapest, most easily attainable and best of all manures for a corn crop, is a dense mass of red clover, either in its green or ripened and dried state, ploughed down three or four inches only; just deep enough to prevent wastage, and yet near enough to the surface of the ground to be acted on by the sun's heat and the air. In its decay, clover thus affords certain, active and constant nourishment to the young and expanding roots of the corn. Both corn and wheat grown over a clover lay are very generally free from disease and insects, and better in yield and quality than crops grown on or with animal manures. But to secure this, we must manure the clover while yet young, with liberal supplies of plaster, lime or fine well rotted manure spread broadcast over the growing plants.

FAILURE OF FRUIT.

Within a few years past special attention has been paid to the cultivation of fruit in the southern part of Illinois, where the season is considerably earlier than in the central and northern portions of the State, and great stories have been told of the amount of money realized from small pieces of land devoted to strawberries, peaches, &c. The editor of the *Rural World* recently met a committee of the Illinois Horticultural Society, who were on their way home from a visit to the famous fruit regions of "Egypt." The report of these gentlemen is exceedingly discouraging. Hardly a sound peach was seen by them, so thoroughly has the curculio done its work. The yellows is also destroying the trees. The Concord grape is badly affected by the rot. In some cases full one half of the crop was already destroyed. A new and apparently formidable disease has appeared among pear trees. In one orchard in South Pass of 1500 trees, all of which appeared to be quite healthy early in the season, the committee found—in different places—first one tree, then two, and then five; all affected—not with blight or anything they had ever seen before,—but sick and dying, from an unknown disease. They finally dug up a tree and found a fungus growth spread over the roots of the tree, and only in one case was it found on a limb. It had cut off the entire connection, and with it a supply of sap, and so death ensued. Dr. E. S. Hall, of Alton, W. C. Flagg, and H. D. Emery, Senior Editor of the *Prairie Farmer*, were among the members of this committee, whose representations may be taken as another caution against reliance on specialties in farming.

HEREFORD CATTLE.

It is customary for the breeders of blooded stock to confine themselves to a particular breed, and it is not often that one has an opportunity of comparing the respective merits of different races on the same farm. Mr. F. W. Stone, an English farmer of Guelph, Canada, who occupies some 800 acres of the rich land in that section, has some fifty head each of Short-horns and Herefords, besides grades, the decendants of the best animals from English prize stock. In an account of a late visit to this farm, Sanford Howard, Esq., thus speaks of Mr. Stone's appreciation of the Herefords. We copy from the *Country Gentleman*:—

The Herefords have latterly been increasing in numbers on the farm, and this increase will probably be allowed to continue. After seven years' experience with them, their good qualities have been so prominently displayed that Mr. Stone has determined to adopt them as a permanent stock. They are found to be healthy, hardy, easily kept, fattening rapidly, whenever they have a fair chance, and producing the finest quality of beef. They are by no means the inferior milkers which the advocates of rival breeds frequently represent. Comparing them with the Short-Horns kept on the farm, all persons who have had anything to do with them concur in stating that the Hereford cows give, on the average, at least as much milk by the season as the Short-horns, while some experiments that have been made, show that in richness of milk the Herefords are superior.

Many of Mr. Stone's grade cattle are half Hereford, and a few are three-quarters of that breed. They show the leading characteristics of the Herefords very strongly. Some of them are cows, now giving milk, and they are good-sized, handsome animals, with indications of being good milkers. A lot of yearling and two-year old steers are about as promising, in reference to thriftiness and fattening tendency, as any grade animals of their age that I remember to have seen. Some of the steers have been subjected to the yoke, and bid fair to make active and powerful oxen.

LEACHED ASHES AS A FERTILIZER.

A very considerable portion of the ashes made in New England is purchased by the agents of soap-boilers, and passes through the process of leaching before it is used as a fertilizer. As they come from the factory "they are a mixture of a peculiar description; principally the insoluble portion of the barilla, potashes or kelp, employed in soap-making, mixed with cinders, lime, salt, and other occasional additions; and also with muriate of potash, common salt, and other saline matters." The insoluble portion of barilla—[*barilla* is the Spanish name of a seashore plant from which soda is made]—consists principally of lime, charcoal, sand, and the rust of iron. Arthur Young recommended the use of 60 bushels per acre, and described the immediate effects as very great.

A plain, sensible farmer of England gave Dr. Cogan his opinion of the value of soap ashes in the following letter:—

"My opinion of soaper's ashes is confined to the application of it as a top-dressing on pasture land. About twelve years ago I agreed with a soap boiler for 1500 tons of soaper's ashes. I used to apply about twenty wagon loads per acre, and a single bushing would let the whole in. I was laughed at and abused for my folly; the wise-acres alleging that my land would be burned up for years, and totally ruined; all which I disregarded, and applied my soaper's ashes every day in the year, reeking from the vat, without any mixture whatever.

"I tried six acres mixed up with earth; but I found it was only doing things by halves. My land never burned, but from the time of the application, became of a dark green color, bordering upon black, and has given me more, but never less than two tons per acre, ever since."

For the New England Farmer.

PRODUCER AND CONSUMER.

I see a great deal in the papers about the high price of goods,—articles of food especially,—in the cities; and being in the "trade" myself, I would like to say a few words on this subject.

I belive the great trouble to lie in the "hand-to-mouth system." It would be much to the advantage of the consumer to buy in larger quantities, and just as well for the merchant, though all will sell much cheaper in this way. And instead of goods going through two or three hands, let the consumer buy direct from the farmer or country merchant,—it matters but little which,—as it will come at the same price, as most of the country merchants exchange other goods for produce, which they sell for cash without profit, at their stores. If sent to market, they pay a commission of five per cent. for selling, and perhaps by the time the consumer gets the article there have been several other profits made on it.

The cost of getting a pound of butter or a dozen of eggs to market is about two cents, unless sent in large quantities; while, by the retail market rates, I judge that a profit of twenty per cent., and often higher, is paid by the consumer. As direct trade as possible between producer and consumer would be to the advantage of both. Nor do I think such a system would be much opposed by country merchants, for if the farmers sell their produce for cash at good prices, they will trade all the more, and it will save the traders here the trouble of handling goods on which they never make any great profit.

I would like to hear the opinion of traders and farmers on this subject. Crops of all kinds are very good in this section.

T. P. Bailey

Newbury Centre, Vt., Aug., 1868.

Remarks.—Although the foregoing communication has very much the appearance of a business circular, we cheerfully give it a place in our reading columns, because it suggests a *plan* by which the consumer may possibly avoid the profits of one or more middle men,—a feature that is often entirely wanting in the writings of those who complain of our market system. Now, if Mr. Bailey will reduce his theory or plan to practice; if by employing "runners" or "drummers" to take the orders of the city consumers, as our merchants keep this class of men in the country, or if he can attain the same object by other and simpler means, he may greatly extend his business with profit to himself and with benefit to those who live "from hand to mouth," provided that in the practical running of his machine, he can dispense with a few of the "wheels within a wheel" that now interpose between the producer and consumer. Of the probability of his being able to effect this, our readers can judge as well as ourselves.

For the New England Farmer.

HOW TO PAY FOR A FARM.

When so much is said against running in debt for a farm, it is refreshing to read instances like those recently narrated in the Farmer, where that responsibility has been boldly assumed and finally successfully discharged. Such instances of success show that there are men who still have faith in the profitableness of farming, and confidence in their own abilities. They further show that success does not depend entirely upon the possession of an unusual amount of physical strength, nor upon a lengthy experience. Indeed some of the most encouraging examples are those of men

who come fresh from other occupations, and relied upon their energy, perseverance and business-like habits, and general knowledge of the subject, rather than any special acquaintance with the details of management.

Whenever a person runs in debt for his farm, two conditions are necessary for its easy and rapid payment,—judicious purchase, and an adequate working capital. The choice of a majority of purchasers appears to fall upon places that have been run down; the buildings old and poor, fences out of repair, and land in a low state of cultivation, and perhaps, withal, an unfavorable location; the chief attraction being the low price such places usually command. But these neglected farms are generally the dearest kind to buy. The yield from them the first, second, or even the third season, must of necessity be small, while there is a constant call for extra labor and money for repairs and permanent improvements. The purchaser has in fact assumed a three-fold burden,—the renovation of the land, the reconstruction of the buildings, and the liquidation of the debt; either of which is quite sufficient for a beginner. If he undertakes to carry on all three at once, he has a task more fitting for a man of experience and capital. If he leaves a part of the work undone, he labors under disadvantages which materially affect his profits and comfort, so that at any rate he subjects himself to a trying ordeal.

There is undoubtedly real satisfaction in bringing up an old place, and in contemplating the progress as the result of one's own work; but when viewed as a matter of dollars and cents, these improvements can often be bought cheaper than they can be made. It may be far better, and even cheaper to pay, or promise to pay, five thousand dollars for a place in good order, than twenty-five hundred dollars or less, for the same number of acres, with equal natural advantages, but where buildings, fences and soil must be renewed. Although these figures are as two to one, it does not follow that it will take twice as long to pay the larger sum, nor that the risk in buying the former place is twice that of the latter. In one sense, the risk is less, and the notes of the purchaser would rate higher, for he has productive property. His labor and investments bring him quick and full returns, and he can devote all his energies and profits directly to the extinguishment of his debt; enjoying, meanwhile, the conveniences and comforts which render business and life pleasant, and which might require years of toil and patient waiting, were he obliged to provide them by his own labor. Moreover a farm which has not been run down is more salable, and should a change be desired, it can be effected more speedily and satisfactorily. If for these considerations the annual responsibility in interest, taxes, &c. is greater, there are greater facilities for meeting it, as the income is immediate and constant. A farm well bought may be said to be partially paid for.

Next to a judicious purchase, the speedy payment depends upon an adequate working capital. Unproductive land is worse than useless. Instead of supporting, it is an incumbrance to its owner. Land may be unproductive, to all practical purposes, from want of the requisite means to work it, and much larger capital is necessary on a sterile than on a productive soil. In all cases the purchaser should determine before hand just how many acres he can afford to let remain idle. Now an adequate working capital implies the power and ability to cause the whole farm to be productive,—to make every acre help pay for itself. It implies sufficient means to carry through an unpropitious season, without resorting to extra loans; as well as the ready money to take every advantage of the markets at which he buys and sells. Character may secure all the credit he desires, but the cash enables him to drive a better bargain. Of all others, the man in debt needs this capital from the outset; and until he can command it, it will be for his peace of mind and pecuniary interest to work for others, or begin as a tenant, or at least buy a very small place.

Some have such a dread of interest money that they pay all or nearly all their slender means towards the purchase money, and devote all the income as far as it may accrue to diminishing the principal, and allow only a meagre sum for their working capital, and thus they are hindered and circumscribed in all their operations. The farms are only partially worked, consequently scanty crops and small sales follow. The payment of the debt progresses slowly and tediously, and the very interest they sought to avoid becomes doubly oppressive, and they naturally conclude clearing a farm of debt is up hill work.

Debt is burdensome and dangerous, just in proportion to the means to meet its liabilities. Its terrors vanish before bountiful crops. But how shall the bountiful crops be obtained without the ability to work the land? A hundred dollars used as working capital will give larger returns than the simple interest it saves, when paid towards diminishing the mortgage. Working capital is the lever for throwing off the debt; and its amount and the manner of using it determine the rapidity and ease with which it can be accomplished.

Failures that occur through ignorance, imprudence or extravagance, constitute no argument against buying a farm on credit. Such causes would produce a similar effect in any legitimate business, and it is hardly fair to contrast a failure, thus occasioned, with success achieved under the opposite conditions. But when honest, hard-working and self-denying men fail in the attempt, or attain the desired end through such a long and difficult struggle that they cannot conscientiously advise others to embark in the same undertaking,

it is interesting to know the causes of their ill success. And will not four-fifths of them acknowledge that they either made a bad purchase, or lacked an adequate working capital? N. S. T.

Lawrence, Mass., Aug. 10, 1868.

REMARKS.—It is true, as stated by our intelligent correspondent, that in some of the instances recently narrated in the FARMER, in which individuals who were successful in paying for and greatly improving farms bought on credit, were "fresh from other occupations." But is it true of any of them that they had no "special acquaintance with farm management?" One of the writers alluded to says, "not having had much experience in farm work;" another says that for "twenty-five years previous to my purchase, I worked at boot and shoe making;" but neither of them informs us just what his early training was, although the latter mentions a "*suitable* helpmeet" as an essential to success. Our Norwich, Vt., correspondent, however, tells us that he was brought up on a farm, and the successful Englishman and his wife were farm hands or servants. Our observation has resulted in the conviction that early training on the farm is, as a general rule, a condition to success, even with those who enter upon the business "fresh from other occupations." Exceptions may occur, and it is said that "exceptions prove the rule." We believe that the value of the knowledge and skill acquired by boys and girls during a twelve or fifteen years' apprenticeship to the various occupations of the farm is strangely underrated, and that it is wrong to speak or think of such as having no trade, or not having had much experience in farm work.

QUICK WORK. — The proprietors of the Marsh Harvester having offered a premium of $25 to the person who would cut and bind an acre of grain with their machine the quickest and best, a trial was had at Plano, Ill., July 24. The decision of the three judges is published in the *Prairie Farmer*. They divided the premium between two men who bound an acre of heavy and somewhat crinkled rye, with the horses on a trot, one in thirty and the other in thirty and one-half minutes—the latter doing his work a little the best. Two other men who had never bound on the machine did the work in thirty-four and thirty-eight and one-half minutes, respectively. The judges remark, "the ease and perfection with which the machine delivers the grain to the binder, and the facility with which men bind on it is truly astonishing. On examination of the work both before and after the grain was shocked up, we found it to be well done."

TOP DRESSING WITH SHEEP.

Our Braintree, Vt., correspondent, "H. H. C.," whose "New Plan for Top dressing," was published in the FARMER of August 11, and many who have read that article, will be interested in the following statement by Sanford Howard, Esq., of the method of enriching land by sheep, practiced by Mr. Stone, of Guelph, Can., who has about 300 Cotswold and South Down sheep. Writing to the *Country Gentleman*, Mr. Howard says:

Some of Mr. Stone's land lies so far from his principal farm steading, that it cannot well be manured in the ordinary way. Very large quantities of rich manure are made, but it is chiefly applied within a distance convenient to haul it. The mode adopted with the out-lying lots, is to feed off successive crops with sheep, until the desired fertility is obtained. First, a crop of rye is sown in the fall. If it gets strong enough before winter sets in, the sheep are put on it. The next spring the sheep are turned on at the proper time, and the rye kept fed down as long as it continues to grow vigorously. When the growth of the rye is checked, the ground is ploughed, and sown to oats and vetches, which are fed off, and, when this crop is done, the ground is again ploughed and sown to rape or turnips, which are fed off in like manner.

Mr. S. has several fields where this course is now going on. His rams, which are intended for sale this fall, are on a field on which the second crop (oats and vetches) is just giving way to turnips and rape. The sheep are in high condition, and the ground is already well manured, though the feeding off the third crop will enrich it still more. The sheep, of course, have been *well fed;* when the green crop would not afford them enough to eat, they have had peas, or other additional food. The mode of feeding the green crops is that adopted in England, enclosing with hurdles a certain extent, on which the sheep are put from day to day.

This is a practice which I think might be introduced into this country with good results. Our people hear of the English farmers enriching their land by sheep farming. But it is quite a different thing from turning sheep on to the land, to live or die from the grass or weeds that may grow—often to gnaw the the grass to its very roots, and starve the

sheep besides. The sooner it is found out that *this* kind of sheep farming does not enrich the soil or its owner, the better for the country.

HINTS FOR THE GARDEN.

The August number of the New York *Horticulturist* is rich in seasonable hints. We copy a few paragraphs:—

Bulbs of all kinds, if they have been growing in the same place for two or more years, ought to be taken up as soon as the leaves begin to turn yellow and they show signs of ripening. If the bulbs were planted last season, they are as well to remain another season, although the flowers may not be quite as large and fine as when the bulbs are yearly replanted in fresh soil. If left in the ground, well-rotted manure should be supplied liberally, and lightly forked in late in the autumn. When the bulbs are taken up, lay them on shelves where they will dry in the shade until wanted. Make the ground for replanting deep, placing plenty of well-rotted manure well intermixed; then plant the bulb three inches deep, surrounding it entirely with half an inch thick of clean sand. The replanting should be made at different periods, as those first planted will be the first to blossom in spring, and by planting at different times, a succession of blossoms may be had next season.

Cuttings of almost any plant may be struck now, because the common soil is almost as warm as a hot-bed, and a sash placed over it almost anywhere, and shaded, will soon produce a mild, gentle, moist atmosphere. The best cuttings for this time are formed from the ends of the young growing shoots; but any young wood, and even badly formed cuttings, may now be easily struck. It is a good plan for beginners to practice at this season, for if they fail with the first, there is time for renewal without loss or expense, as sometimes results from inexperience during early spring propagating. Sharp sandy loam is a good material for the bed, and it should be looked at as often as once a day, and, when needed, sprinkled with tepid water. Morning is the best time to do this.

Chrysanthemums.—It often happens that, from want of care and attention, old plants of chrysanthemums become ragged and sprawling. These may be turned to good account by layering the shoots at this time, by which a number of small, well-shaped plants may be had, each of which will give a number of blooms and form pretty objects for the window or conservatory late in the season.

Camellias should be carefully looked over this month, and old plants that have filled their pots completely with roots will require abundance of water, while those in which the roots have not quite filled the pots, require only to be moderately watered.

Evergreen or Deciduous Shrubs that have completed their growth for this year, may now be moved with safety from one part of the grounds to another, but it would not do to take them from a nursery and transport them any distance. After setting, water thoroughly and mulch at once. New roots will at once form, and the plants will start strong and vigorous next spring.

Pelargoniums should be repotted this month, if not before done. In doing the work, trim off the outside of the ball and roots with a knife, but not shake it clear of the soil or so as to break the ball. Use strong heavy soil with good drainage rather than light sandy loam.

Carnations and the varieties of pinks may all be layered this month, and make good plants before the close of the season.

For the New England Farmer.

A VERMONT FARM.

A Stumpy Farm growing Smooth—Cows, Sheep and other Stock—150 Tons of Hay—15 acres of Oats—A Splendid Field of Wheat—Rotation—Management of Manure—Dutch Cattle—Night and Day Pastures—Hours for milking—Butter and Cheese.

Last winter I referred to the very convenient barns of Thomas Baker, Esq., of Barton, Vt., and the stock I saw in them.

I again visited the farm July 25, and will mention a few items that seem to me worthy of notice. Mr. Baker owns about seven hundred acres. The timber that formerly stood upon it was mostly hard wood, such as maple, birch, beech, &c., and the soil is of good depth, color and strength. The pastures where he grazes twenty-seven cows, three or four hundred sheep, besides young cattle and colts, are still in that somewhat rough state that immediately follows clearing.

When the land is first cleared one crop of grain is usually raised, with which is sown grass seed, usually timothy alone, but sometimes mixed with clover. Then the land is pastured, at least until the stumps are rotted sufficiently to be removed, and sometimes permanently. As pastures, such lands are not generally improved by ploughing.

The fields, on which over one hundred and fifty tons of excellent hay is being cut, have been tilled and are so smooth that the Wood's mower and the revolving horse-rake seldom meet with obstructions. The hay was mostly timothy, but on the newly stocked pieces there was quite a mixture of red and white clover,—the last seems to be a natural production, and is quite a valuable addition.

About fifteen acres of oats are growing this year; a part of them on land newly cleared. But the crop that is especially deserving of notice is five acres of splendid spring wheat, which is now nearly mature. It is remarkably uniform in height, color and promising ap-

pearance, and is likely to yield from thirty to forty bushels per acre. It lays in a central part of a large field, and in a depression that has at times been too wet for satisfactory cultivation; but a stone under-drain was made through it last year that carries off the surplus water which irrigates the grass lands below.

To show the cause of so good a crop, I must refer to the system of rotation adopted. The land is allowed to remain in grass about eight years. It is then ploughed in the fall, about ten inches deep, and oats sowed the next spring, without manure. The next fall the manure that was made the previous winter is applied before ploughing, and then it is ploughed six or seven inches deep, leaving some of the old sod undisturbed; about thirty loads, of thirty-five bushels each, are put on an acre,—each load makes five heaps, before spreading. As early the next spring as the land will do to till, it is well harrowed, and two bushels wheat per acre are sown, of a variety brought from the west, called Fife, and the grass seed is sown at the same time.

Last spring, as the ground was in good condition at the time of sowing, it is probable that the under drain assisted materially in drying it. A rich, well-prepared seed bed sown at proper season will seldom disappoint the farmer in a crop.

This land is well adapted to wheat. One year Mr. Baker raised four hundred bushels; some of the land yielding forty bushels per acre. It will be seen that in this management, hoed crops do not enter into the rotation, and the manure is at the barn through the summer after it is made.

Some farmers may, at first thought, object to this method, believing that a hoed crop is necessary to secure a thorough pulverization of the soil, and the destruction of weeds. Mr. Baker secures the first by his manner of ploughing and harrowing; and the second, by his management of the manure, which is allowed to ferment during the summer sufficiently to destroy the vitality of the weed seeds that may be in it.

His manure is all under cover, and in two places hogs have so worked over the mass that one could hardly imagine a richer fertilizer, well decomposed, unctuous, and juicy. In another shed ten grade Dutch calves have been fed milk or whey all summer, and are making the largest growth of any lot of calves raised by Mr. B. since he commenced farming. They are not fed meal, but have very nice hay.

The other crops, barley, potatoes, turnips, and fodder corn, occupy a few acres, and are making such a growth as speak well of the fertility of the soil.

His herd of Dutch cattle have increased by one calf, dropped by the heifer "Beauty," the first of June, when she was only eighteen months old. She is as large as some three-year-old native cows. The imported cow suckled her calf until he was six months old and she four months with calf again. At that time she gave thirty pounds of milk a day. This stock is so little known and so lately introduced, that I look upon its growth and development with much interest.

The cows on this farm have two pastures,—one for days, and the other for nights. The hours for milking are five o'clock P. M. and five A. M. The cows are tied up in the stables when milked. During the month of June, twenty-two cows yielded over one hundred pounds of butter per week to sell, beside supplying the family. In July, twenty-four cows make a sixty pound cheese a day. Three cows suckle their calves. One veal calf, a half-blood Dutch, five weeks old, dressed 125 pounds of meat, according to the butcher's estimate. The calves raised to keep, have been fed on sour milk, whey and hay, and have not diminished the profits of the dairy.

After visiting such a farm, one's respect for the calling is increased. Its management is a trade to be learned, as well as a work to be performed. Z. E. JAMESON.

Irasburg, Vt., July, 1868.

HAY TEDDERS.

I had a little experience with the hay tedder three years ago, in drying a piece of rowen, or second cutting, of eight acres, which was all clover, and quite heavy for a second crop. I had taken off forty loads at the first mowing, in two weeks, the last of June and first of July, without the use of the tedder. The 20th of August I commenced on the second crop, full one and one-half tons to the acre, some of it so heavy as to fall down or lodge; and being desirous to hay and house it as soon as possible, I borrowed a tedder of a neighbor, and went into it with all possible despatch. The weather was fair and hot, and every particle of it was dried and housed without any wet. The tedder was used freely, but before I got half through I noticed the stemmy look of the hay and was aware of the loss of branches, leaves and heads, but hastened to save it all while the weather was so favorable, and kept the tedder going; but was fully convinced of my error on feeding it the next winter to sheep. Clover will generally be eaten with great avidity, but this was so dry and stemmy the sheep loathed it, and not more than half was eaten, while the first cutting, though much coarser, was eaten very much cleaner and with better relish. Full half the value of the rowen was lost. The tedder should not have been used, though it is a valuable implement in all grasses but clover, and a great aid in hay making.—*J. W. C., Mont Vale Farm, Vt., in Jour. and Watchman.*

—*Punch* advises farmers to sow their P's, keep their U's warm, hive their B's, shoot their J's, feed their N's, look after their potatoes' I's, and take their E's.

A LARGE COTTAGE.

We present another of Mr. G. E. Harney's plans and perspectives of country or suburban homes. Our object in giving these illustrations is rather to afford hints and suggestions to those who are considering the subject of building, than to furnish working models. There are peculiarities about the arrangement of the rooms and in the form of the exterior of this house which are worthy of notice. It was designed for a situation where the best views of the surrounding landscape were obtained from the front entrance to the house; hence the arcade, No. 1, in the plan, occupies that position, shielding the front door, and at the same time forming a very pleasant lounging place, or summer evening retreat. Glazed doors open into the vestibule, No. 2, on either side of which is an arched recess for clothing, and in front a Gothic arch divides it from the hall proper, No 3, which is 10 feet wide and 18 feet 6 inches long; on the left, two doors open into the drawing room, No. 4, measuring 15 feet by 18 feet 6 inches, and lighted by a mullioned window in front, a large bay on the side, and a window on the rear reaching to the floor, and opening upon a veranda, No. 10.

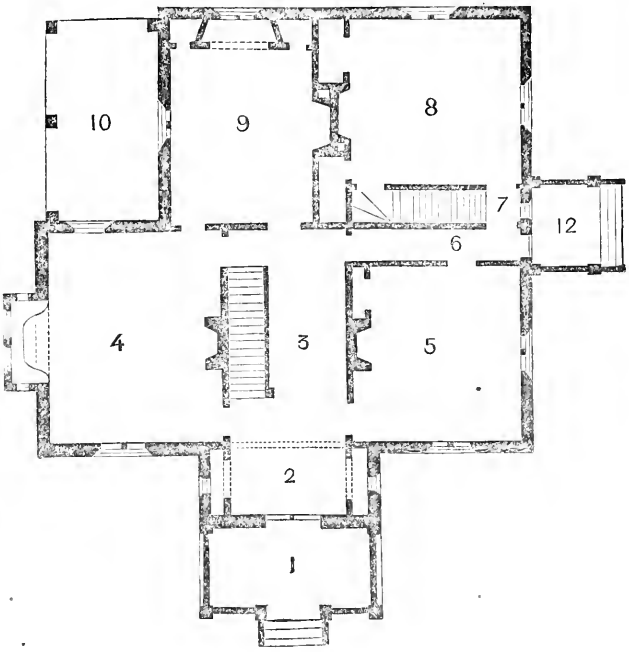
At the end of the hall a door leads to the library, No. 9, 12 feet by 15, containing two closets, with a recessed window between. No. 5 is the dining room, 15 feet square, and opening upon a back entry, No. 6. At No. 7 are the back stairs above and below. No. 8 is the kitchen, 14 feet 6 inches by 15 feet, containing two large closets, in one of which is a dumb waiter from the cellar kitchen. No. 12 is a portico over the side entrance.

The design represents a building of stone, which material, however, is not estial to the general plan or perspective of the house. The second floor contains four large chambers, with closets, a sewing room over the vestibule and hall, &c.

CROSSES FOR EARLY LAMBS.

Mr. Peart, the butcher, has been urging me for some time to raise early lambs for market. I told him that I thought of buying a thoroughbred South Down ram this fall, and picking

out a lot of large Merino ewes to cross with him. "Don't you do it," he replied; "get a Leicester. The Leicester lambs are far better." "Is it not too violent a cross?" I asked. "Not at all. Mr. A. got a Leicester from Canada and crossed him with common Merino ewes, and had great luck. I don't believe he lost a single lamb, and they were splendid. They were the best I ever killed. There is nothing will pay you so well. Mr. B. did the same thing with a South Down, and he had no end of trouble in lambing. The heads are so large; and after all, the lambs were nothing like as good as the grade Leicesters. You will miss it if you get a South Down."



I wrote to Mr. Samuel Thorne, who has had several years' experience in raising grade South Down lambs for the butcher, asking his opinion on the point. He replies: "My own experience does not agree with that of Peart. I have had many South Down and grade South Down lambs, and never, to my knowledge, lost one owing to the size of the head in lambing. As you know, the South Down has by no means a large head. Some of the other Downs have. I fancy Mr. P. has confounded the breeds. In using a Hampshire ram Down one season we had a great deal of trouble, and some loss from this cause. I never before heard any complaints of grade South Downs not 'dying well'; on the contrary, the New York butchers, as far as my acquaintance extends, prefer them to any other."

I think Mr. Thorne hit it exactly, and that the ram used by Mr. B. was a Hampshire Down. When at Geneva last week, I saw a fine lot of grade South Down lambs raised by Mr. Swan, from common Merino ewes, crossed with a thorough bred South Down, and he said he had had no trouble with them. On the contrary, he was delighted with the cross. They had all the marks and the general appearance of the South Down.

Mr. Thorne says he has no doubt that "any of the improved mutton breeds, crossed with common Merino ewes, will produce lambs that will pay a handsome profit." His plan is "to buy good, strong ewes in the latter part of August, selecting those that have the appearance of being good milkers. They are coupled the first of September, so as to bring the lambs in February. The ewes are kept on good hay during the winter, and as they near the time of lambing, one feed of roots a day is given. After lambing they are removed from the flock, the supply of roots increased, and bran mashes and some grain added. The object now is to create as great a flow of milk as possible. The lambs soon show a disposition to eat, and a place is then set apart for them where bruised oats and cracked oil-cake, with the best clover hay, are given ad libitum. If the lambs do well they are all sold and delivered by the 1st of June, and the ewes then have the summer in which to get ready for the butcher in the fall. Near any city or large town where early lambs command an extra price, there can be no doubt of the profit to be made by raising them. As soon as the lambs reach 60 lbs. they may be sent off. Mine usually brought me from $5 to $8 each. I paid from $2.50 to $4.50 for the ewes, and sold them fat the next fall for from $5 to $7, and I had the fleece besides."

This looks like a profitable business, and as June is rather a dry time financially on the farm, the money from the lambs would be very convenient.—*J. Harris, in Am. Agriculturist.*

Kitchen Odors.—Meat which has been slightly tainted may be restored to perfect sweetness, and the odor arising from it while boiling entirely prevented by throwing into the pot a few pieces of charcoal contained in a small bag. The odor of vegetables slightly affected may be prevented in the same way. Red pepper, and even black pepper, produces a similar but less perfect result.

HARVEST TIME.

The lengthening shadows, leaving the green lea,
Creep down the rugged rocks and stoop to kiss the sea;
Then hurriedly climb up again, turn and flee
Back to the purple hill.
Up the broad path the reapers homeward go,
The little gleaners wander to and fro;
And from the valley, lying just below
Echoes the tinkling rill.

The lindens, leaning over the green lane,
And hung with samples of the golden grain,
Caught from the fulness of the laden wain
As it bore home its prize.
Their clustering leaves press the bright light away,
And so beneath reigns twilight all the day,
Save when some straying sunbeams, like a fay
Peeps in with laughing eyes.

Beyond the harvest fields the rolling land
Slopes to the sea; toward the level strand
The waves ride proudly in, to greet the sand,
Each bows its silvered crest;
Then, rearing up, sweeps out again to sea,
Chanting upon their way, sweet melody,
And so they rise and fall unceasingly,
And never are at rest.

Wrapped in a peaceful stillness Nature lies,
As if, while gazing on the quiet skies,
She had looked past their depths, had met God's eyes,
And in that gaze grown calm;
As if, awed by the solemn sight, she lay,
Or, fallen asleep, was dreaming life away,
Singing, unconsciously, by night and day
A reverential psalm.

Half veiled in golden light of shimmering air,
The landscape stretches, wondrously fair,
No trace of paling beauty anywhere;
Nature is in her prime.
In richest robes the hills and woods appear,
The lakes and springs lie motionless and clear,
Ruled by the fairest Queen of all the year—
Beautiful harvest time.

The silver river, winding through the lea,
The singing birds on every greenwood tree,
The music of the never silent sea,
The deep and silent wood,
Are never changing witnesses that He
Who made all these fair things so graciously
Is mighty in His love, and prayerfully
I whisper, "God is good."

Hushed for the night is labor's busy hum,
The patient oxen from the home croft come,
Their yoke unloosened, and their day's work done,
Down to the little spring.
In from the sea the fragrant breezes roam,
Bearing the scent of sea flowers, freshly blown,
And murmuring of their wild, free ocean home,
They gladden everything.

Like little lambkins hastening to the fold,
And seeking shelter from the night and cold,
Drift the white cloudlets to the gates of gold,
And enter one by one;
All day ranging about the quiet sky,
God's great wide pasture ground stretched out on high,
They've wandered, and, now weary, homeward hie,
Where gleams the sinking sun.

Into its rainbow curtained setting place
The golden orb rides down with stately grace,
Slow veiling in the clouds its radiant face,
And lo! at its command,
Longer the shadows fall on rock and tree,
From my sight fades the harvest plain and sea,
And twilight clasps its pale arms lovingly,
About the peaceful land.

—Hon. N. S. Townshend, President of the Ohio Wool Growers' Association, says Combing Wool has been grown in Ohio, which has been pronounced by experts to be equal to that grown in any part of the world

MAINE AGRICULTURAL COLLEGE.

The last number of the *Maine Farmer* contains an editorial "Look at the Industrial College" of that State, of about two columns in length. The college grounds consist of two farms and two sets of farm buildings, about one third of a mile apart, and comprise about 365 acres, 175 of which are under cultivation. It is situated in the town of Orono, nine miles from Bangor. One of these farm houses has been rebuilt at an expense of about $5000, a dormitory 47 by 63 feet, 2 stories high, has been erected, at a cost of $18,000; and near to the dormitory, which is situated between the two old farm houses, and commands a view of both, a laboratory, 40 by 50 feet, with an extension 32 by 50, to cost $25,000, has been commenced—sums that considerably exceed the $30,000 which the legislature appropriated for building purposes. The Trustees give notice that the institution will be opened for the reception of the first class of students on the 21st of September.

We are sorry to find that the Editor of the *Farmer* was not entirely pleased with the situation, the buildings, or the prospects of this institution. He speaks of the soil of the farm as chiefly a clayey loam, and says, "it by no means represents, as such a farm should represent, an epitome of the soil of Maine, and it is in a section that never has and never can take high rank as an agricultural district. Everything is against it. We fear the farm will never be a favorable locality for the proper testing of, and experimenting with, the different kinds of fruit trees—a feature of great importance in connection with the purposes of the Institution, and one as desirable to be secured as any that can be mentioned." Still he noticed "near the north-west corner of the farm, three or four acres sufficiently rocky and apparently of good character for an orchard; while near the White farm buildings, especially to the north of the barn and upon a declivity facing the northward, is considerable sandy or light loamy soil."

We are not acquainted with the "clayey loam" of the Penobscot and its tributaries, but if it is any thing like the clayey loam of the valley of Lake Champlain, with which we are acquainted, we must hope that the strong hands of the young men of Maine, guided by the teachings of science and aided by modern

machinery, will in a few years give to this college farm a far more favorable and hopeful "look," and perhaps demonstrate the possibility that the section in which it is located is capable of a high rank as an agricultural district.

Our visitor thinks a cheaper structure might have answered for a dormitory, and remarks that "when window glass is used that cost two dollars per light, and doors that cost twenty dollars each, we should question whether somewhat cheaper glass, and good, but less expensive doors, would not be far better, provided by the means a little money could be saved for additional buildings, scientific apparatus, or other necessary equipments of the college."

In deciding to open the college, "without a President, without a library, without a laboratory, with but a limited apparatus, and with only a Professor of Mathematics and a Farm Superintendent," the Board of Trustees, he says, are acting on a "judgment that is certainly different from our own, and while we wish it the most complete success, we earnestly hope the result will not be such as to bring disappointment."

In relation to the crops and stock now on farm, which have been managed for the two years past by Hon. John H. Gilman, the editor of the *Farmer* says:

The present season the farm has cut ninety tons of hay, the yield averaging about one ton to the acre. Haying was commenced the 5th of July. The hay, with the exception of three tons of meadow hay, is of superior quality, chiefly herdsgrass and redtop, and is in excellent condition. The experiment was tried of putting in one mow immediately after it was cut, with no making and no foreign moisture in the grass. It was cut the 18th of July, about 11 o'clock A. M., and hauled into the barn about 2 o'clock P. M. Four tons were put into a mow by itself, and upon the top, old straw to the depth of a foot or more was pitched on. The result is a complete loss. The other crops upon the farm are seven acres of potatoes, seven acres of barley and three and a half acres of buckwheat. No corn is raised, from the fact that four bushels of potatoes can be raised easier than one of corn. Eight acres of land are being summer tilled, upon five of which grass was ploughed under early in the summer, and buckwheat sowed and ploughed under upon the other three. To the south of the White farm house, is a small fruit garden in which thirty to fifty apple trees, of rather small size and of somewhat stunted appearance, which led us to the belief that the soil is not a favorable one for fruit trees. This appearance of the trees, however, we were informed was due in a measure to neglect, and we were also informed that in some places in the vicinity, good orchards of fine healthy trees, where they had been properly cared for, were to be found. In the fall of 1866 four hundred pear trees were set out in the nursery, and of these certainly not more than one-half are now living. Some four thousand young apple trees are looking very well.

The stock upon the farm consists of six head of full blood Durham stock, as follows: one bull, two cows, one one-year-old heifer and two calves; together with seventeen head of grade cattle, five horses, sixty sheep and lambs, and four swine.

THE JAMESTOWN BREED OF CATTLE.

Will you or some of your correspondents inform me through the New England Farmer, what breed you would call a cow that resembles the picture of the Dutch cow in the last Farmer, in color and shape, but has no horns. I am informed her grandmother was imported from Ireland in the Jamestown. I have a very likely male calf from this cow, which is now more than two months old, and he too will be hornless, and I would like to know what breed to call him. Vegetation has advanced more rapidly for two months past than I ever recollect observing.

Thomas Haskell.

W. Gloucester, Mass., Aug. 6, 1868.

Remarks.—On reading this inquiry, we remembered of having seen, and we thought of having published, some account of the Jamestown cow, not long since, but for some time we were unable to lay our hands upon the documents, without which we did not like to trust to our memory for a reply. After considerable inquiry and hunting, we find in the abstract of the County Reports in the Agriculture of Massachusetts, a detailed statement of her history, written by our correspondent, A. W. Cheever, Esq., Sheldonville, Norfolk County, Mass.

It will be remembered that in 1847, the United States ship, Jamestown, Capt. R. B. Forbes, commander, carried a cargo of provisions from this country to the starving people of Ireland. The Lord Lieutenant of that country, wishing to confer some token of his gratitude, made a present of a fine Suffolk heifer to Capt. Forbes, which proved to be a deep milker, giving in her flow twenty-six quarts beer measure of the richest milk. Capt. Forbes sold the cow on his arrival here and gave the proceeds to the Irish Charity Fund. John Marland of Andover, Mass., was the purchaser. From him she passed into the hands of J. D. Bates, of Swampscot, and afterwards into the hands of Mr. Osborn of Danvers, Mass.

Mr. Sanford Howard, who saw this cow and who had also seen the Suffolks in England, says that she closely resembled the Suffolk, an English breed without horns. He also says that the Suffolks are different in

color, shape and characteristics from the Galloways; which are also "polled" or hornless, and almost invariably black.

Col. Stone of Dedham, Mass., who is endeavoring to preserve and perpetuate in its purity, as far as possible, this Jamestown stock, says that as far as he knows, the original cow never had but one heifer calf. A bull called "Jamestown" from this cow, by "Beverly," a thorough bred Jersey, (out of "Flora" by the "First Prize Bull," at the Royal agricultural Show in Jersey,) has left a progeny which appears to possess superior dairy properties. Nearly all the descendants of the cow "Jamestown" are without horns, showing the remarkable strength of the Suffolk strain.

In 1867, the first premium of the "Wilder Cup" was awarded by the Norfolk County Agricultural Society to J. W. Gay, of West Dedham, for his superior herd of fifteen milch cows, eleven of which were Jamestowns.

In closing his statement to Mr. Cheever, Col. Stone says:—

"You know the strong prejudice I have in favor of this stock, and you have seen some good specimens of the same. They possess qualities which I consider very valuable in a dairy stock. They are very gentle, I never having known a vicious animal, unless they were too strongly crossed with the Jersey. When 'Jamestown' was five years old, a four year old boy could manage him in safety; he was worked in harness and perfectly handy. They are perfectly hardy, good feeders, and hold out in their milk remarkably, which I consider *the great recommendation*. I know of several that *give milk the year round*."

The cow "Flora," mentioned in the above account as the grandam, on the Jersey side, of the bull "Jamestown," was imported by Mr. Motley, and proved one of the most remarkable of that celebrated stock, having made sixteen pounds of butter a week.

We think it probable, therefore, that Mr. Haskell's cattle belong to the Jamestown stock, and we hope that the foregoing will be a satisfactory answer to his inquiries.

But is this all? If the anticipations of our Norfolk friends shall be realized as to the value of this stock, may we not recognize in the history of this "Suffolk heifer,"—a mere token of the gratitude of a suffering people,—"a divinity that shapes our ends, rough hew them as we will,"—a divinity that has said, "Cast thy bread upon the waters, for thou shalt find it after many days?"

NEW PUBLICATIONS.

THE AMERICAN DEVON HERD BOOK, published under the direction of the Association of Breeders of Thorough-bred Neat Stock. Edited by Horace Mills Sessions, South Wilbraham, Hampden County, Mass. Springfield Mass., S Bowles & Co. 1868. Price $2 00 for first vol. and $2 50 for second, or, bound together, $4 50, post paid. Pages 144 and 148.

The addition of these two volumes, just received, makes our library quite complete in the Devon department, as we had previously on our shelves the first and second volumes by Davy and the third volume by Sanford Howard, now Secretary of the Michigan State Board of Agriculture. Mr. Sessions having secured the few copies of Davy's English Devon Herd Book in this country offers them, bound together, for $4 50. In the first volume of Mr. Sessions' American Devon Herd Book, published in 1863, fifteen States were represented by fifty-three different breeders, with the pedigrees of 151 bulls and 350 cows, making in all 501 animals, all owned in America. The second volume, published in 1868, contains the pedigrees of 252 bulls and 418 cows—670 in all—from 150 breeders and owners, residing in 21 States, and some in the British Provinces.

In consequence of the prohibition by the general government of the importation of cattle as a precautionary measure against the introduction of the plague so fatal in England, no Devons have been imported into this country since the publication of Mr. Sessions' first volume; nor is it deemed necessary to do so, as he says it is the testimony of those who have visited the best herds in England, that we need not go abroad to obtain animals equal in every point of excellence to the best that can be found in England.

We do not feel competent to pass a critical judgment upon the execution of the difficult task which the editor has undertaken and accomplished. So favorably, however, was his first volume received by the breeders and owners of thorough-bred Devons, that the editor remarks, "We only hope that the second volume will meet with the same favor as the first, and be worthy of the title of the American Devon Herd Book, and receive the universal patronage of the Devon breeders of America. The second volume is larger, and with the experience gained in the preparation of the first volume, we cannot doubt that the editor has produced a work at least proportionally more perfect and valuable, and we need only inform the breeders of this favorite race of cattle, that the second volume of the American Devon Herd Book is ready for delivery.

Notice is also given that the third volume will be published in three or four years, or as soon as a sufficient number of pedigrees are received to warrant its publication.

THE AMERICAN STUD BOOK: Containing full Pedigrees of all the Imported Thorough-bred Stallions and Mares, with their Produce, including the Arabs, Barbs and Spanish Horses, from the earliest Accounts of Racing in America to the end of the year 1867; Also all the Native Mares and their produce, Alphabetically arranged. With an Appendix, giving Pedigrees of all the Native Stallions whose Dams have no Names, with a full and copious Index to produce of the Mares. By S. D. Bruce, Editor of the *Turf, Field and Farm*. Vol. I. A to L. Chicago: E. B. Myers & Co. 1868. Price $10. Large octavo, 661 pp., Charles Ruthven Byram, 323 Washington St., Boston, sole agent for New England.

The print, paper and illustrations, mostly steel or copper-plate, are in the best style of modern book-making. But we are not sufficiently well posted on Stud-books, or on the history of American horses to express any opinion as to the correctness or thoroughness of this work. The author informs us that twenty years have been occupied in gathering the information which it contains, and that none but those who have inquired into the loose, obscure records of the past have any idea of what a herculean task it has been. From the delay in the publication of this book, the writer says, complaints have arisen which have been very annoying; and if the author had only looked to his own ease and a speedy remuneration for his services, he would have hurried it out years ago. But a feeling that the great labor of his life should correspond to what he knew to be the correct standard, prompted him to go over and over it again; and, in following a chain which later researches gave the key to, he had to throw out matter previously arranged. In addition to this, his desire to remedy the slightest defect led to a continual repetition of the work.

We are assured that eminent turf men and breeders in all sections, who have examined the proof sheets, approve and recommend it as the most complete and exhaustive work of the kind extant. The publication of most of the pedigrees in the weekly issues of the *Turf, Field and Farm*, during the past three or four years, must we think have secured many corrections and hints from breeders and horsemen among the readers of that widely circulated journal.

On the whole, we are much pleased with the appearance of the first volume of Mr. Bruce's American Stud-book. By printing the pedigrees on small type and in double columns, much space is saved and great distinctness secured.

—An Ottumwa, Iowa, paper says that Rev. Dr. Parker, of Bladensburg, in that county, pared a wart on his hand, splitting it to the quick, and then mashed one of the old-fashioned potato bugs on the wound, for an experiment, when he was seized almost instantly with a deathly sickness, so that he was unable to fill his regular appointment to preach, and since then has been under the care of four physicians, with but little hope of his recovery; mortification having taken place in his arm, rendering it necessary to amputate.

For the New England Farmer.

PRESERVATION OF FORESTS.

Your correspondent, Z. E. Jameson, in FARMER of August 1, controverts my idea of the necessity of greater care for the preservation of forest trees. He assumes "that this earth was designed for man's habitation, and that it is his duty to subdue and replenish it." This may be true in a certain sense, but does it follow that it is man's duty to mangle and destroy the grand old forests, the workmanship of Nature, the mother of us all, and to treat every tree as a mortal enemy? or, that there is no danger of carrying this war of extermination and subjection too far?

Where wood land is worth no more than, according to the representation of Mr. Jameson it is in Vermont, or where it is not likely to be worth any more in the future, the cultivation or even preservation of forest trees may not be advisable in a pecuniary point of view. Where good wood land is worth only from $2 to $40 per acre, as he says it is in Northern Vermont, and the farmer has not already more cleared land than he can cultivate without resorting to the skinning process, he may have the best of the argument; but where, as with us, it is worth $300 and upwards, per acre, and the land, from being rough, is not worth more than $10 per acre, when cleared, for grazing, reason as well as experience teaches that the growth of the forest is more than the interest on the land.

But, adopting the course of your correspondent, what, in a few years, is to keep up the throb of the pulse of the iron horse that follows the net work of railroads that, like the veins of the human body, branch out in ten thousand ramifications, throughout the length and breadth of our country, wending its way over the snow fields of the Rocky Mountains, and through unknown deserts to the far Pacific coast?

I think, in view of this and other considerations, that it is high time to begin to practice economy with the forest growth. When I see the drain that is being made on the forests in my own immediate neighborhood, and see no reason why the same demand for wood should not exist in all parts of the country; when I consider the untold millions of dollars worth destroyed during the late civil war, and the fact that the lumber regions of Maine, years ago, were driven back to the head waters of the Kennebec and Penobscot, and when I remember that the great West is increasing in railroads, but decreasing in wood and timber, I feel that it is high time to take measures to secure a supply for the future.

I am not enough acquainted with climatology to say what the effect of the forest has upon our climate, but I am aware that in certain bleak localities on our farms, a forest will often shelter fields from the cold winds, and make them a week or two earlier and warmer

in spring for cultivation. This I can prove from experience on my farm, where about three acres of wood stretch along the northwesterly side of a swell of land, thereby sheltering ten or fifteen acres in two fields in a southeasterly direction, from the wind that continually sweeps up in a northwesterly direction, through a tract of country two and a half or three miles in length, between two long ranges of hills. Forty years ago, where the said forest trees now stand,—many of which are large enough for "saw-logs,"—a field of Indian corn flourished; the forms of the hills still remain plainly visible among the trees. I believe that, casting the legal interest on said land at $20 per acre, its full value without the wood, from that time to the present, and estimating the wood as it now stands at its market value, it will be shown that no loss has been incurred in allowing it to grow up to a forest, though susceptible of cultivation as a field.

Now, according to Mr. Jameson's plan, what should I do but rise, slay and destroy that forest? Were I to do so, I should consider myself a fit subject, at the next sitting of the Probate court in this county, for the appointment of some one of my neighbors to a guardianship over me and my estate.

M. J. Harvey.

Epping, N. H., Aug. 17, 1868.

THE CATTLE DISEASE.

The assumption that cattle from Texas or any other section, apparently healthy themselves, should leave on the ground over which they pass, or in the water of which they drink, a poison, an insect, or anything that causes deadly disease in native cattle, is one which many cattle dealers and butchers in this market are unwilling to admit. That the seeds or germs of fevers and other diseases of the human family may lurk in the clothing of nurses, is a fact more readily admitted and more easily accounted for.

To admit that there is much mystery about the present cattle disease does not explain the facts which have been observed for years by people at the West, who have had a dear-bought experience with the "Spanish Fever." To the facts stated in the communication in the last Farmer, from J. R. Dodge, of the Agricultural Department at Washington, we may add, from the Report for 1866, the statement that Texan cattle driver to New Orleans do not communicate the disease to the cattle of Louisiana. In 1865, eight hundred Texan cattle were driven into Mississippi county, Arkansas, and scattered throughout the county without producing the disease. The fact that these sections lie on the Mississippi river, and in a *miasmatic* region is suggested as the reason for the non-development of the disease. We also copy from the same Report the following communication from Col. J. Wilkerson, originally published in the *Southern Cultivator*:—

"I have been a cattle dealer for twenty-five or thirty years, and in that time have had many a death among my stock by this disease, and have in consequence taken some notice, meanwhile endeavoring to learn its causes and how it was brought about. I notice that cattle scarcely ever take the fever if let remain where they were raised, and I am fully convinced it is generally brought on by a change of climate. For instance, you take cattle from the mountain country to the low country and they will take the fever in a short time and die, but their disease will not affect the cattle raised there; but, on the other hand, take cattle raised in what we call a distempered part of our country—that is, the low country—from warm latitudes, up into a colder one, they will themselves improve all the time; but, without being sick themselves, they will spread the fever and kill the cattle in the section of country into which they are taken, till they travel on, or stay or have staid long enough for the fever to leave the system. I have been in the habit of driving cattle from Florida to Virginia, and found my cattle to improve and do well; but after I passed the line of 34 degrees, they began to spread the fever all along the line of travel among the stock raised in that section of the country, till I struck the line of Virginia, which is a distance of about 250 miles, then it ceased, and all went on well. I suppose the reason for its stopping was, that my cattle had been out of the low country long enough to become acclimated. Hence, I think the disease is originated from a change of climate, either from a colder to a warmer climate, or taking them from a warm climate to a more cool and healthy one. How it is that they carry the disease with them, and give it to others without injury to themselves, is a mystery I am not able to solve, and will leave that to be discussed by the bureau of investigation."

The following case is given by the *Prairie Farmer*:

Last fall a herd of Cherokee cattle (85 head) were brought into Champaign County and placed on a farm with a herd of native cattle (38 head). They were fed together all winter and through this season so far. This herd was out of the track of the later Texas cattle, but on the 15th of July they were brought up on to the prairie where such had passed, and are still kept. About the third of August the natives began to die and when we were there, 20 were dead and all the

others sick, while the Texas cattle were all healthy and hearty, right among them, showing plainly that cattle wintered over do not communicate the disease, or contract it.

As illustrative of the opinion that native cattle do not communicate the disease to other native cattle, the *Prairie Farmer* says:

Post mortem examination has been made of a cow near the stock yards, which showed all the outward symptoms. The examination showed a most marked case of the disease. On further inquiry about the yards, we learned that a large number of cows which had ranged the prairies about there had died, while those in inclosures were safe and well. One instance was that of the proprietor of the Hough House, who has thirty-five cows which have been in a fenced lot joining the stock yards on one side, and the prairie on two other sides, where the Texas cattle have been pastured. These cattle are all safe and well, as are those of another lot nearly similarly situated.

WHEN TO CUT RUSTY WHEAT.

At a meeting of the Lexington, Ky., Farmers' Club, Aug. 8th, the reports as to the wheat crop in that section were quite unfavorable, and some members thought it would have to be abandoned. In relation to early cutting, especially that attacked by rust, Mr. Starks said, as reported in the *Farmers' Home Journal*:—

His practice has been to cut wheat when attacked by rust as soon as it is in the dough state, and he has found it to be a profitable plan, as his merchants in Lonisville, to whom he has sold his crop for some years, prefer his wheat to that of many other farmers, simply because he cuts it earlier than is customary and before its valuable properties have been wasted, and when it makes more flour, and of a superior quality to that cut later. He is convinced, from long and careful observation that the vaous diseases to which grain is subjected, move in cycles, appearing and disappearing regularly, as has been stated in regard to the fly. In reply to a question—why rusted wheat, cut when in the dough state, becomes plumper than that left? he replied that the sap goes to the grain and nourishes it, if it is cut when green. He cuts his and puts it in good shocks immediately after the reaper; there is no danger of it moulding from the sap only, but if heavy rains come it may, though he has never had any do so. The past has been the most peculiar season in many respects we have ever known in Kentucky and furnishes no rule for judging the future. If a good crop of wheat is expected, it must make good progress in the fall; grazing has proved injurious some seasons, but at others it did not appear to produce any bad effect. His best crops have been raised on hemp land, broken up with a two-horse plow as soon as the hemp was off and rolled well. If we could get clover land ploughed up early enough it would be second only to hemp land. His wheat has seemed to do worse in oat stubble than in anything else, but on hemp land the growth was more luxuriant and the rust was more serious than on corn land. Until this year he had never noticed that on western slopes the grain was much thicker. He fears sudden changes of weather in winter when the ground is filled with water, as the freezing and thawing displace the roots.

WORKING BUTTER.

Pat, pat, pat,—roll, roll, roll,
The golden butter in the tray,
It can't endure such beating
Without giving out the whey.
Down in the cool cellar,
Far out in one corner,
Stand Fanny and I;
Patting the butter,
Ready for market—
The rich golden butter;
The nice flavored butter,
Made by Fanny and me.
Shall we stamp it with Rose,
Or stamp it with Apple,
This beautiful ball,
That stands so high!
I think we'll impress it,
With a Cow—as she made it.
And thus we did do it,
Both Fanny and I.

Lizzie, in Boston Cultivator.

SHORT-HORN SALES.—We learn from the *Country Gentleman* that Mr. B Sumner, of Woodstock, Conn., has recently sold to Richard Goodman, Esq., Lenox, Mass., the cows Laura 5th and Snowdrop; to Dr. Okie, Providence, R. I., the heifer Countess of Antrim, by 2d Earl of Carlisle 2804; to Capt. Richard Vaughn, Greenfield, R. I., cows Alice and Pitt 2d, by Fancy Boy 2839—also bull calf Neptune, by 2d Earl of Carlisle 2804; to Augustus Whitman, Esq., Fitchburg, Mass., yearling heifer Rosette, by 2d Earl of Carlisle 2804, and bull calf Baron, by Rosy Duke 6142, out of Baroness, by Barrington; to R. O. Storrs, Mansfield, Conn., bull calf Colfax, by 2d Earl of Carlisle 2804, and bull calf Prince Consort, by 2d Earl of Carlisle.

—D. F. Appleton, Esq., Ipswich, Mass., is breeding the Kerry cattle which were imported by Mr. Sanford Howard in 1860, for Mr. A. W. Austin, of West Roxbury. We learn by the *Country Gentleman* that Mr. Appleton has sold to Mr. Stiles, Skaneateles, N, Y., the yearling heifer "Biddy;" to Mr. Samuel Sinclair of the N. Y. *Tribune*, the two-year old, "Ruby," and to Mr. E. B. Perry, Providence, R. I., the cow "Dido."

BELMONT ECLIPSE.

BELMONT ECLIPSE.

This cut represents the horse that took the first premium on Thoroughbreds at the Exhibition of the New England Agricultural Society at Concord, N. H., three years ago. He stands sixteen hands high, and weighs 1075 pounds. He was bred, and is still owned by Winthrop W. Chenery, Esq., of Belmont, Mass. His color is a rich golden chestnut; he has a clean, neat head; strong, oblique shoulders; short, strong back and loins; very long hind quarters; powerful, well-let-down hocks; flat, wide sinewy legs; faultless feet; and throughout a full share of bone and muscle. He is good-tempered, tractable, and possessed of remarkable speed and endurance. Four *first prizes* have been awarded to him by different New England Agricultural Societies. His pedigree shows that he was got by imported *Balrownie*, out of *Meg Merrilies* by *Leroy*, dam by *Black Snake*, and he by *Lee Boo*, &c., from which it will be seen by those familiar with the stud history of England, that Belmont Eclipse unites the blood of some of the best races of the English horse.

EXTRACTS AND REPLIES.

COLTS RUBBING THEIR TAILS.

I have previously had some trouble with itchiness in my horses, and now have a colt, worth five or six hundred dollars, that has rubbed most of the hair from his tail. If you can prescribe something to remove the difficulty and to restore the hair, it will be worth much to me and to others whose horses are similarly afflicted. S. F.

Ripton, Vt., Aug. 7, 1868.

REMARKS.—After speaking of the mange, Mr. Youatt remarks that every case of itchiness of the skin should be regarded with suspicion. When a horse is seen to rub the root of his tail, or his head, or neck, the parts should be carefully examined. If the roots of the hair where it has been rubbed off remain, and there is only redness and not scurfiness of the skin, it probably is not mange but only the effect of lice, or inflammation, or other unhealthiness of the skin.

But as our correspondent says nothing about the state of the skin of his colt, or of its rubbing any other part of its body, we are inclined to the opinion that the rubbing of his colt is caused by worms in the rectum and not by lice or disease in the cuticle. This point, however, should be decided before any medical treatment is attempted.

An inquiry, similar to that of our correspondent was made in the *Country Gentleman* some two or three years ago, which lead to the expression of the opinion of several horsemen on the subject, most of whom ascribed the difficulty to worms. The effect of Ascarides in children and adults is well known, and it is believed the horse is similarly afflicted. An Illinois horseman replied that he would warrant a cure by a daily rubbing with the stable rubbing cloth, with greasing or oiling with the finger or swab the seat of the disease. He also recommended giving a few clean wood ashes, some salt and a teaspoonful of rosin in the oats three times a week for one or two weeks.

A New York horseman recommended the following,—to be administered once a day, on an empty stomach, to be followed by a mash of shorts well seasoned with salt,—

Castor Oil	12 ounces.
Oil of Wormseed	1 ounce.
Oil of Tansy	3 drachms.

After giving the above for two or three days, or until the worms come away, give the animal *one ounce*, night and morning, in his feed, until the itching disappears, of the following preparation:

Popular Bark	1 pound.
White Mustard Seed, (whole,) Powdered Mandrake, Sulphur, Salt, Ginger, and Charcoal, of each	2 ounces.

WINTER WHEAT.

The first of our glorious harvests, the great, indispensable hay crop, is now secured, to the joy of the husbandman, in better condition than is usual. It is to be feared that spring wheat and other small grains may be a partial failure from the abundant early rains and the late pinching drought. But such failure should not discourage us so far as to induce us not to try again another spring. We must fall back on our *main chance*,—winter wheat, which is far superior in quality, quantity and safety as a crop. It is gratifying to know that more attention is given to this crop by New England farmers than formerly. The time is sure to come when there shall be a wheat field on every farm, as there is now a cornfield and an orchard, and when the money now paid for our barrels of flour shall remain in our pockets, to pay a debt, or buy some needed implement that shall lighten our hard, daily labors in the field.

The New England States, *one and all*, lie on the bosom of this great planet a waste, and almost a desert, as regards the production of wheat, while thousands of acres are raised in latitudes both north and south of us. Even in cold Russia and Lapland this cereal is their main stay. Through the influence of a recommendation of the Governor of Maine, in his message to the Legislature of that State, an act was passed giving a bounty on its growth, and the result will be an immense revenue to the State in a very few years. It is to be regretted that the Govenors of the other New England States have not followed the example of Gov. Chamberlin. Eventually they will do so, and wheat growing will become one of the most profitable and important features of New England farming. If any crop is worth raising in the old States, it is this. We ask the farmer to be up and doing without waiting for legislative encouragement.

Though I may repeat my former advice, permit me to say to new beginners, plough a piece of your mowing field or pasture immediately. A good second crop with the stubble, is almost equal to a clover fallow, or a fair dressing of manure. Harrow and mellow the sod, and get in the seed three inches deep if possible. Soak the seed, and be sure it is the winter variety, in brine by dissolving half a peck of salt in four or five pails of water, ten or twelve hours, and rake it in ashes or slaked lime. This is death to the weevil fly. Sow one

and three quarters to two bushels to the acre, from the first to the tenth of September. A small patch of two or three acres will furnish flour for a good sized family, with fifteen bushels to the acre only. Will farmers give us the results of their experiments in raising wheat? HENRY POOR.

Brooklyn, L. I., Aug., 1868.

BLOODY MILK.

In reply to correspondents in Roxbury, N. H., Fitchburg and South Abington, Mass., who have recently inquired for a remedy for bloody milk, we will say that we think it most probable that the trouble arises from some local cause, rather than from a vitiated condition of the whole system. Milk is so nearly allied to blood, that a slight derangement of the delicate organs might result in bloody milk. It may be the result of bruise or sprain caused by jumping over fences and logs, or of being trodden upon by other cattle while lying down, or of being hooked or jostled by other cows, or abused by boys. It may also arise from a "cold" taken by the cow while lying with the udder on damp ground, or from exposure to the great and sudden changes of our climate. Cows are often crowded too closely in stalls and yards, where they quarrel with each other about their feed, and tread upon and bruise each other when some of them are lying down. If the bloody milk is caused by a bruise, that should be healed; if by inflammation, that should be removed. It may be well to bathe the udder with soft warm water, and administer some medicine. An ounce of saltpetre, dissolved in water, given three times in the course of a week, may have a good effect. The old remedy of a piece of poke root, the size of a small hen's egg, grated or cut fine, and given in oats or other feed, once a day for two days, is also recommended by some. Poke root, however, we believe is less popular with veterinary practitioners than formerly. In our own stock there are cases of bloody milk nearly every year, but it usually continues for only a day or two and then subsides without other medicine than bathing the udder.

HARROWING SWARD LAND.—A COW WITH A COUGH.

I noticed in a recent number of the FARMER an inquiry in regard to harrowing sward land. I will give my method. I use a Side-hill or Swivel Plough, which I prefer for several reasons. Harrow lengthwise the furrows slightly, in order to settle them down; then harrow crosswise, first running the harrow in the direction in which the furrows were turned, going back in the same place, and so continuing, which pulverizes the ground with less labor and renders it smoother than can otherwise be done.

I have a cow which has been afflicted with a cough for the last nine months, with discharge of a thick matter from the nostrils, but which does not appear to affect her general health materially. Will you or some one else give me the cause and remedy through the medium of the FARMER?

A SUBSCRIBER.

East Hardwick, Vt., Aug. 10, 1868.

REMARKS.—A cough is not a disease; it is simply an effort of nature to throw off one. Still, in common language, we may say that there are few things more dangerous or alarming than a cough, in man or beast. How many "colds," that with proper care and treatment might have been broken up and cured at the commencement, end in fatal consumption. So with cattle, a cough that might have been removed at first by warm housing, a few mashes of bran or shorts, plenty of roots or other green food, frequent currying, or perhaps a dose of physic, ends in serious inflammation of the lungs. Dr. Dadd says the first object is to induce action to the surface by friction and counter irritants, and recommends that the throat, and feet if necessary, be well rubbed with a mixture of olive oil 4 ounces, oil of cedar 1 ounce, and liquid ammonia half an ounce. Then give a dose of powdered liquorice one ounce, composition half a teaspoonful, in a quart of gruel, to be repeated two or three times during twenty-four hours. A drink of any warm aromatic tea, such as pennyroyal, catnip or aniseed, may be useful. Mr. Youatt says that an epidemic cough that was very fatal in England in 1830–31, was caused by the small passages of the lungs being absolutely choked by myriads of little worms.

CHERRY LEAVES POISONOUS FOR CATTLE.

Noticing in the FARMER of August 1st, by your answer to an inquiry relative to the cause of a disease among certain cattle, that you think were poisoned by eating cherry leaves, I wish to know to what kind or kinds of the cherry you referred; and whether the poisonous properties are confined to one species or belong to the whole.

This is a subject which I think may well merit attention, as the wild cherry, especially the black and red, grow in great abundance here, and there is a ready access to it in the pastures for stock of all kinds. J. P. CARR.

Waterford, Vt., Aug. 5, 1868.

REMARKS.—From statements of cases of fatal poisoning by eating cherry, leaves, it appears that both the wild and tame cherry at some seasons, and under some circumstances, are poisonous. It is supposed that they contain *Prussic Acid*. It has been supposed by some that they are dangerous only when wilted, but cases have occurred in which the green leaves have poisoned animals. A farmer in Plymouth county, Mass., who had three cows killed in one day by eating the wilted leaves from a wild cherry that had been blown down in the pasture, some time afterwards finding that the cream from his milk would not make butter as usual, suspected his cows had eaten something injurious. He therefore watched them, and found that as soon as they were let into the pasture the cows went to the wall and commenced browsing some cherry trees within their reach. The cows were removed to another field, and in a few days the milk resumed its proper quality. A lady informed one of the editors of the FARMER that a dose of half a pint of vinegar and two tablespoonfuls of chalk had proved effectual in several cases of cherry poisoning. It is probable that the cherry leaves are poisonous only, or mainly, at a certain stage of their growth or development. As salt is

useful in cases of poison from stings, &c., Mr. Cole suggests its use when cattle are poisoned. Possibly well salted cattle may have less appetite for cherry leaves.

NUTS ON A GRAPE VINE.

Accompanying this please find a piece of a grape vine with a cluster of nuts or something else. There was another like cluster next them on the same vine. I do not know how to account for it, and should be glad to hear from you or some of your readers a solution. We are informed in Scripture that "men do not gather grapes of thorns, or figs of thistles;" but we have in this something that appears to be nuts from grapes.

LORENZO BROWN.

West Northfield, Vt., Aug. 7, 1868.

REMARKS.—This probably is simply one of those monstrosities which are occasionally seen in the vegetable kingdom, and which have parallels also in the animal world, but for the production of which naturalists are not able to give a satisfactory reason. We generally content ourselves by saying, "they are out of the common order of nature"—"unnatural productions," &c. In this case, instead of a bunch of grapes, we have a "bunch" of something that has somewhat the appearance of immature hazel-nuts. On opening the nuts we found that many of the seeds which they contain had been eaten into by a very small yellow maggot. The eggs from which they hatched may have been laid in the embryo grape and produced the irregular growth, or these worms may have been bred in the abnormal development. We have heard of similar cases before, and hope that some grape grower will give Mr. Brown a more satisfactory explanation of this freak of his vine.

WHITE SPECKS IN BUTTER.

Having read in the FARMER of July 4 and 18, different opinions as to the cause of what we call striped butter, all of which I think are erroneous, I beg leave to express my conclusions. I have long been satisfied that there is but one cause and one remedy. If the butter is worked thoroughly after it is salted, it will not be striped. You may not believe this at first, but if you taste of the white spots, you will find they are perfectly fresh. The butter is oftener striped in very warm weather, when the hands, by softening it, prevent its being worked properly. Did any one ever keep the "spotted butter" in a cool place twenty-four hours, then work it till it was waxy, and find any white specks in it? If so, it is not what we call "striped butter." S.

Waltham, Mass., July 18, 1868.

SHOE-BOIL.

I notice in the Monthly FARMER an inquiry for information as to the best method of treating a shoe boil, or swelling caused by the shoe, or, as some say, the frog of the foot, when the horse lies down. With no pretensions to any great experience as a horseman, I feel that I ought to communicate a "method" which proved entirely successful with me in a very bad case.

To reduce the swelling I applied a solution of saltpetre and vinegar. But the real cure is effected by a contrivance which prevents the animal from folding the foot in such a manner as to cause the trouble. This I do as follows: I make a strap long enough to pass around the foot, close down to the heel of the shoe, with the buckle in front. Through the part of the strap which comes on the frog I drive outwardly, four or six sharp nails, which should stick through at least half an inch. I then stitch another piece of leather over the heads of the nails to keep them firmly in place. With this spur snugly buckled on, the patient will be careful, after the first experiment, to turn the foot out where it belongs when it lies down. Don't raise a hue and cry about the inhumanity of this arrangement for you will never be able to discover a sign of a scratch, nor will the beast lose a night's rest. G. H. ARNOLD.

Braintree, Mass., Aug. 10, 1868.

REMARKS.—We are much obliged for the foregoing practical method of curing and preventing shoe-boil, and take pleasure in publishing it for the benefit of horse owners generally.

SANBORN HILL, N. H.

What is known as Sanborn Hill was settled by two brothers, Jonathan and Joseph Sanborn, from the town of Hawk, now Danville, and is about one mile square. It contains eleven families. Five of these eleven families made the past season four tons one hundred and fifty-four pounds of maple sugar. As the Sanborns have almost all left the Hill, would it not be well to change the name to Sugar Hill? I made twelve hundred pounds from two hundred and fifty-four trees.

JOHN S. SANBORN.

West Springfield, N. H., July 21, 1868.

REMARKS.—We think the change would be very appropriate. But as "he who hath builded the house hath more honor than the house," are not they who made the sugar entitled to more credit than the hill on which the trees grow? What say, then, to changing the names of the people instead of the hill? Mr. Maple sugar, Mrs. Crystalline Syrup, and the young Cakes, might, like all new words be a little awkward at first, as were probably such names as Smith, Joy, Sweet, Black, Lightfoot, Carpenter, Mason, Fletcher, Woodward, Grey, &c., when first applied to individuals; but time, which mellows all things, would soon familiarize them to our use.

SHORT-HORNS IN VERMONT.

Knowing that there is always a desire among the stock men of the different sections of country to know what there is in other localities, by those engaged in the same business, I will give a brief account of some of the herd of Short-horns of D. R. Way, as I saw them recently. His herd is not so large as that kept by him previous to his removal from Landgrove to his present farm, in the north-eastern part of Rockingham, Vt. At the head of the herd stands the superb bull, Earl of Oxford, bred by J. O. Sheldon, Geneva, N. Y., by Third Lord of Oxford, dam, Third Maid of Oxford. Earl of Oxford is two years old; won the first prize at State Fair last year; possesses fine handling qualities, great depth and breadth of brisket, perfect straightness, and great breadth of back; high head, with a majestic stylish look rarely seen. He is a fine feeder, has great constitution, and possesses altogether, a fixity of type that is sure to make its appearance in his calves. He will turn seventeen hundred pounds, and is unquestionably one of the first bulls in the New England States, as the stock he leaves will show.

Third Lord Oxford has four consecutive duchess

sires in his pedigree of that family. Of him an English herdsman truly remarked, he is the handsomest bull he ever saw. He never left a poor calf, as any one can readily believe who visits the White Spring Herd, or that at the Cornell University.

Among Mr. Way's lot of extra cows, we noticed Constance Third, a finely made cow, a good milker, and good for stock, as her calf, by Second Duke of Geneva, about ten months old, will tell. He has six other young calves by Earl of Oxford that do him much credit, besides some yearlings and other stock. We also noticed a large yoke of oxen, fat enough for market any day. H.

Londonderry, Vt., Aug. 20, 1868.

THE SHENSTONE TREE SOCIETY.

As several of your correspondents have spoken of the utility of shade trees by the road side, perhaps a brief account of the "Shenstone Tree Society," may be interesting to your readers.

This society, named for the celebrated poet gardener William Shenstone, was instituted in this town some twelve or fifteen years ago, and has for its principal object the setting of shade trees along the streets. Money for this purpose is raised in various ways, but chiefly by the monthly meetings of the society. The entertainment, consisting of music, select reading, dramatic performances, lectures, &c., is usually of a high order, and the meetings are well attended. A small admission fee is charged, and the proceeds appropriated to the purposes for which the society was formed. Several worthy objects are thus gained. The meetings are a source of innocent pleasure to young and old; youthful talent has here an opportunity to try its wings, while the many trees which adorn the streets of our ancient town, as well as other works of improvement bear testimony to the labors of the society. In the years to come, when the trees shall have attained their full sizes, these labors will be better appreciated than at present.

Marlboro', Mass., Aug. 1868. Mattie.

GROWTH OF CORN AND RASPBERRY CANES.

This season I picked corn suitable for boiling in sixty-four days from planting; in another field, seventy days after planting, some of the ears were "specked;" and in eighty days it was difficult to find an ear soft enough to boil. The seed was shelled from the ear the day it was planted. Last season I picked corn suitable for seed in seventy-four days from planting.

On the 6th of August, I cut a cane of common red raspberry on my farm, measuring 11½ feet,—the growth of the present season.

A. B. Carpenter.

West Waterford, Vt., Aug. 17, 1868.

MILK-ROOM AND ICE-HOUSE.

I am intending to build a milk-house this fall, with an ice-house in connection. Will you, or some one of your many subscribers, give me a *plan* for building the two combined? O. P. K.

North Hero, Vt., Aug. 21, 1868.

Remarks.—We are glad to see that farmers are considering the importance of the subject of milk-rooms. While "watching" with a sick man during one of the nights of the late excessively hot weather, a little milk was wanted about three o'clock in the morning. The milk of three or four cows had been placed in the pantry, which opened from the kitchen, the evening previous; but on going to it, every pan was found to be thick at that early hour. The disheartened tone with which the good woman of the house remarked, "there is no use in straining our milk; we might as well turn it into the hogs' trough first as last," impressed us very forcibly, as well illustrating the importance to every farmer of a suitable milk-room.

We do not know why the conveniences of an ice-house and milk-room may not be combined, either in a separate building, or as a part of the ell or other portion of the house, but we have no definite plan now on hand, though we will bear the subject in mind.

With these remarks we hand over the inquiry "O. P. K.," to the readers of the Farmer, and hope that his request will be attended to at once. In the meantime we publish in another column a plan for a "spring house" which may afford some valuable suggestions on this subject.

PRESERVING TOMATOES.

Tomatoes picked when ripe may be kept an almost indefinite length of time, by putting them into pure cider vinegar, reduced by adding two gallons of water to one of vinegar, and kept either in stone or wood. If careful not to displace the stems or break the skin, they will come out almost as fresh as when first picked.

TOMATO PIE.

Tomatoes treated in all respects as apples, only adding a little flour to absorb the juice, make better pies than apples.

ELDERBERRY PIE.

Elderberries make a first-rate pie. Season well. Make sweet.

SUMMER SQUASHES

Should not be used until the rind is so hard that you cannot easily stick a knife into it. Then dress and treat in all respects as you would a winter squash. Very few would suspect them to be anything else.

I have tried all of the above methods for years, with much satisfaction, and they are now submitted to the readers of the New England Farmer.

W. F. Woodward.

Maplewood, Mass., Aug. 19, 1868.

DRYING GREEN CORN.

Mrs. Lima Sherman, of Canisteo, informs the New York Farmers' Club that she prefers corn dried without boiling, as she thinks the water extracts much of the sweetness of the corn and renders it insipid. She directs to shave the corn from the ear, taking care to cut it as near in center of the grain as may be, scraping off what remains on the cob. Butter your dishes, spread the corn an inch and an half thick on each dish, set it in your stove oven, scald it thoroughly, taking care to stir it frequently that it may not scorch. You may now finish drying it around your stove; the oftener it is stirred the sooner it will dry. It should be put up in paper sacks and packed away in a dry place.

GOOD CROPS OF HAY.

While cutting the grass on two patches of my farm, on the 18th of July, I think it was, my men spoke of the large yield, and as I now have one of Fairbanks' best scales set in my barn floor, I

thought I would weigh the hay alluded to. One lot of 43 square rods was a piece of wet land enclosed by my garden fence. The hay on this lot, when well made, weighed 1860 pounds. The other lot measured 215 square rods, and was also originally wet ground, and the crop here weighed 9946 pounds. Both of these pieces had been drained, the largest piece by 39 rods of ditching. To both of these patches I applied last fall a dressing equal to about 25 loads to the acre, that I compost principally from muck. When I commenced reclaiming the low piece of 215 rods, it did not produce 10 cwt. of hay. I do not give these weights because I think the produce remarkably large this year, for I think I have cut as large or larger crops in previous years, but I never weighed them before, as I had not the convenience for so doing, which my scales now afford. O. FOSTER.

Tunbridge, Vt., Aug. 15, 1868.

AGRICULTURAL ITEMS.

—The *Western Rural* says that the parings of cucumbers will disperse roaches.

—There are said to be over 250,000 seeds of red clover in a pound.

—Love's labor lost—a hen setting on wooden eggs.

—Early hatched chickens make early layers next winter.

—They have big trees in Australia. One was lately cut down there, nineteen feet in diameter and 330 feet high.

—Dr. Franklin introduced broom corn into this country, previous to which brooms were made of evergreen boughs, peeled birch, &c.

—The Iowa *Homestead* has accounts from various parts of that State of large crops of wheat, corn, vegetables, and—grasshoppers.

—To whiten straw hats, scrape stick-sulphur with a knife, mix the powder to a mush with water, plaster it thickly over the straw, place in the hot sun for several hours, brush off when dry.

—At a meeting of the St. Louis merchants on 'Change, a resolution was adopted that after Aug. 1, thirty-two, instead of thirty-five pounds of oats should constitute a bushel in that market.

—The Belvidere, Ill., *Standard* says that several farmers in that vicinity complain that their Osage Orange hedges were injured last winter, although they were six or seven years old.

—The first shovel ever manufactured in Fairfield County, Ohio, was put up at auction by the makers, Messrs. Motherwell & Co., and sold for $45. That's encouraging home industry.

—"Brief is the mission of the fragile flowers;
Some droop and die e'er close the sunny hours;
Still some with vigor lift their lordly heads,
Imparting splendor to their cultured beds."

—In whatever you engage, pursue it with steadiness of purpose, as determined to succeed. A wavering mind never accomplished anything worth naming. There is nothing like a fixed, steady aim. It dignifies your nature and insures you success.

—John Howe, says, in the *Western Rural* that he has been successful in preserving his cabbages from the attacks of the "flea" by putting upon the plants water in which potatoes had been boiled.

—Where bees forage on grazing lands, all the honey they get is so much sweetness and nutriment taken from the pasturage. It is not certain that the loss is not a serious one to the dairy.

—Sheep are said to be so plentiful in Australia as to be sold by travelling butchers at a cent a pound, and in two colonies alone no less than 60,000 are boiled down each week.

—A correspondent of the *Canada Farmer* says the Alsike clover seems to do best in ditches or holes where the plants are nearly or quite covered with water in winter and spring. This is a marked advantage over the red clover.

—Farming is a trade; and a man has to learn it, however much he may know; the knowledge must be applied, and made the man's business. He cannot learn it in a day, but must expect to improve constantly.

—An egg beat up with a teaspoonful of molasses and a large teaspoonful of ground black pepper, and set where flies can get at it, will thin them out rapidily, according to the experience of the *Western Rural.*

—A Lorain county correspondent of the *Ohio Farmer* says that during the late excessive heat and drought, cows dried up nearly one half in yield of milk, but not that difference was made in the product of cheese. On short feed, milk is much richer than on a flush growth of grass.

—A prize of a silver pitcher was offered by an association at Milledgeville, Ga., to the one who should raise the greatest number of bushels of wheat to the acre. Eighteen persons competed, the largest yield being forty-three and three-fourths bushels, the next nearly as large, and five of the eight being above thirty-six bushels.

—Dr. Trimble recently informed the New York Farmers' Club that "the canker worm has of late disappeared from New England." It is true that comparatively few were seen last year, but we are sorry to see that several orchards in the vicinity of Boston now bear unmistakable evidence of the re-appearance of this destructive pest.

—A Minnesota paper states that a new bug has made its appearance in that State, whose mission seems to be to destroy the potato bug. It is described as being flat, one-third the size of the potato bug, and yellow or reddish, with black spots. Its mode of operation is to thrust its sword-like proboscis into its victim, which is then dragged off to be devoured at leisure.

—The American Farmers' Magazine closes an article with the following statement, which we commend to the attention of those farmers who

are disposed to change their system of farming to conform to every fluctuation of prices:—"The farmer who would make his business pay, must have a policy and must adhere to it."

—H. Capron, Paris, Province of Ontario, assures the *Rural New Yorker* that he succeeds in keeping his grounds clear of the stripped bug, by pulling up and burning the vines, as soon as done bearing, with the weeds which grow among them, and burn them all up clean, believing that he thus destroys the eggs or germs of the incoming crop of bugs.

—An appropriation of $2000 was made at the last session of the N. Y. Legislature for the benefit of the heirs of the Rev. Chauncy C. Goodrich, the producer of the Goodrich seedling potatoes. The heirs of Jethro Wood, the inventor of the cast iron plough, have received an appropriation from the same Legislature of $2000, in consideration of the services of their father.

—The remark of Mr. Mechi that he could enlarge very much on the advantages arising from drainage, such as greater and earlier crops, of better quality and easier ploughing, and increased temperature of soil and subsoil, is copied by American agricultural papers, without informing their readers that much of his farm consists of such a stiff, tenacious clay that, without draining, its surface would not be dried during the whole season, by the feeble rays of the sun in that climate.

—A writer in the *Journal of Agriculture* says that for the purpose of determining the propagating power of a plant of purslane, he counted the number of seed pods upon it. There were 4,613. Fourteen of these—seven small, four medium and three of the largest—were selected, and the seeds counted. They gave an average of ninety seeds to the pod, or 415,170 seeds to a single plant.

L. S. Abbott, of Ohio, says, in the *Farmer*, that transplanting has a peculiar effect on the form of the turnip. An experienced eye can determine whether the turnip has been transplanted or sown where it grew to maturity. Transplanted plants always produce turnips of irregular shape with sundry large roots running down into the ground; those not transplanted have a round, smooth bulb, with a single tap root extending into the earth.

—The Greenville (Ill.) *Advocate* says, during last week some five or more boys died very suddenly—supposed to result from eating mulberries. The supposition is that the mulberries were in some way poisoned by the locusts, which have been so plentiful of late. It is also suggested that it is possible that they were stung by those insects,—the sting of which is considered by some as a deadly poison.

—The *Journal of Agriculture* says that peas are an excellent preparatory crop. They mellow the soil, and seem to enrich it also. They obtain their strength, like clover and other leguminous plants, largely from the atmosphere. On this account they are used on barren soil to improve it—by ploughing in. We have had experiments in this way that were highly satisfactory.

—A correspondent in New York city of the *Rural New Yorker*, says the first arrivals in that market of Antwerp raspberries were sold at 75 cents per quart,—prices averaging about 45 cents; Doolittles and Philadelphia were sold as low as 25c; gooseberries $4 to 6 per bushel; currants were taken by the preservers at 18c per quart; wild blackberries at 25 to 30c; Dorchester, Wilson, &c., at 40 to 45 cents per quart. Small fruits unusually scarce and high.

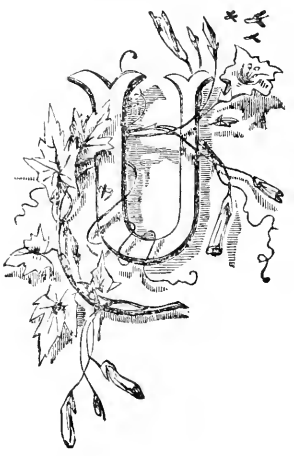
—The *Maine Farmer* is informed by Mr. Amherst Alden, of Bangor, who keeps eight or nine cows and carries their milk to the city, that from his experience in feeding milch cows he is satisfied that cows fed on hay cut from the 5th to the 10th of July, would give nearly double the amount of milk that the same cows would give kept on hay cut from the 25th to 30th of the month. In 1867 Mr. Alden sold something over a thousand dollars worth of milk from nine cows.

—The Pennsylvania *Farm Journal* says that Mr. Oliver P. Stoughton, of Lawrence County, clipped this season from fifty-six three year old Spanish Merino ewes, six hundred and forty pounds of wool; and from a three year old buck of the same breed nineteen pounds. He purchased the sheep some time ago from Mr. Chamberlin, of Rutland County, Vt. He sold the wool at the low price of forty-one cents, and yet the flock netted him over two hundred and seventy dollars cash.

—Cows that hold up milk, Mr. Johnson says can be cured if they will drink sour milk. After drinking, and as soon as they begin to lick the pail, they will give down freely. He has tried it with cows that would give about two thirds the proper quantity, retaining the other portion. Then he gives them the milk to drink, and waits until they begin to lick the pail, when he has no trouble in obtaining the remainder. He has tried meal, salt and various things, but found nothing to produce such an effect as sour milk.

—A correspondent of the *Country Gentleman* gives the following as the origin of the term "deacon" as applied to veal and calf skins. In the early days of cheese making in Herkimer county, there lived a good deacon in the town of Norway, who, like many other good men, had a sharp eye for profit. He fatted and killed many veal calves and sold to the mechanics at the "Corners." The love of gain with the old deacon was stronger than the fear of public opinion, and he did sell or was accused of selling veal quite too young, and so the villagers, by way of reproach and ridicule, called his veal "deacon" veal, and from this the term began to be applied to young calves, and has spread, and is used quite generally in dairy sections. Young calves are "deacons;" when killed they are "deaconed," and calf skins are "deacon skins."

MANAGEMENT OF ROADS.



NLESS there is considerable wealth in the neighborhood, we cannot expect the inhabitants will be able to construct highways of the best quality. The first cost of the best style of roads would be thought too much for country towns where the population is widely scattered and not over wealthy.

Another reason, too, will prevent most towns from attempting to make such smooth, hard roads as some large towns make, as they have not the material at hand. A hill cannot be found by the road-side every mile, from which can be taken all the gravel needed, of a quality that will pack solid, wear smooth and last long. But deficiencies in this matter make it all the more necessary to exercise a wise skill, both in making and keeping roads in repair. A system should be adopted that would employ the best talent and use the best material within a reasonable distance of the place where it is needed. Knowledge and skill in the management of roads are as essential as good material. A man who knows how will make a fair road with inferior gravel, while an ignorant and careless one will almost inevitably misuse the best.

In order to obtain the best skill for this work, we are decidedly of the opinion that we must give up our present mode of managing the roads. It is poor policy to put this important matter in the hands of seven or eight persons, some of whom will be quite likely to have no qualifications for the business, except a pair of oxen or horses, and a willingness to neglect their regular business for the sake of earning a little ready cash; while others assume the office unwillingly, because their neighbors say, "they must take their turn." Of course, there are some who have better qualifications, and honestly and earnestly endeavor to do the best they know how. It is undoubtedly true of this, as of all other kinds of work, that *experience* improves a man's natural ability and skill, and will enable him to work more economically as well as more efficiently. The experienced worker knows better *what* to do, *when* to do, and *how* to do it.

Under the present system, in most cases a green hand, or at least a fresh hand, takes hold every year, and works away, patching a little here and a little there, with no attempt to carry out any general system of permanent improvement, uses up the money allowed to his district, and then gladly gives place to his successor. And so, year by year, our roads are about as likely to become worse as better.

It is not necessary to suppose, because our roads remain without improvement, that every highway surveyor is incompetent under this system. We believe the *system itself* is faulty, in that it neither demands skill nor gives encouragement or opportunity for its acquisition. The actual question to be solved at our town meetings often is, not who is *best qualified* for this office, but who can be persuaded to accept it?

Now it seems to us that the effectual remedy for this state of things is to give the whole charge, the entire responsibility of expending whatever sums of money the town may choose to raise for highway purposes, to one competent superintendent. He should be a man whose honesty is without suspicion, and one who, if he does not already know enough of the science and practice of road making and road repairing, yet has sufficient common sense and ambition to *learn* how to fulfil the duties of the office in the best way. When such a man is found, keep him in the place just as long as he will serve. Let him make a few blunders if he must; that should be expected in the beginning. It takes a year or two to develop a man's skill and energy in a new business. But even at first, he will not be likely to make so many mistakes as can be detected under the present management. With every years' added experience, his system will become defined; he will improve his practices, and by and by we may hope to have roads that will be a good deal smoother, and that will not so frequently need to be repaired. Indeed, our main roads, on which the chief part of our travel and heavy teaming is done, should be kept in such condition that there

will be no need of such operations on them as we now call repairing.

With regard to *bridges*, a change just as important is imperative. We are constantly constructing new, and repairing old ones, all up and down the thousand streams that penetrate the valleys of New England. The practice fairly illustrates the fable of the rolling stone of Sisyphus, which, when he had rolled it to the top of the hill, turned, in spite of all his power, and went down again! So with our wooden bridges. Gangs of men and teams are ever about them, reconstructing or repairing, and the people impose upon themselves heavy burdens in taxes, which might be averted by an earnest and intelligent inquiry which would certainly lead to more economical action.

It cannot be truly said that we have not yet had sufficient experience to convince us that wood, in damp places is liable to rot in a few years; but we may forget that timbers will in time become too weak to support the weight of heavily loaded teams, and that planks will occasionally become loose, and let children drop through into watery graves. Accidents of this nature *may not* occur once in a century. But it is an indisputable fact that wooden bridges will get old and rickety, and the weak parts are not always found till the crash comes unexpectedly—and then any one can see how unsafe it was, and wonder that it held up so long.

When we are fully awake to the fact that wood is a perishable article, we shall be ready, perhaps, to inquire if there is not some available material, which, by its durability, shall be entitled to a preference in these situations?

There are, already, two stone bridges where we reside. We have not learned how carefully they were built, and so cannot speak of their promise of durability. But if the work was well done, why should they not last a thousand years? And if a thousand, why not ten thousand? The current of our rivers is not swift enough to wear away granite perceptibly, and probably a stone bridge would not be carried away by one of our spring freshets.

In Great Britain there are stone bridges that were built more than a thousand years ago, and still in good condition. There is a stone bridge over the Ipswich river, in the ancient town of Ipswich, in Essex county, that is nearly a hundred years old, we believe, that appears as firm as though finished only yesterday. Surely we have material and skill at least equal to what England possessed ten centuries ago, and could build bridges that would stand as long.

It is not our object at present to say more than to suggest an inquiry into the comparative cost of wooden and stone bridges. No doubt stone would be much more expensive than wood in the first place, but we believe that for a period of even one hundred years, the use of stone would be the most economical.

THE WOODPECKER.

Some have supposed the rows of holes often seen in fruit trees, extending nearly around the trunk, were made by the bird for the purpose of sucking the sap of the tree, and hence the name of "sap-sucker" has been given to the "downy woodpecker." Others have supposed that they were after the small grubs or larvæ of insects under the bark, while some have thought they were mere decoys for the flies often seen around these perforations.

In an article headed "The Woodpecker Question Settled," a correspondent of the *Utica Herald* says the object in making these holes is to get the small ants which are attracted by the sap. This he determined by carefully watching the operations of the woodpeckers, and by shooting a few and examining their crops, which he found filled to their utmost capacity with the smallest species of black ants.

If this conclusion is correct, the foresight and calculation displayed by the little bird in setting and watching his traps may be called instinct, but can we adopt Sir W. Hamilton's definition of that principle, and say that "instinct is an agent which performs *blindly* and *ignorantly* a work of intelligence and knowledge?"

WHAT IS FARMING TO BE?

We recently published some account of a trial in Illinois of a machine with which four men cut and bound an acre of grain in 30, 30¼, 34 and 38½ minutes, respectively. We now find in the *California Farmer* an allusion to the steam plough of Messrs. Coffin & Standish, of Martinez, which the editor of that paper saw at work spading up a highway. Though the road was as hard as the travel of

years could make it, the plough moved steadily along cutting up the solid bed finely. It has been frequently tested, and the inventors are still at work making such improvements as these trials have suggested, and are entirely confident of complete success. The *Farmer* remarks:—

The steam plough when completed will plough, plant and finish fifty acres per day, in the best manner; and the engine will also, when attached to their new "Header and Harvester," as it is the intention of the inventors to do, will head, thrash and clean up fifty acres per day,—the Header cutting a breadth of twenty feet wide. When this is accomplished we may, indeed, call it the age of progress.

Call this a dream, if you will. But is it not just as likely to come to pass as are the dreams of the croakers, who see visions only of what is discouraging, degrading, plodding inferior, hateful in the present or future of American agriculture? We have been so long "scared with the dreams" and "terrified with the visions" of this class of prophets, that we take pleasure in recording the more cheerful anticipations of our California friends.

SHALLOW PLOUGHING.

One of "the wise men who concentrate the rays of agricultural knowledge" at the New York Farmers' Club, not long since invented a plough designed to stir up the soil to a depth which ordinary plough-joggers never thought of reaching. Some New Jersey farmers who belong to the society of Friends, took issue with the teachings of this Club as to the advantages of universal deep tillage, and finally asked for an examination of the results of a system of cultivation based on shallow ploughing. A committee was therefore appointed by the Club to visit the grounds of these Friends. We find an account of this visit in the *Rural New Yorker*, by a member of the Committee, marked with the familiar initials "T. C. P." from which we give the following paragraphs:—

The next day we were taken into carriages and driven over the surrounding country, and to several farms where shallow ploughing had been practiced for many years. They call from four to six inches shallow,—their average is about four. Though the season was both backward and dry, they had made good harvests, and I was much astonished to see the evidences, in large and numerous stacks and a heavy stubble, of crops of wheat, oats and rye that would have done no discredit to the wheat lands of Western New York. The clover would compare favorably with the best I have seen in that favored region. The soil is a loamy alluvion resting on an ocean drift; the surface slightly undulating, and requiring draining only in the bottoms bordering streams.

On the bottoms where the tide overflows are some fine redtop or herdsgrass meadows, which are protected by embankments. These meadows are a great source of profit to the owners, as more than one-half of all the redtop seed raised in the Union is grown here. Those who have these meadows generally keep cattle.

The course of farming now usually adopted, after more than one hundred years' experience, is wheat, clover, corn, oats, rye or wheat, followed by clover again. The first crop of clover is cut for hay, followed by a crop for seed, then pastured by sheep. Sheep are usually bought in October, the ewes then stinted to the ram, and kept in good condition; lambs sold as soon as the butcher will take them, and the ewes follow as soon as fed up to marketable condition. This is their favorite course, and on this they increase the fertility of their soil and grow rich. I saw a portable steam engine driving a threshing machine at a group of stacks, and understood that it is generally used.

My impression is that I have seen no portion of the country where a system of farming, based upon clover, can be so profitably studied as in Salem, Co., and around Salem City. It has been longer and more persistently practiced than in the winter wheat region of Western New York, and presents much the same results—highly cultivated farms, elegant buildings, and a refined and intelligent society. In such a soil as theirs, deep ploughing is not desirable, because they get the immediate advantages of their clover sod, and the soil does not require the ameliorating influences of deeper culture.

Disease in the Stable.—The North British *Agriculturist* attributes much of the disease in stables to the exclusion of the necessary quantity of light, a fair share of which is deemed as essential to animal growth as to vegetable. When stables or other inclosures are kept in comparative darkness, filth is apt to be overlooked, from which unwholesome gases are continually exhaling, rendering the air unsuited to the demands of animal life. This conclusion is, in every respect, a reasonable one, and should challenge the attention of every stock grower. Extreme darkness or garishness—especially in the case of fattening animals—is to be avoided, as along this medium line runs the pathway of healthfulness to stable stock and of profitableness to the owner.

MASSACHUSETTS AG'L COLLEGE.

We learn from the *Amherst Record* that the new buildings will be ready for use at the opening of the new year, Sept. 10th, and that Prof. Miller and family have arrived from Chicago. The *Record* also says:—

Dr. Calvin Cutter, well known before the war as the author of Cutter's Physiology, and since, as surgeon of the 21st Mass. Vols., and brigade and division surgeon on the staff of the gallant General Reno, will deliver a course of ten lectures to the students of the College, during the next term, on the "Laws of Health."

Dr. Jabez Fisher of Fitchburg, a prominent agriculturist of the State, and for many years a member of the Board of Agriculture, will give ten lectures upon "Market Gardening."

Hon. Charles L. Flint, Secretary of the Board of Agriculture, will deliver, in November next, a course of ten lectures on "Dairy Farming."

Hon. Marshall P. Wilder will lecture upon the "Modes of Hybridizing and Improving ornamental and useful plants."

There will also be courses of lectures during the fall and winter, upon Comparative Anatomy, the Diseases of Domestic Animals, and Chemistry. During the summer term, there will be lectures upon Botany, Zoology, Organic Chemistry and Agriculture. Besides which practical instruction will be given in Book-keeping, Surveying, Analytical Chemistry and Drawing.

For the New England Farmer.

WESTERN FARMING.

Although I am not a farmer just now, I am still interested in all that pertains to that occupation. For more than twenty years I was actively engaged as a farmer in what used to be called the "Genesee Country," lying between the Genesee river and Buffalo. Ill health made it necessary for me to change my business. I changed my location from Wyoming County, N. Y. (Warsaw,) to Maplewood, Mass, my present residence. I overworked, and was not careful to observe the laws of life, as far as I understood them. This resulted in one of the worst forms of "nervous dyspepsia," and so prostrated me that I was of little use to myself or any body else, until I tried the "Turkish Baths" on Essex Street, Boston. After having continued their use over a year, I am now able to attend closely to busness, besides doing considerable hard labor.

One needs to go West and spend at least a year among the farming community to have a correct idea of western farms and of western farming. There is land on the "flats" of the Genesee river that has been tilled nearly or quite one hundred years, and not one bit of manure has ever been used upon it, and is still too rich, if anything. Gen James Wadsworth, who fell in the battle of the Wilderness, owned thousands of acres of just such land, and it used to be said that he could travel from his residence, (Geneseo,) to Rochester, on his own lands, a distance of over twenty miles.

Farmers west obtain very large returns for their labor, when properly applied. A man and a boy of sixteen years of age would frequently do the work on one hundred acres, cultivating from twenty-five to forty acres of winter wheat, with spring crops, such as oats, barley, corn, potatoes and grass. This before the mowing machines and reapers came into use. With the help of only two boys, one twelve and the other fifteen years of age, I once had the care of 200 acres, with a harvest of over 100 acres. Our ploughs were drawn by three horses, rather than one, as we often see here.

Deep ploughing and good cultivation usually gave us good returns. One hundred bushels of shelled corn, 70 bushels of wheat, 100 of oats, 75 of barley, or 600 of potatoes have been raised upon an acre. The amount raised from fifty acres, with only the ordinary management, was often astonishing. Since the introduction of machinery, a large amount of the hard labor is avoided.

Millions of acres of land equally rich, wait to be cultivated. And how strange that so few of the young men of Massachusetts strike out for a home and a competency, with all the blessings attendant upon a rural and farming life. Go on to this rich land, men and *women* too,—for we have women farmers who claim their "rights," don the "Turkish dress," and work out of doors. A lady with two daughters, near Buffalo, N. Y., carries on a large farm with more than ordinary success. They do their own ploughing, drive their team to sow, reap and mow, with no regular man's help, but with most perfect success.

Emigrate, emigrate, then, ye homeless. Don't regard it beneath your position to work the soil. Look to the future good of this already great country, as well as to the improvement of your own circumstances. In and about our large cities, crime and immorality are rampant. "Where shall the man be found who fears to offend his God." Oh how many, very many fall out by the way. Young men and young women, as you value the prosperity of your country and your own highest happiness, escape from the immoral influences of city life. Build you up a home where there is little to excite the evil passions of men, and where, with proper care, you may have health, competence and as much enjoyment as can be secured here below. Wm. F. Woodward.

Maplewood, (Malden,) Mass.,
Aug. 17, 1868.

For the New England Farmer.

THE PEACOCK.

Your cut of the peacock in the Farmer of Aug. 15th, has a very striking resemblance to the bird in question, and with the richly changing hues, which characterize their plumage, added, I think it would be true almost to life. But in reading the article below I can but think you have, unwillingly it may be,

libelled this bird of all beauty. You say, "it has been charged with having the plumage of an angel, the voice of a Devil, and the stomach of a thief."

The first and second charges I shall not attempt to refute or deny, for I have never seen even the wings of an angel, nor has his lordship, the Devil, ever piped his voice in my hearing. But the charge of having the "stomach of a thief," I consider a *foul* slander. On the contrary it possesses a most delicate and fastidious appetite. We have had one on our premises for twenty years, and part of that time two, three or four, as the case happened to be; and I would as soon think of charging them with relishing young lambs, calves, or even children, as "chickens, ducks or goslings!" Never was a grosser mistake made, if those we have had the care of are fair specimens of their race. They are smaller eaters I think, for the body they have to sustain, than any domestic fowl I have ever noticed. We have but one now, and he picks almost as daintily as any canary bird. The cost of keeping him would not exceed that of any common hen, though he is much larger. He often visits our neighbors, and I am quite sure he is no unwelcome guest, which he certainly would be were he the glutton represented in your article.

The only objection made against him is his disagreeable voice, which can be heard in a still morning two or three miles, and one not acquainted with it might think it proceeded from some child in distress. But to me even his voice has a charm, inasmuch as it keeps the hawks away from the chickens, and the crows from the cornfield.

His plumage is universally admired. Many of the feathers when full grown are more than a yard long. He seems to be justly proud of displaying his charms to the greatest advantage on a bright and sunny day; and on a rainy one, or when he goes through the wet grass or mud, he will as carefully raise his trail from the ground as a fashionably dressed lady does that of her silken dress.

Young chickens of any kind attract his attention, but instead of devouring them, he is apparently desirous to become their protector. He will even drive away the mother and watch over them himself. But if Dame Partlet, arming herself with all her powers, succeeds in keeping him at bay when she first comes out with a young brood, he accords to her thereafter all her maternal rights;—though as he retreats in acknowledgment of his subjection, he looks back upon the young brood with evident admiration and it may be too with a little regret that he cannot force the mother to resign her charge. But he was never known to harm one of these little ones in any way.

If a shower be gathering in the distance, or if a storm is approaching, he usually notifies us with his shrill voice, in frequent screams. Having known the Peacock from childhood, we have become much attached to him; anp even his voice, which is counted as his greatest, if not only failing, is not unmusical to our ears. And so, as a friend to the Peacock family, I have attempted to refute what I consider a libel upon its character.

C. W. M.

West Gardiner, Me., Aug. 20, 1868.

REMARKS.—We are always pleased to have unfavorable impressions of either persons or things corrected, and are therefore so well pleased with this defence of the Peacock's habits and disposition, that we shall attempt no justification of the "foul" and "libellous" aspersion on its character which accompanied its *carte de visite*, but hope that henceforth the whole Peacock family will so conduct themselves as to justify the good opinion of "C. W. M.," and all the numerous admirers of the gay feathers of this beautiful bird.

BAREFOOTED BOY.

Blessings on the little man,
Barefoot boy with cheeks of tan;
With thy turned-up pantaloons,
And thy merry whistled tunes,
With thy red lip, redder still,
Kissed by strawberries on the hill;
With the sunshine on thy face,
Through thy torn br m's jaunty grace;
From my heart I give thee joy—
I was once a barefoot boy!
Prince thou art—the grown up man
Only is Republican.
Let the million-dollared ride;
Barefoot trudging at his side,
Thou hast more than he can buy,
In the reach of ear and eye—
Outward sunshine, inward joy—
Blessings on thee, barefoot boy!—*Whittier.*

A SPRING OR DAIRY HOUSE.

I constructed a spring-house during the summer of 1861, which has been very much admired, and believing it to be very perfect in principle, I will describe it for the benefit of your readers. This house is for a small dairy; it will accommodate but twenty pans or crocks, that are fifteen inches in diameter each, though its capacity may be doubled without increasing the size of the house, by placing another sink for water twelve inches above the one I shall describe, supported in the same manner, and allowing the water to flow into the uppermost one first, thence to the lower one. The building is circular, ten feet in diameter on the inside, and has a ten feet ceiling.

The wall may be of brick or stone. If of brick, it need be but nine inches thick; if of stone, eighteen inches thick.

The floor to be cemented on the earth. The building to be located below the spring, so that the water will flow through a pipe to the

height of two feet nine inches above the floor of the dairy room. The water is received into one end and discharged at the other end of the sink in which the pans of milk are set.

The sink is the shape of a horse-shoe, the opening at the heel being placed in front of the door. It is of iron, eighteen inches wide at the top, and thirteen inches at the bottom, and twenty-six feet long. It is supported on iron brackets, set in the wall of the building, two feet six inches from the floor, and being circular in form, and surrounding the interior of the building, is most conveniently located.

In the absence of both bricks and stones, it may be a double frame building, with an air space between the two frames. In the use of a frame building, it should be constructed by laying two foundation walls, with a four-inch air space between them, which should extend at least two feet below the surface of the ground, as it is at that point that the heat is conducted into the building more than any other. The other foundation wall should be laid at least eight inches above the surface of the ground. The floor should be built the same as in the brick or stone structure.

The exterior of the building may be lathed and plastered, or sided with boards. In either case, the side of the outer studs should be lathed and plastered before the inner ones are erected, and the interior should be neatly plastered and lime-washed. If arranged thus, this building will be found equal, if not superior to one of bricks or stones.

The ventilation should be effected in the manner I shall describe, whatever may be the material used in construction. The mode of ventilation which I use is an original idea, and the action of it just the opposite of that used in ventilating heated buildings, or where the air within is warmer than that without the building. The cold spring water used for cooling the milk, if it is allowed to flow in and out perpetually, as it should, has the effect to reduce the temperature of the building below that of the air without it in summer, the season when the dairy house is used. Hence there will be a circulation downward, if there are openings for circulation both above and below.

I provide the lower escape for the air, by inserting in a building of the size described, eight two-inch glazed draining tiles equally spaced around the building. The tiles should not project within or without the walls, and should be set just below the sink. There should be a space of one inch between the inner wall and the sink, that the air may have free passage over and behind the sink, to the openings in the wall, and to prevent the heat from being conducted from the wall to the sink. The eaves of the roof should project two feet six inches, and the boards with which the projection is ceiled on the under side, should be laid with a space of three-eights of an inch between them, as these are the ingress openings for air. By this arrangement the air is taken into the space between the roof and the ceiling of the room, where all dust that may be floating in it will be deposited before it descends into the dairy through the opening in the centre of the ceiling, where the air is admitted through an ornamental iron lattice, two feet in diameter.

In the downward passage of the air towards the egress openings, it is required to pass over all the milk in the sink, equally, which is of great importance.

A circular marble table is set in the middle of the room on a single iron column, set in the cement floor. On this table the milk is skimmed and the butter worked. This location of the table in the centre of the space surrounded by the sink, it will be seen, is as convenient as it can be, as none of the pans are to be moved more than two and a half feet, to or from the table.

The building being entirely above ground, the carrying of milk up and down stairs is avoided.

The cost of a building constructed of stone, of the dimensions, and with all the appurtenances described, finished in a neat and workmanlike manner, is $225. J. Wilkinson.

Baltimore, Md., 1868.—*Germantown Tel.*

PHILADELPHIA BUTTER.

From a report of a visit to one of the dairies of this celebrated butter-making section, credited to the *Republican*, we copy the following account of the manner of churning and working the butter. On this farm a "spring house," similar to that described above by Mr. Wilkinson, is used.

Churning.

"We rose at half-past four to see the churning and butter-making. The churn is a barrel (bulging only enough to make the hoops drive well), with a journal or bearing in the centre of each head, so that it may be revolved by horse-power. This barrel has stationary short arms attached to the inside of the staves, so arranged as to cause the greatest disturbance of the milk as it passes through them in the churn. At one side is a large opening secured by a cover that is screwed firmly into its place —this is the cover or lid of the churn. Near it is a hole less than an inch in diameter, for testing the state of the churning and for drawing off the buttermilk. This is closed with a wooden plug.

"The churning lasted about an hour, at the end of which time it was necessary to add a little cold milk to cause the butter to gather. This being secured, and the buttermilk drawn off, cold water was twice added, a few turns being given each time to the churn, and when the last water was drawn off it came nearly free of milkiness. A crank was then put on

to an arm of the churn, the horse-power thrown out of gear, and a gentle rocking motion caused the butter to be collected at the lower side, directly over the small hole through which the remaining water escaped. It was left in this condition about two hours. After breakfast we returned to see the working of the butter.

Butter-Worker.

"In one corner of the spring-house stands the butter-worker, a revolving table about three feet in diameter. The centre of this, for a diameter of twelve inches, is an iron wheel with a row of cogs on the upper side of its rim. From its rim to the raised outer edge the table (made of wood) slopes downward, so that as the buttermilk is worked out it passes into a shallow groove and is carried away through a pipe which discharges into a pail standing below. Over the sloping part of the table there works a corrugated wooden roller, revolving on a shaft that is supported over the centre of the table, and has a small cog-wheel that works in the cogged rim of the centre wheel, and causes the table to revolve under the roller, as this is turned by a crank at its outer end. Of course, the roller is larger at one end than at the other, so as to conform to the slope of the table, and its corrugations are very deep, not less than two inches at the larger end. Supported at each end of the roller and on both sides are beveled blocks, which, as the table revolves, force the butter from each end toward the centre of the slope. About twenty pounds of butter is now put on the table, and the roller is turned, each corrugation carrying through a long narrow roll, which is immediately followed by another and another, until the whole table is covered. The roller does not quite touch the table, and there is thus no crushing of the particles. The beveled blocks slightly bend these rolls and crowd them toward the centre of the sloping part so that when they reach the roller again they are broken in fresh places, and by a few revolutions are thoroughly worked in every part.

Final Processes.

"Then follows a process that was new to all of us—the 'wiping' of the butter. The dairy maid (in this instance a lusty young man) turning the roller backward, with the left hand, so that the butter comes through all the right hand side, presses upon every part of it a cloth which has been wrung dry in cold spring water, and which he frequently washes and wrings out. This is continued until not a particle of water is to be seen in the butter as it comes from the roller, to which it begins now to adhere. If there is any secret in the making of Philadelphia butter, this is it; and it has much to do with its uniform waxiness of texture, whether hard or soft.

"After this, the butter is salted (an ounce of salt to three pounds of butter)—still by this machine, and any lurking atom of moisture is in this way prevented from becoming a cause of rancidity.

"When the salt is thoroughly worked through the whole mass, the butter is removed to a large table, where it is weighed out and put up into pound prints.

"The working, wiping and salting of over one hundred pounds of butter occupied about an hour, and before 10 A. M. the entire churning, beautifully printed, as fragrant as the newest hay, and as yellow as pure gold, such butter as only Jersey cream will make, was deposited in large tin trays and set in the water to harden. The next morning it was wrapped in damp cloths, each pound by itself, put in a tin case, each layer having its own shelf, with two compartments of pounded ice to keep it cool, and surrounded by a well-coopered and securely-locked cedar tub, was sent to the Continental Hotel, where we found it on our return as delicious as when it left the farm."

CLEARING MEADOWS.

Scarcely anything in the farming operations of this State, is as a general rule so slovenly carried on, as its meadow lands. It is the exception, to find a meadow free from bushes and stumps and rough spots. A smooth meadow is a beautiful sight. It never fails to attract the attention of the passer by.

In order to get rid of bushes, it is the cheapest way in the end to cut them out by the roots. A clump of bushes on a muck meadow may be cut round, and then a common ox chain thrown around and hitched to the whiffletree behind the horse, and it may be twitched out in a twinkling. A rod of such land once cleared is forever cleared. All projecting stumps and roots should be removed as fast as practicable, so that the horse rake, and even on many meadows the mowing machine may be made to work. A few days spent in this way will add much to the annual value of the farm, as well as to the comfort of the laborer. Let ditches be dug so as to drain out the stagnant water, and a marked improvement will be visible from year to year.

A farmer remarked in our hearing recently, that in his boyhood, farmers did not begin to cut their meadows till the first of September. The consequence was that meadow hay was regarded as scarcely worth the cutting, and such was the fact. He said that when he was old enough to own a meadow, he commenced cutting it the first of August, and his neighbors all cried out that he would certainly spoil his meadow; but he continued the practice, and now has one of the best meadows any where. Lately he has commenced cutting as early as the 10th of July, and his meadow hay is bright and green, the upland grasses having worked in to a considerable extent, and his hay is little, if any, inferior in value to upland

hay. There is as much deterioration in cutting meadow hay late, as upland hay. In either case the best time to cut hay is when the juices are beginning to harden.

Every good farmer will aim at the improvement of his lands every year. Unless he does so, bushes will grow larger from year to year, rocks will appear more numerous on the upland, the pastures will furnish less feed, and in a few years there will be a general aspect of decay on the farm, the fences and the buildings. Neglect will tax us heavily, while thrift will add to our resources without our scarcely knowing it. Then again, whenever we make any real improvement, it stimulates us to do something more. We feel encouraged by what we have done, and engage in something else with the greater pleasure, no matter whether it be clearing up a meadow, building a new fence, or preparing for the next year's crop.—*Maine Farmer.*

MANAGEMENT OF POULTRY.

A good deal of experience has taught us that success in the poultry-yard depends as much upon good general management as upon any other one thing. When the eggs of any hens indifferently are kept for the purpose of raising young chickens, and when little attention is paid to the particular hens reserved for laying, it will in general be found that the profits are small, and the quality of fowls raised rapidly deteriorates.

In addition to the usual plan of selecting only the best formed and quietest hens for breeding purposes, we have found it of advantage to pay considerable attention to the *age* of the fowls which we retain. For the production of eggs for domestic consumption, we never keep hens beyond their second year, but for raising chickens we have found it to be poor policy to employ eggs laid by hens of less than two years old. We have always found that the chickens from the older hens are more easily raised, have stronger constitutions, and turn out every way better than those raised from eggs laid by very young pullets. At the same time such old hens do not lay as many eggs. The eggs, consequently, cost more, but this extra expense is but a small item on the number of eggs usually employed for hatching.

In order to have eggs during winter, besides the usual appliances of meat, lime, sand, bones, &c., we always make sure of having some very early chickens. The pullets of these will commence to lay in October or November, and will lay throughout the winter. Next season we draft a few of the very best of these and keep them as breeders, the balance being fattened and killed off as soon as they have positively ceased laying. At this time it is wonderful how rapidly hens take on fat. We often see accounts of hens not laying because they are too fat. When considering the ease with which hens fatten as soon as they cease laying for the season, we have often thought that the true way to state the case is that they fattened because they did not lay. At this age they are delightfully tender and juicy, and we would about as soon think of fattening a cow that gave twenty quarts of milk a day as to think of fattening a laying hen.— *Co. Gent.*

TEXAS CATTLE DISEASE.

Large numbers of cattle from Texas have been recently brought into Illinois, Missouri, Indiana, &c., and there is considerable excitement among farmers there in consequence of the disease which they communicate to the other cattle. In Illinois, Missouri, and Kansas there are stringent laws against their introduction into these States, and it appears that the people are determined that these laws shall be enforced, and the further importation of these cattle prevented. The *Chicago Republican* gives the following account of the disease:

This malady is peculiar to this Texas breed. The disease seems to have acquired a home in the constitution of animals bred and reared there, and lurks in them in a latent form until favorable circumstances develop it, when it becomes both contagious and infectious. It is similar in character to the cattle plague of Russia and the rinderpest of England. Animals affected by it become dull, stupid, stiff, separate from the herd, are not inclined to eat, are seized with trembling, cramping, staggering, falling, and the joints become compressed. Some become perfectly blind. The blood becomes very black and thick; the heart is only slightly affected; the lungs appear perfectly sound and healthy; the second stomach is very much contracted, with the fecal matter dry, hard, and compact; the paunch, or first stomach, is almost empty; the bowels are contracted, nearly empty, and extremely costive; the bladder generally contains but a small quantity of thick, highly-colored urine, sometimes discharging a considerable quantity of bloody urine.

The theory of careful observers who have watched to discover the manner in which this disease was communicated so certainly, and with such fatal effect to our own herds, is that our grasses have the effect upon the Texas stock to eliminate the poison through their kidneys and bowels, and perhaps through the lungs, which being doposited in the pasture, is left ready to infect the first herd which follows after them. Our Northern cattle, not being acclimated to the disease, are readily susceptible to the infection of the poison, and suffer accordingly.

THE DAINTIES OF OUR ANCESTORS.

OST of the books on which we depend for our knowledge of the history of the world and of the successive generations of men which have peopled it, give us full details of the march of armies and of the succession of potentates, while the facts which illustrate the history of the common people are meagre indeed. A perusal of portions of a recent book entitled "Our English Homes," has, however, led us to reflect a little upon the contrast between those homes in the fourteenth and fifteenth centuries, and our *American Homes* at the present day, and especially the homes of a large portion of the *farmers* in New England.

It is doubtful whether so many of the necessaries and luxuries of life were even found clustering around any other community of people, as can be found among the middle and northern States of our country. Their dwellings, in the first place, are substantial, tight, commodious, and generally comfortably warmed in cold weather. Usually, the rooms are furnished with a view to the highest degree of utility, and in thousands of instances in nearly all classes, some of them are fitted up with elegance and taste. The stiff, straight-back chairs, with solid wooden bottoms, of a generation scarcely yet passed away, have given place to those which are lighter and of better form to afford rest when sitting down. The old wooden *settle*, six feet long and five high, with a tight back like a board fence, has lost its office. It had a seat which would accommodate five or six grown persons, or half as many more children, and a box under it containing something less than half a cord of wood for a single evening's fire! It was used to protect the family from the cold air constantly rushing in through the cracks in the outer walls of the house, and made ten times more fierce by the heated currents which were ever rushing up the chimney. The huge old fireplace is closed up, and a *cooking stove* stands before it,—one of the greatest blessings yet conferred upon man by science and art.

To this inestimable boon has been added numerous other contrivances which tend to facilitate and alleviate human toil,—such as the sewing and washing machine, the wringer, clothes dryer, mangle, conveniences for all sorts of cooking, lighting and warming, and in thousands of instances the introduction of hot and cold water all over the house. All these tend to health and profit. They promote quiet and calmness of mind, by preventing anxiety and fatigue

Nearly all the furniture of our houses is well adapted to its uses. Carpets are on the floors of nearly every house, and are heathful and economical. Beds are comfortable, tables abundant and convenient, lounges, bureaus, drawers, closets, and clothes presses, common. The walls are papered, and adorned more or less with paintings or pictures, according to the taste or ability of the occupants. And what is a crowning glory to all these, is the presence of books in nearly every household, —often selected with excellent judgment— and among these, on the centre-table, or in some convenient place, is the HOLY BIBLE.

Among the farmers, and quite often among mechanics and others, there may be added a good horse and comfortable carriage, which may be used for business or for recreation by all the family. Added to these rich and varied blessings we have the most wise and humane laws, the most ample means of education in all the departments of learning, including religious advancement, and all the liberty of speech and conscience that any people can desire. Besides these civil and social blessings, we have the finest climate in the world— all things considered—and a most healthful fertile and beautiful country.

Our tables are spread as bountifully, as our other blessings are abundant, with the products of our own and foreign lands. Surely, our lot is cast in pleasant places. Was there ever a people so favored of heaven before!

Now let us look at some of "*the dainties of our ancestors*," as described in the book on English Homes, to which we have alluded. It says:—

"The whale was eaten by the Saxons; and when men were lucky enough to get it, it appeared at table late in the 15th century. In 1246 Henry III. directed the sheriffs of London to purchase one hundred pieces of whale for his table. Whales

found on the coast were the perquisites of royalty; they were cut up and sent to the king's kitchen carts. Edward II. gave a reward of twenty shillings to three mariners who had caught a whale near London bridge. Those found on the banks of the Thames were claimed by the Lord Mayor, and added to the civic feast. Pieces of whale were often purchased in the thirteenth century for the table of the Countess of Leicester. England was supplied with this choice dainty by the fishermen of Normandy, who made it an article of commerce. The Normans had various ways of cooking it; sometimes it was roasted, and brought to the table on a spit; but the usual way was to boil it and serve it up with peas; epicures looked out for a slice from the tongue or the tail. The grampus, or sea-wolf, was also highly esteemed; but of all the blubber dainties the porpoise was deemed the most savory. The Saxons called it sea-swine, and the ecclesiastics of the middle ages *porco marino*. Porpoises were purchased for the table of Henry III. in 1246."

The questions will naturally arise, Why was society in so rude and unsettled a condition, and why were the necessaries, comforts, and conveniences of life so few? The land was not poor, but capable of sustaining a much larger population than it had, and yet the people were scarcely out of a semi-barbarous condition. No! it was not poor land, or bad seasons, nor even the indisposition of the people to labor on the land, but a "general round of oppression, resulting from ignorance of the proper interests of the productive classes, and a constant contest between capital and labor, each plundering the other, and *both plundered by arbitrary power!*"

In the reign of Henry III. the whole stock of a carpenter's tools was valued at one shilling, and consisted of a broad axe, an adze, a square and spoke-shave! "There were very few chimneys; the fire was laid to the wall, and the smoke issued out at the roof, or door, or window, and the furniture and utensils were of wood. The people slept on straw pallets, with a log of wood for a pillow." Even as late as the time of Elizabeth, 1558, it is stated that apologies were made to visitors if they could not be accommodated in rooms provided with chimneys. They had few glass windows, and when glass was introduced it was for a long time so scarce, that when the people went away they would order the windows taken out and laid up in safety! In the 14th century, none but the clergy wore linen. The household furniture, among the wealthy, consisted of an occasional bed, a brass pot, a brass cup, a gridiron, and a rug or two, and perhaps a towel. Of chairs and tables we hear nothing. Even the nobility sat upon chests in which they kept their clothes. If a man in seven years after marriage could purchase a flock bed, and a sack of chaff to rest his head upon, he thought himself as well lodged as the lord of the town!

In addition to this poverty of what seems to us absolute necessities, the houses and the people were exceedingly dirty. Erasmus, a celebrated scholar of Holland, who visited England, complains that "the nastiness of the people was the cause of the frequent plagues that destroyed them;" and he says their floors are commonly of clay, strewed with rushes, under which lie unmolested a collection of beer, grease, fragments, bones, spittle, excrements of dogs and cats, and of every thing that is nauseous."

Their tables were as miserably supplied as their dwellings. They had little fresh meat, but salted most of their cattle and swine in November, upon which they mostly depended through the winter. Very few vegetables of any kind came upon their tables. It is stated that in the early part of the reign of Henry VIII., not a cabbage, turnip, carrot, or other edible root grew in England!

The average duration of human life was, at that period, not one half as long as at the present day. The constant use of salted meat, and few or no vegetables, contributed to the shortening of life, to say nothing of the large numbers swept away by pestilence and famine.

It was probably in England then, pretty much as it is in Nubia now, where Buckhardt saw a farmer who had been plundered of everything by the pacha, because it came to the knowledge of the savage ruler that the unhappy man was in the habit of eating wheaten bread; and that, he thought, was too great a luxury for a subject!

In relation to the condition of things, Knight says,—in his book entitled *Knowledge is Power*,—"when these iniquities prevailed, and there was neither freedom of industry nor security of property—when capital and labor were not united—when all men consequently worked unprofitably, because they worked without division of labor, accumulation of knowledge, and union of force—there was universal poverty, because there was feeble production."

With us, the difference is, that every per-

son enjoys full liberty to fix his location where he pleases,—provided he can pay for it. He manufactures any articles which he desires to, not protected by patent, or raises any amount of crop that his industry and skill may enable him to. He then sells without restriction of any kind, to those who will pay him the highest price. The government never meddles with him further than to collect the revenues fixed by the legislators whom the people themselves have selected for that purpose. Capital and labor are united, and no power stands behind to wrest them from their legitimate course.

KENTUCKY BLUE-GRASS LAND.

The Lexington *Farmers' Home Journal* is publishing a series of articles, somewhat scientific in their character, upon the causes of the wonderful fertility of the Blue-grass lands of that State, in which, among other facts, it is shown that the limestone on which that soil is based has long been and is still undergoing a slow process of decomposition, from the action of the air and the gases in the soil, by which the fertility of the land is produced and kept up. But is it safe to act on the assumption that this soil is practically inexhaustible? This question is discussed in the eighth paper of the series of articles above alluded to, in the following manner:—

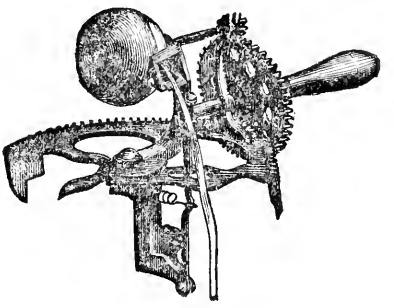
It is a very great calamity to any country when the land becomes unproductive; for it requires no more labor, no more expense for farm implements and stock, &c., to till the rich land than it does to cultivate the poor land, while in the latter case the labor and expense are measurably thrown away, because not remunerative. It is, therefore, very easily to be demonstrated that it is poor farming to reduce the productiveness of any land, however rich it may naturally be.

The blue-grass farmer has too frequently lost sight of these agricultural axioms; and, relying on the natural fertility of his soil, indulged in a scornful kind of pity toward the more skilful farmer of poorer regions, who annually increases the productiveness of his fields by attention to the science of agriculture, and the use of artificial fertilizers. Relying on the large store of the elements of fertility in his rich land, and upon its natural process of renovation by the influence of the limestone sub-stratum, the blue-grass farmer cares nothing for the "phosphates," the "alkalies," the essential mineral ingredients of the soil—"he cares only for the crops," which kind nature gives him, for the simplest and blindest labor. Like the prodigal son of a rich father, his wealth has come to him without any exertion of his own, and he cannot, therefore fully appreciate its value.

But the largest fortunes have been known to become exhausted, and even rich heirs have at length been brought to know how very inconvenient poverty may be. All heirs of rich fathers have not shown so little consideration, but employing their natural faculties have used and preserved their capital for the benefit of themselves and their posterity. And this line of conduct is more especially the duty of the blue-grass farmer.

It is pretty well known to all that the natural process of the renovation of this soil does not keep pace with the exhaustion of modern farming; and as markets become better, this exhaustion will be more rapid; and it is evident to all good observers that this land is gradually becoming less productive. Many may be disposed to dispute this, who do not severely crop their land, or who use it mainly for grazing. But where do we now see that enormous productiveness which was enjoyed by the pioneer blue-grass farmer, in former times? The process of exhaustion may be slow, but, like the motion of the hour hand upon the face of the clock, time demonstrates its progress. It is wise to begin in time, to take this important matter into serious consideration, that we may check the impending evil before it becomes a public calamity.

THE LIGHTNING APPLE PARER.



The Gold Medal of the New England Agricultural Society was awarded last week to the machine represented by the above cut. It also received the highest premium at the Paris Exposition, as it has likewise, we are informed, at every State, County, and Town Fair where it has been exhibited, without a single exception. It does its work with an ease and expedition that justifies its name. There is no crank to turn,—a simple horizontal movement of the handle strips off the apple's jacket, and places the knife entirely out of the way while taking off and putting on the apples. It appears to be durable, is well made, entirely of iron, and so constructed that the most careless operator cannot bring the knife in contact with the fork. When seen in the picture the little machine, we think, appears more complicated than when in actual operation. Its simplicity is in fact one of its highest recommendations. One of these machines has been in use in our family during the year past and has given entire satisfaction. It is for sale at the principal agricultural and hardware stores in the country.

AGRICULTURAL RHYMES.

When books and papers were scarce, people read to remember, and rhyme was a great assistance to the memory. Thus many of the sayings of Franklin's Poor Richard have been handed down from father to son, and are still household words among us. The following collection was made by Dr. J. C. V. Smith, formerly of Boston, and published in the *New York Tribune*:—

If butter churned in morning air
Is kept in a cool place with care,
The taste is nice;
But that which shows the buttermilk
Don't sell to those who dress in silk—
For any price.

To be in debt
Brings out the sweat.
No half-cooked meat
Is fit to eat.

A woman who sneezes
Ought not to make cheeses;
Put her hands in a muff,
Or ever take snuff.

When the wind is east and turkies gobble,
It is no time a horse to hobble;
But let him range to catch the breeze—
Should he be troubled with the heaves,

An ox with broad horns and short glossy hair,
Is good for a team, the market, or fair.

One white foot is bad, and two are too many,
That horse is best that does not have any.

A farmer without hogs,
But an army of dogs,
Will have more puppies than pork;
For the swill will be lost,
To the husbandman's cost,—
Dogs good for nothing to work.

The slackest farmer, strange to say,
Is known for being out of hay.

It does not pay in any way,
To milk a cow three times a day.

When chickens roost above the mow,
It spoils the hay for horse or cow.

The well-bred daughter for a farmer,
A prudent helpmeet and a charmer.

It is no place to set poles,
Where moles or mice have dug their holes.

Cobs make no food for kine to eat,
But they are good for smoking meat.

Pork and beans make muscles strong—
Something farmers seek;
It is a dish to make life long,
When cooked but once a week.

A slovenly dress, a shabby pate,
The fences down, a broken gate,
Pigs in the garden, weeds very high,
Children unwashed—no bacon to fry—
Lots of great dogs and yawling tom cats,
Windows repaired with a dozen old hats,
An empty barn—not a spear of hay,
Cows in the clover, horse run away,
Things sold by guess without being weighed,
Bills coming in and taxes unpaid—
Pipes and tobacco—whisky—neglect,
Drag in their train, as all might expect,
All sorts of trouble to fret away life—
But worst of the whole, an unhappy wife.

Many estates are lost in the getting,
Since men have forsaken hewing and splitting,
And woman their sewing and knitting.

A mackerel sky—
The wind will be high,
Then bring in the grain,
Close by there is rain.

A smoky chimney may be cured,
A scolding woman not endured,
A farmer's wife, like cream or curd—
Is to be seen but seldom heard.

If you would thrive,
Be up by five;
For there is health
And certain wealth,
When at the plough,
Or milking cow.

A farmer at home should be found,
And often looking at his ground—
Inspecting fields, repairing fence—
For dollars come by saving pence.

Clear the soil from moles and slugs,
Prune the trees—keep off the bugs,
Then fruits and melons, rich and fair,
Will recompense for all your care.

Rutabaga, carrots, and beets,
Improve the character of meats;
They make good beef, and quicker too,
Than any other feed will do.

At the farmer's cost
Is an early frost.
Exercise reason—
Harvest in season.

Of all the crops a farmer raises,
Or capital employs,
None brings such comforts and such praises,
As a crop of girls and boys.

For the New England Farmer.

MANURES.

My attention was early directed to the importance of composting and sheltering manure by two circumstances. First, by hearing old Revolutionary soldiers tell of making saltpeter by leaching the earth taken from under old stables. If such dirt held the strength of manure in this way, why should not all manure be treated in a similar manner? In the second place, while residing in Woodstock, Vt., in 1825, when farming was at a low ebb, a Mr. Bingham removed into that town from Bethel, and purchased a badly run down farm. I remember of hearing him remark, in conversation with a neighbor, that he was going to raise wheat. This neighbor replied, you cannot raise wheat in Woodstock, if you did in Bethel. But Mr. B. did raise wheat in Woodstock, as did also his neighbors who adopted his mode of cultivation and management of manure. He saved not only the solids, but the liquids, and composted and cured it carefully in a dry cellar, and thus not only raised wheat, but more than tripled the other products of the farm in a few years.

Two-headed Calf---Corn Cobs.

Since writing the foregoing, I have been called to assist a neighbor to remove a two-headed calf from one of his cows, which had been down since the day before. The calf had two distinct nostrils, four eyes, two skulls and three ears. The cow was left very weak and low. One of the assisstants recommended

the owner to make a tea of white pine boughs, while I told him to boil corn cobs, and give her the broth. He gave her both, and the cow got along nicely.

And this brings me to the much mooted question of the value of corn cobs. If you have to pay toll for grinding them, they may not pay. But they may be used more economically. I once knew a widow lady who was remarkable for the good condition and fine appearance of her cattle, and for the small amount of hay she used in wintering them. She boiled all the cobs she could collect, and gave the tea or broth to her two cows and to her weak or sick sheep and lambs. In case of sickness, her favorite medicine was Harlem Oil, or Medicamentum. So successful was she that the neighbors used to say that she would take a dead lamb, and after bringing it to life, it would start off bleating, "Medicamentum and corn cobs cured me."

I once tried the experiment by boiling three times a day a pailful of cobs, sprinkling on a little salt, and about two tablespoonfuls of meal to each painful of cobs, and gave them to the cow warm. With the cobs and 1400 pounds of bushy hay during the winter, she came out fat enough for beef. For sick cows or sheep, I do not know of anything better than the broth of cobs to give them a start.

Red Water.

If I had a creature troubled with Red Water, I should give it cob broth and white pine tea.

Sick Hogs.

I agree with Mr. Whatmore that chamber lye is good for a hog, especially when applied as a wash, but sour buttermilk is better. For a sick hog, pulverized blood-root is a good remedy, given freely; also garget or poke root.

Grub, or Dung Worm.

How shall we get rid of the grub or dung worm? I am trying an experiment by saturating my manure heap with gas water. I am of the opinion that enough of this runs into the Merrimac river to kill all the worms for five miles, on both sides, below Manchester.

Banking up Apple Trees.

I have been banking up apple trees with good results. I have one that came up in the bottom of a potato hole, that I am filling up gradually, and it grows vigorously.

NORMAN CALL.

Allenstown, N. H., 1868.

CHERRY POISON.—On last Saturday, says the *Intelligencer*, published at Horse Cave, Mo., while Mr. F. M. Richie, who lives eight miles from our town, was ploughing near a wild cherry tree that stood by a cross fence, some of the limbs of which were in his way, he trimmed off a mere armful and dropped them across the fence into the pasture of Mr. B. F. Thompson, in which was one of his fine milch cows, and also one belonging to Mr. James Bishop. On Sunday morning these two cows found the cherry limbs and eat the leaves off them, and in less than half an hour, or before they had walked twenty steps from the limbs, they both died.

AGRICULTURAL LABOR.

After alluding to the auspicious opening of the exhibition of the New England Agricultural Society at New Haven, and to former expressions of his views on various agricultural subjects, the president, Dr. Loring, in his address, spoke as follows:—

The application of labor in its various branches constitutes, in reality, the wealth of a nation. Nature presents her riches for man's necessity, comfort and enjoyment; and only asks him to use his industry and skill for the utilization of what she so bountifully bestows. Mines and forests and virgin soils all wait for his vitalizing hand. It is labor in all its diverse channels which domesticates the untamed products, bringing their ores and minerals forth from their gloomy beds into all service of grace and use and beauty,—converting the forests into cheerful and splendid abodes, and making "the desert blossom like the rose." Subservient labor here, free and enlightened labor there, gives to each sphere in which it is employed, character and thought, and social and civil condition. With us it is the application of independent and aspiring labor, which forms the most important problem now occupying the best thought of the times. Subservient, exhausted, ignorant, wearied labor cannot, in this country, be longer profitable or useful. Whether applied to manufactures, or the mechanic arts, or agriculture, it must now perform the largest amount of work in the shortest space of time, to be accordant with the necessities of this era. Slow, toilsome, tedious effort in the business of converting the raw material into articles of use and beauty cannot be profitable to either the employer or the employed. It is rapid and economical production by machinery which enables us to compete with other countries where labor is cheaper than in our own; and it is the skilful use of machinery here which enables the laborer to accomplish his task, with the assurance of an ample reward, and of leisure sufficient to give rest to his mental and physical faculties. A half century ago hard labor accomplished in many hours what is now performed in fewer minutes. And as the pecuniary necessities of the laborer have increased, so have his opportunities for a more ample compensation been increased by placing in his hands well-constructed and ingenious ma-

chinery of every description. It is by the exercise of mechanical ingenuity that intelligent labor in this country has been furnished with an opportunity to be well requited, and to compete with ruder forms elsewhere. And in the same way may the toiling masses find time for that rest and mental culture which a free people demand, without interfering with that industrial production upon which the prosperity of a nation depends.

It is true that this same ingenuity has been applied in a very considerable degree to agriculture. The application of mechanical forces to the business of the farm forms one of the most interesting of modern problems, and is rapidly advancing toward a great degree of perfection. But we have not yet reached that point at which the slow, and tedious, and wearisome processes of agricultural labor in many branches can be avoided. The hardest toil is on our farms. The production of a crop by hand labor is expensive and primitive. The work of disintegrating the soil with the plough is slow, and by no means in accordance with this age of steam and machinery. I never see an army of young men pursuing their recumbent way through a root crop, without wondering when we shall be able to substitute a simple machine for that slow multitude of fingers. We cannot hope to be just to agricultural labor, or to ourselves, as farmers, until we apply such machinery to the land, that one well chosen hour will bring forth what is now performed in two; and agricultural labor shall enjoy with every other branch of industry all the ameliorating influences which occupy so much of the thought of the present age.

It should be remembered that as a nation we have emerged from that subservient form of labor, which has been profitably applied in every age and in most great agricultural countries to the production of the staples for the commercial markets. It is now free labor, carrying with it the ownership of the soil, which is to be employed and provided for. And it is agricultural labor which occupies a very large proportion of the citizens of our republic. It is in the land, and in the capital employed in managing it, that the largest portion of our wealth is to be found.

In New England alone the value of the farms is estimated to be $474,305,853. The value of the implements used on these farms is $16,466,614. The value of the live stock is $68,695,015. Making an aggregate of 559,470,482. The capital invested in manufactures in New England, according to the latest returns, is $257,477,783, less than half that invested in agriculture. I have been unable to ascertain the number of persons employed in labor on the land in any of the New England States, except Massachusetts, but in that State alone nearly seventy thousand laborers are occupied in tilling the soil. That the vast amount of capital invested in agriculture is managed to the best advantage, and that the labor employed in this industry is most profitably applied, no one can for a moment suppose. Consider, then, what a problem this is. How shall the labor used in this great interest be most thoroughly exercised, with entire regard to the best interests of all classes of society. That the investment of five hundred and fifty millions in agriculture may be made a good one, the experience of every prosperous farmer will bear witness, and it only requires a general understanding of the best use of labor to make the prosperity more general. We should remember, moreover, that the owners of the farms in New England are in many instances the actual laborers on the land. For these men, upon whose sound bodies and well-informed minds the coming generations depend for their inheritance of healthy and useful faculties, let every effort be made to ameliorate the condition and increase the profit and the well being of agricultural labor.

High Farming.

As a natural consequence of the more extended use of machinery in all branches of agriculture, will follow that more thorough and careful cultivation, which I have often urged as the only profitable farming known among us. Wherever farming in New England is to be done at all, it must be done well. A ton of hay to the acre, and thirty bushels of corn, and twenty bushels of rye, and fifteen bushels of wheat, and two or three hundred bushels of roots, are not the crops that can be called remunerative here. It cannot be profitable to feed a worthless animal six months in every year out of the store of hay secured at the cost prevailing among us. These facts are not to be lost sight of. And I am confident that I state what is true, when I assert that in these points a constant and steady improvement is going on. The number of well cultivated acres is increasing. In the cultivation of garden vegetables for market, in the production of grass, and small fruits, and root crops, we are making constant progress. Farmers who, ten years ago, thought it impossible to raise a mangel or a Swede, now follow successfully these roots. Where there was one herd of well-bred cattle there are now many. And I have witnessed with pride and satisfaction the devotion of practical farmers to the improvement of stock, and to the purchase of animals which, a few years ago, were looked upon as the special property of those who turned to farming more as an extensive pleasure than as a profitable occupation.

Tomatoes for Garget. — A correspondent in Maine recommends tomatoes as a cure for garget in cows, and also says that he finds a peck of them fed to a healthy milch cow as beneficial as the same amount of potatoes. Have others had experience in this matter?

A CATTLE SHOW IN SCOTLAND.—The exhibition of the Highland Society, which is regarded as the parent of all British agricultural societies, having been established by Royal Charter in 1787, was held this season in Aberdeen the first week in August. By a report in the *Canada Farmer* we learn that the grand total of animals on exhibition was 1681; consisting of horses 139, sheep 632, swine 57, poultry 480. There were 1158 machines, implements, &c. The number of entries at Aberdeen was considerably reduced by an unfortunate misunderstanding between exhibitors in the vicinity of Glasgow and the railway managers, which resulted in an opposition show at the latter place, which offered premiums of equal value to those of the old society. Although there is no allusion to "trials of speed," the receipts at the gate were about $8000, and the amount of prizes offered a little larger than the receipts.

GOOD SEED.—We find in the *Iowa Homestead* a statement by Sewell Foster, Esq., of the production of two parts of the same field of wheat this season, both of which were prepared alike, and treated in the same manner with the exception of the seed. On one portion very clean, plump, nice wheat, costing $2.25 per bushel, was used; on the other ordinary wheat worth $1.75 to 1.80 per bushel was sown. The good seed averaged 23⅛ bushels per acre; the poorer 18¾ bushels per acre.

NATURE AND USES OF PLASTER.

The question is often asked among farmers; of what use is plaster? When, where, and how shall it be used? And I have never heard a satisfactory answer given to them Nearly every farmer who had made any application of plaster, had found it serviceable at one time, but without profitable returns at another. No one within my acquaintance knows the reason for success or failure.

Most people found the application to clover attended generally with good results; some found it good sometimes for potatoes; but not a single one could tell, What is plaster good for? Chemistry solves the question: Plaster is sulphate of lime. To different branches of science it is known by different names. In the arts it is plaster; in mineralogy it is gypsum; in chemistry it is sulphate of lime. It is sulphuric acid and lime. Sulphuric acid has an affinity for ammonia, and when it finds ammonia it breaks up its partnership with the lime and combines with the ammonia, forming sulphate of ammonia, and this is non-volatile. The lime finds a companion, when deserted by the acid, in carbonic acid, forming carbonate of lime.

Hence it will be seen that when the farmer has ammonia in his soil, put there by himself in manure, or in any other manner, liable to waste, the plaster will fix it there, and in all such cases it can be applied to the ground with profit. The odor about stables and manure heaps, is escaping ammonia, and the farmer can judiciously use a little plaster in both places, saving the ammonia for his land.

Plaster saves to the soil nitrogen, one of the chief mineral elements entering into the growth of plants; ammonia is three parts hydrogen and one part nitrogen. Ammonia escapes from decaying vegetation wherever it is found, and is suspended in the air, and when after a long dry spell and considerable quantities of it has ascended, the first rain brings it to the earth, and if there is a little plaster in the clover field, the ammonia never rises again.

This very study into the uses of plaster shows that the farmer should be a student, and in some degree, a man of science. He must learn that in doctoring his soil something else than mineral substances may be needed. He may need organic substances as well, and to know this is the duty of the farmer. But I trust I have explained the nature and uses of plaster, so that whoever reads may know when its application may be serviceable.—*Ohio Farmer.*

WEANING LAMBS.

Lambs should be taken from the ewes before feed begins to fail in the fall; they require, when left to get their living by grazing alone, good pasture, or they will decline in flesh and and enter winter in a condition that will not warrant their going through. The ewe also after supporting a lamb through the summer, requires time and plenty of food to recuperate lost strength and flesh. Sheep lay on flesh more readily from grass in the months of October and November than any others, and lambs should be taken off as soon as September, or at least as soon as they are four months old.

The two flocks should be separated if possible so far that they cannot hear the bleating of each other, and by all means so that they are not in fields adjoining, for they will spend one-half of the time running up and down the fences trying to get together. If lambs cannot be furnished with good pasturage, they should have a little oat meal once a day; a gill to each is sufficient, and less than that amount should be given at first.

If docking was neglected at the proper time, do not do it when weaning; the lambs have enough to endure by the separation from their mothers; nor should the job be attended to until grass has a good start in the spring.—*Ohio Farmer.*

Ladies' Department.

From the German.

THE STOCKING KNITTER.

She stood beside the window, at her knitting worked the maid;
It was homely work—you'll laugh at all my fancies I'm afraid.
But when her work was ended, and she laid her knitting down,
With a thoughtful face she gazed upon the stocking ribbed and brown.
Thus she pondered—"If each loop of this my knitting was a thought,
And each worsted-strand a fancy, what strange lessons would be taught
For the future from my knitting? as I con it o'er again,
For the secrets of the future from the tangles of the skein.
There are woven dreams in knitting, and there's many a girl will look,
To the clicking of her needles, on her knitting as a book.
As they rattle on so gaily, I am blithe and of good cheer,
And anon a loop is fallen—and I wipe away a tear.
With the snapping thread how often has my darling left in pain:
As I join the yarn, in fancy he has come to kiss again.
All the loops are chains of thought, some bright as sunrise on the wave,
And while some brought balm to sorrow, some were darksome as the grave.
All the strange tales of my childhood they came back to me once more,
The old rhymes of gnome and fairy, and the spectre shapes of yore;
With the knots that I unravelled all those fearsome nights were fled,
They were swept into oblivion at the smoothing of the thread.
And I felt my heart was breaking as my needle snapt in twain—
'Twas an omen for the future of disaster, doubt, and pain
And I heard again in fancy all the tender words and vows
That I heard from gallant lovers with the rose-flush on my brows;
They were sweet words of devotion, and my heart was very proud,
And they came from out my knitting, where they slept as in a shroud."
As the lithe, small hands were idle, so the maiden, to my mind,
Thought and spoke. In work most homely poet-fancies you will find.

DOMESTIC ECONOMY;

OR,

HOW TO MAKE HOME PLEASANT.

BY ANNE G. HALE.

CHAPTER XIV. Continued.

FOOD AND ITS PREPARATION.

Rye drop cakes are an excellent and healthy bread for breakfast. Here is a simple rule: Beat three eggs very light, add one quart of milk, a large pinch of salt, stir in a handful of flour; then rye till the mixture is stiff enough to hold up the spoon; pour it into a French roll pan, or into muffin rings, and bake fifteen minutes. For muffins, take one egg well beaten, a piece of butter an inch square, one cup of milk, one tablespoonful of sugar, one teaspoonful of soda, and two of cream of tartar; stir in flour till it is a stiff batter; pour it into rings,—or into a flat pan for a broad loaf, which when baked should be cut into squares. A good rule for Indian or corn bread is the following: three eggs well beaten, one quart of sour milk, a piece of butter the size of an egg, two tea spoonfuls of saleratus; mix them well, then stir in three tablespoonfuls of flour and Indian meal enough to make it a stiff batter. Bake it in a flat pan half an hour.

For buckwheats take a quart of warm water, one quarter of a yeast cake, and a little salt. Stir in buckwheat flour—making it a thin batter. Let it set by the stove over night; in the morning stir in half a teaspoonful of soda or saleratus. Make them of milk if you have it. Using a teaspoonful of saleratus and the same of cream of tartar, the yeast can be omitted, and the mixture fried immediately. Consume as little fat as possible in frying them. For this a swab, made of a bit of clean white cloth tied to a clean meat peg, with which the fat can be applied to the griddle, is very convenient. Leave a gill of the batter as yeast for the next set of cakes. Nice griddle cakes may be made in the same way of rye and Indian meal, or of Indian and flour.

While there is such a demand for cake and pastry there must be receipts for making them. I have no space for these, but give general directions and suggestions for the making and baking of pies and cakes. When preparing for pastry allow a heaping handful of flour for each pie that you intend to make. Sift it, and set it in a cold place till you wish to use it, sometime beforehand. Get your plates buttered and the filling materials ready. Then, to three handfuls of flour allow two heaping tablespoonfuls of lard; half of this may be of butter, or of soft, new, beef fat which has been clarified by boiling in water. Rub one-third of this shortening into the flour—together with salt—a small pinch for each pie; rub lightly—mix a very little saleratus—a piece the size of a white bean is sufficient for two pies—in cold water or milk, with which wet the flour; stir it up as quickly as you can—just get it together so that you can roll it—don't mould it; take it on the moulding board with a sprinkling of flour for both board and pin. Roll it to the quarter of an inch in thickness, spread shortening over it as evenly as you can; sprinkle flour from the dredging-box upon it, and fold it into a long roll; flatten it a little with the pin, spread more shortening, sprinkle again with flour, and roll or fold it closely together. Cut a slice from this; roll it as nearly as possible to a round shape, fold it across the centre, to lift it to the plate easily, spread open, see that it lies closely to the plate or dish; then take the dish or plate on the palm of the left hand, and, holding a knife in your right, just under the edge of the plate, trim off the pastry close and neatly; lay a row of the narrow strip of pastry thus made along the edge, to make

a handsome rim, and if berries or any other juicy substance forms the filling, two layers. Place your filling to meet this rim, wet the rim with cold water and sprinkle flour upon it, (this should also be done to the under crust before placing the rim) then cover with the top crust, (laying it folded across the centre and then opening it) flatten it around the edge with the palms of your hands, and trim it as the under crust was trimmed; prick it eight or ten times with a fork, or the syrup will burst the edge of the crust—as there must be some vent for the steam.

Pastry looks much nicer if made in a cold room,—the shortening must be kept cold till it is all used if it is mixed in a warm room. Pies made of cooked material, such as cranberry, gooseberry, and stewed apple—mince-meat for pies, after it is ready to bake, should be stewed—need an oven nearly as hot as that for baking bread; half an hour, or forty minutes, will generally bake them; they are done when they slip easily in the plate. Raw apples, rhubarb, peaches, cherries, and berries, require as much heat as for baking bread, and from three-quarters' to an hour's time. Custard, squash, pumpkin, and rice pies, should not be filled till just as they are placed in the oven; and the material should then be *hot*, having been heated to a scalding point by placing it in a tin pail or kettle and this being set in the hot water of the boiler over the fire. Stewed fruit pies look best if cross-barred or covered with rings made of narrow strips of pastry, instead of being covered closely. Cream, either sweet or sour—the sour corrected with saleratus—makes nice and healthful pastry. Take the cream and stir in flour enough to handle it easily, add a little salt, mould just to get it into shape, and roll it out immediately for the pie—it is very easily and quickly made.

When you have cake to make, get all the ingredients ready for use and place them close at hand. The currants for fruit-cake should be washed in warm water the day before. Rub them in the water thoroughly, but lightly, and then pour it off; give them two or three such washings, till the water is clear. Drain them in a coarse cloth; then spread them on a dry cloth and rub them dry with it; at the same time pick out the bad ones. Then set them by the fire, or in the sun, to dry thoroughly. Raisins, unless they are very fresh, should also be washed in the same way. Chop them, or cut them with sharp scissors, to stone them. Good brown sugar is best for fruit cake or common cup cake, but crushed white sugar should be used for nice white cake,—the granulated, if pounded and sifted, will answer. All sugar is better *pounded* and then sifted, than if rolled. Fresh eggs are needed for nice cake. All eggs before beating should lie in cold water sometime—over night if they can—they then make a finer froth. Use a wire beater, or a clean, long cork stuck crosswise of the tines of a fork. For nice cake the whites and yolks must be beaten separately. Make a small hole at each end of the egg and either drain the white through one, or by blowing at the other end force it through; be sure that not an atom of the yolk passes with it, it would prevent its foaming well. Beat the whites in a flat dish till you can turn the dish any way without their spilling—till they are light and white as snow. Keep up a steady movement with the beater, and never leave off for an instant; if it returns to a liquid state the foam will not rise well, and your cake will be heavy; by keeping your right elbow close to your side, resting on the hip, the beating will not be very tiresome. It can generally be accomplished in twenty minutes. It is a good plan to have some one beating the yolks at the same time. In summer go into the coldest place you can to beat eggs.

To mix the cake; add first the sugar to the whites, slowly and carefully; then the yolks, and then the flour—for sponge cake. For other kinds, beat the sugar and butter together till they seem like cream, then add the whites; next, the yolks; if cream of tartar is used sift it with the flour and follow with this; then the spice, or flavoring extract; then the soda or saleratus, dissolved in the milk or cream. Put it into well-buttered pans. For very nice cake cut clean white papers and line the pan with them, and set it immediately into the oven; if fruit is used stir it in lightly, just below the surface, at the last moment.

Never use strong or rancid butter or lard, for cake. One half lard is better than all butter. Use a wooden spoon for mixing cake, and a wooden or earthen dish. For cookies and sugar gingerbread, rub the shortening into the flour; beat the eggs and sugar together, then stir in the milk with the saleratus, and then the shortened flour. In rolling it out, shake flour on your hands and rub the board and pin with them just enough to prevent the dough from sticking. For making molasses gingerbread: boil the molasses a few minutes, then dissolve the lard in it, and when at blood heat add the other ingredients, and stir in the flour. Gingerbread and cookies need a quick heat,—will bake in eight to twelve minutes, according to their thickness. Light cake needs a good, steady heat, about the same as for bread. Do not open the oven door after the cake is set in, for ten minutes, and then be sure that no cold draught can reach the oven; glance in carefully, and if the cake is browning too much, cover it with a clean paper. Don't open it again till you think the cake is done, as the admission of cool air will make it "fall," and cause a heavy streak through it. Cake in pans one inch deep will be done in twenty minutes—sponge cake in fifteen—if the oven is of the right heat. Before removing it from the oven try it with a broom-straw to see if it is done. When done it should stand in the pans fifteen minutes, then remove it carefully to flat dishes. If cake is to be frosted set it on a flat tin at this time.

To make frosting: take the whites of five eggs beaten to a stiff froth, put to it a pound of sugar, flavor it with lemon or rose, and beat it steadily--

it will take a great while—from one to two hours,—till it will stay where it is put. Some persons mix a teaspoonful of starch and scald it with milk and add this when cold to the egg and sugar,—with this, less time is required to beat it. Spread the frosting with a knife neatly upon the cake, and set it into the oven for fifteen minutes; it should have only a moderate heat. For very rich fruit cake, or for wedding cake, the oven, if of brick, should be slowly heated with hard wood, and the fire allowed to die nearly out before the ashes are removed. A stove should have a steady hot fire three hours before setting in the cake, and the heat be kept up for three more, when the cake will probably be done. Don't look at it until it has been in the oven twenty minutes, (beware of a cold draught) if it browns too much cover it with paper. In fifteen minutes more if the paper is deeply scorched set a pan of cold water in the oven. Don't look at it again till it is nearly time for it to be done.

In making doughnuts, or fried cakes of any kind, and fried pies, use as little soda or saleratus as possible; as this makes them absorb the fat. Fry them in equal portions of lard and beef fat. Nuts raised with yeast are less liable to do this; and pastry for fried pies made of bread dough with a little sugar and a trifle of lard worked in is preferable in this respect to any other kind; it is always nice and light.

Prof. Horsford's baking powders, being preparations of soda and tartaric acid, are getting into use, and deservedly so, as there is so little dependence to be placed upon cream of tartar and soda even when they are bought at the druggists'.

DOMESTIC RECEIPTS.

Fish Chowder.—The best fish for chowder are haddock and striped bass. Cut the fish in pieces an inch thick and two inches square; take six or eight slices of salt pork; put them in the bottom of an iron pot, and fry them till crisped. Take out the pork, leaving the fat; chop the pork fine. Put in the pot a layer of fish, layer of split crackers, some of the chopped pork, a little black and red pepper, a little chopped onion, then another layer of fish, split crackers and seasoning. This do till you have used your fish. Then just cover the fish with water, and stew slowly till it is tender; thicken the gravy with pounded cracker; add catsup if you like. Boil up the gravy once, and pour over the fish; squeeze in the juice of a lemon. Add salt if necessary.

To Preserve Ripe Cucumbers.—Take large yellow cucumbers, pare them, take out the cores, and soak in salt water two days. Then take them from the brine, pour over them boiling water, and let them stand over night. Pour off this water, and they are ready for the pickle, which prepare thus: For each quart of sharp vinegar take one pint of hot water, two large cups of sugar, and one tablespoonful of each of the following spices: cinnamon, cloves, allspice, black pepper, mace or nutmeg. Add one handful of raisins or ripe grapes. Scald all together, and boil until the cucumbers are easily penetrated with a fork. Use as little of the vinegar to boil them in as possible, and pour the rest over them when done.

A Cheap Ice Pitcher.—The following is a simple method of keeping ice water for a long time in a common pitcher: Place between two sheets of paper (newspaper will answer, thick brown is better) a layer of cotton batting about half an inch in thickness, fasten the ends of paper and batting together, forming a circle, then sew or paste a crown over one end, making a box the shape of a stovepipe hat, minus the rim. Place this over an ordinary pitcher filled with ice water, making it deep enough to rest on the table, so as to exclude the air, and the reader will be astonished at the length of time his ice will keep and the water remain cold after the ice is melted.

Rusks.—Delicious rusks, either for serving with cheese, or for sopping in beef tea for invalids, may be made in this simple way: Cut a round of loaf baked in a tin in eight three cornered pieces, and put them on a plate in cool oven. When one side is light brown, turn. These rusks are more wholesome for infants' food, when soaked in scalding milk, than the usual bread and milk.

THE
NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

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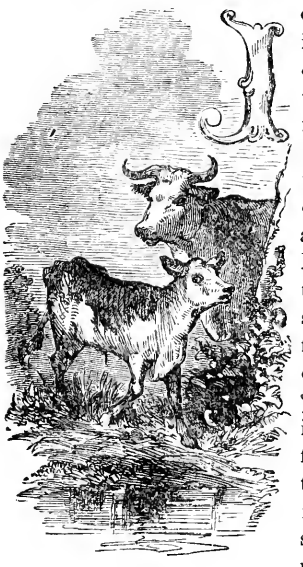
AGRICULTURAL PREMIUMS.



JOGGING along in our onward course through the year, we now find ourselves entering upon one of the dreariest of the autumn months. Even the cattle themselves seem dissatisfied with the out-door prospect, and turning from the field, look to their masters for food and shelter, and at no season in the year, perhaps, does farm stock suffer more from neglect than during that period which intervenes between heavy frosts and the snows which finally drive them to the barn. But after attending to all their wants and to all our other field duties, November affords the thoughtful farmer time for study and reflection. Among many other subjects which claim our attention the proper management of agricultural fairs is one that should not be forgotten.

In looking over the various reports of Agricultural Societies, several reflections have occurred to us. The question has been raised in our mind, whether agricultural premiums awarded as they now are, and for the objects for which they are now given, have not done about all the good which they are capable of doing.

They were originally offered to encourage the production of better varieties of animals, fruits and vegetables; better methods of farm and garden culture, and to stimulate the invention and introduction of better mechanical aids on the farm. Doubtless they have contributed in no inconsiderable degree to accomplish the ends for which they were intended. But we have now reached that point at which it becomes a question, whether many of the objects for which premiums have been granted year after year, need any further encouragement. As the demand for them renders their cultivation sufficiently profitable to stimulate to a large production, and that of the best varieties, why should premiums any longer be offered?

Does the production of apples or garden vegetables require to be stimulated by the offer of premiums? Does not the price in the market afford a sufficient inducement to cultivate them, and are not the more profitable varieties determined by the demand?

The cultivators now understand the best methods of culture, and have ready access to

abundant means of information, and regard to their own interest will do all that is needed in this direction; and even if this were not true, the statements of the premium-takers would afford them but little aid. The offer of a premium may induce the fruit-raiser, or vegetable raiser, to pick out the finest specimens of his crop, and exhibit them on the tables, thus adding to the richness and beauty of the show, but it is not so easy to see how it will increase the quantity or improve the quality of his crops.

If an individual offers a new and promising variety, it may be proper to encourage him by a premium to test still further the value of his article, and to reward him for his enterprise. But does an article whose value has been satisfactorily proved, and for the cultivation of which the demand is a sufficient inducement, require a premium?

It has occurred to us that the premium lists of our Societies require a complete revision, and that premiums should not continue to be given from habit, merely because they have been given in years past. With regard to many articles, circumstances have entirely changed. For example, our ploughing matches have become little more than opportunities for advertising the ploughs of different manufacturers, and the manufacturers can well afford to pay the awards to successful competitors. There should be much greater discrimination in the objects for which premiums are offered. Those especially should be selected that will lead to careful experiments, and bring out such practical information as the farmer needs, and they should be changed from year to year, as circumstances require. We would suggest as subjects for premiums at the present time, the restoring to fertility of exhausted soils, by ploughing in successive green crops, the culture of winter wheat, by ploughing in the seed three and four inches deep, before the 15th of September, and also the drilling in of wheat, both winter and spring wheat, the amount of land and of seed being specified, and a careful statement of the whole process being given.

Let premiums be offered for the entire crop of vegetables raised on a given amount of land, including the small as well as the large vegetables, with a statement of the cost of raising them. If a farmer selects the best specimens from a hundred bushels of potatoes, and exhibits them, what useful information is given by it? It would be a wretched crop indeed, from which a basket of good ones could not be selected.

The same remark may be made with regard to all other vegetables. But if the entire crop is shown, either to the committee, or at the exhibition, with a statement of the cost, and the present value and the method of cultivation, a fair comparison may be made, and some useful information gained.

Most crops are cultivated for profit, and the farmer wishes to know the cost of cultivating them.

If a crop costs twice or three times its value in the market, why should a premium be paid for it? If it cannot be raised within its market value, so as to allow a margin for profit, neither farmer nor gardener will engage in its cultivation.

More careful statements of the cost of raising articles should be required. We have often noticed that premiums are awarded for fruits and vegetables to amateurs, who expend, upon their one or two acres, as much for manure and labor as the farmer expends upon his fifty or eighty acres. The premium articles may be a little more perfect, or may be got up for the show in a neater manner; but if they have cost twice or three times as much per bushel or pound, this fact ought to be known and taken into the account in making the award.

If one man raises a crop at half the sum which it costs his neighbor to raise a similar crop, why should not he have the benefit of it, especially if, by his statement, he can teach his neighbor how to do the same thing at the same cost?

We know a gentleman who cultivates two or three acres of ground in potatoes, corn, beans, tomatoes, cabbages, beets, turnips, &c. He keeps a man all the year at the highest wages, and employs another man at least half the growing season, and hires all his ploughing and teaming besides, and labors a good deal himself. His vegetables make a fine show at the exhibition. But if he would exhibit an account current with his vegetables, the farmer who looks upon them with admiration would have no feelings of envy towards him. Not the man who makes the best show is en-

titled to the premium, but the man who makes the best show from his acre at the least cost. We have made several other reflections on looking over the reports referred to, but we have said quite enough for once.

ANGLO-MERINO SHEEP.

This is the name applied to a breed of sheep introduced some years since into England, and which is represented as the product of a cross of the merino with the English long-wooled sheep. This latter has been brought to a condition of great excellence by the exertions of Lord WESTERN, and is represented by those who have seen it, and examined specimens of the wool, as being in every respect a fine animal. At the Smithfield Cattle Show, samples of this cross excited great admiration, and were for a long time the subject of comment and eulogy in the various agricultural and other journals.

In a number of the *Farmer's* (London) *Magazine*, Lord WESTERN published a letter, accompanied by documentary statistics and proofs, going to demonstrate the high value of this breed, both in reference to carcass, and the superiority of the wool. The weight of some of his wethers, was, after being dressed, one hundred and fifty pounds. Of this weight, from twenty to twenty-five pounds was fat from the intestines. The wool averaged, in the cross breed, more than five and a half pounds per head, in a flock of two hundred and one sheep.

The chief object of Lord WESTERN in instituting his interesting series of experiments, appears to have been the desire to ascertain, practically, the feasibility of engrafting the Merino wool on the Leicester carcass. In his letter he remarks that his sheep may not fatten so early or equal to the weight of the Leicester, yet they give a handsome carcass, and carry a heavy fleece, equal in quality to the Merino; and that they are, upon the whole, an improvement in hardiness, upon the Merinos.

The sheep is a valuable animal, and one which is, perhaps, more readily susceptible of improvement through the instrumentality of good keeping and judicious crossings, than any other domestic animals kept upon the farm.

In this country, a variety of influences have long tended to divert attention from this important subject, but for several years past, there have been unmistakable indications of an awakening interest, and many of our farmers are moving forward in the work of improvement with great zeal.

NEW PUBLICATIONS.

AMERICAN FISH CULTURE, embracing all the details of Artificial Breeding and Rearing of Trout: the Culture of Salmon, Shad and other Fishes. By Thaddeus Norris, author of "The American Angler's Book." Illustrated. Philadelphia: Porter & Coates; Boston: Lee & Shepard. 1868.

Fish Culture means simply the rearing of fish by artificial means, which protect them from many of the dangers to which they are exposed in their natural haunts, and, by feeding and otherwise, improving on nature. Within a few years past Dr. Fletcher, of New England, Dr. Daniell, of Georgia, S. H. Ainsworth, R. B. Roosevelt and S. Green, of New York, as well as the author of this work of Pennsylvania, and others, have interested themselves in this subject, and have done much towards stocking our inland waters with desirable varieties of fish.

Fish culture is an old art, in which the Chinese have long been proficients, and with whom the fecundated spawn is still an article of traffic. We are told that the value of fish kept in the ponds of Lucullus, an old Roman citizen, who lived on the shores of the Gulf of Naples, amounted to a sum which in our money would be equal to two hundred and fifty thousand dollars. And why, in modern times, should not "the waters bring forth abundantly the moving creature that hath life," as well as the land?

The author informs us that the publishers of several agricultural papers have offered to pay him liberally for short articles on fish culture, but that he has invariably refused for the good reason that the subject could not be properly treated in the space usually allowed to such articles. He has, therefore, reserved his teachings for the more ample accommodations which a three-hundred page volume affords.

TRAINING ANIMALS FOR WORK.

There is a great advantage in having all brood animals well and thoroughly trained. The offspring of such are more tractable, and have less natural fear of man. All animals, male or female, used for breeding, should be thoroughly domesticated and taught to handle well, and have no fear of man. By this means, their value for labor may be greatly increased, and their care rendered much more pleasant and satisfactory.

In training animals it is necessary to understand their nature and habits.

Habit is with brutes, as with men, an iron-

handed master. It is one of the essentials in early training to bring the animal to depend upon the driver. Feeding, watering, care, and training should be mainly by one person. There should also be a strong friendship, a familiar acquaintance, and the fullest confidence of the animal. There need be no fear of unrequited affection. All our domestic animals love naturally the hand that cares for them, and the voice that calls them.

The trainer. He who is not thoroughly under self control, should never attempt to instruct the ignorant of either his own or a lower race of animals. He cannot succeed well. The voice, the eye, the lip, and motion betray the ungoverned man. How can he govern others and train in good ways, who cannot govern himself? He who would instruct, must never yield the slightest evidence of passion, anger, or even impatience. Reason is his strength, and good sense his best reliance. How important, then, that his mind be free from the dominion of bad habits, enslaved by no excesses. No intemperate man should ever take charge of animals in training. Bad habits are mainly the result of want of care or of mismanagement on the part of those having the charge of animals.

Animals have no knowledge of wrong or right, of cause and effect, or of hope and reason, to stimulate them to labor. Their labor is obtained through man's power over them. Let not that power be abused. By good judgment and kindness show yourself worthy of the service of a well-trained, noble animal.

Yield of Wheat in Wisconsin.—J. W. Clark, of Green Lake Co., Wis., writes to the *Country Gentleman* that the actual yield from the threshing machines, on some forty of the farms on the prairie soils of that part of the State, per acre, ranges from six to thirteen bushels—the more general range being from seven to twelve bushels per acre. Some of the most intelligent growers set the average at nine, and others call it ten bushels per acre. On the timbered land the production is a bushel or more per acre better—the average being stated at eleven bushels. From personal observation the writer says that the yield in Ripon county is no better, though the city papers, at harvest time, gave reports from some sixty stations in that section of "good crops."

AGRICULTURAL ITEMS.

—During the harvest this year in Braemar, Scotland, a snow storm lasted several hours; the snow lay until next day, and the cold was intense.

—The fund of half a million left by the late Mr. McConough, of New Orleans, for the endowment of an agricultural school of a high order, is about to be rendered effective.

—At the late show of the Newton, Mass., Jersey Stock Club, a cow was sold by Mr. Wellington, of Lexington for $600, and a calf to Mr. Joseph Burnett, of Southboro, for $150.

—To take rust out of steel, rub well with sweet oil, and let the oil remain upon them for forty-eight hours. Then rub with leather sprinkled with unslaked lime, finely powdered, until all the rust disappears.

—The towns along the river Amazon in South America, in the midst of the most productive country in the world, get meat, flour, and dried fruits from North America and Europe, because the people are too lazy to work.

—In the late report of the Connecticut State Board of Agriculture, it is stated by a Mr. Hyde that an Alderney calf of his dropped a calf at eleven months and ten days old, by a bull weighing 1800 pounds.

—Dr. Trimble says he once saw a cypress tree in the Dismal Swamp, Virginia, which was cut down and the rings showed it was 1100 years old. And this tree was growing over another tree which was much larger.

The editor of the *Rural World*, on a late visit to places on the North Missouri Railroad, was astonished to learn that there was hardly a single well in a county,—people being dependent on rain water kept in cisterns.

—It is estimated that the rain fall in the Northern States is forty inches, the Southern States fifty, Minnesota, Western California and Colorado thirty, Nebraska and Utah twenty, Kansas and Western Arizona fifteen inches. This is a general average for a series of years.

—Dr. F. C. Brunck, writes from the grape regions of the Rhine to the *Buffalo Courier*, that choice vineyard lands are held there as high as $4000 in gold per 116 square perches,—about $1400 per acre—and in common situations $280, or nearly $100 per acre.

—A correspondent of the *Rural New Yorker* says no grape should be counted as even approaching perfect ripeness when the stem does not exhibit a deadened and shriveled, blackened character at least three-fourths of an inch from its connection with the branch on which it grew.

—S. Foster, Esq., writing at Muscatine, Iowa, Sept. 3, to the *Country Gentleman* says, corn is a heavy crop, and most of it now fast getting out of the way of the frost. Potatoes above half a crop. Splendid crop of grapes; our town is fully sup-

plied with this luscious fruit, in its most fair, ripe and perfect condition—I mean Concords, at 8 cents per lb., wholesale 6¼. Our people are eating them, and stewing them for sauce, making pies, and canning them for winter and spring use, making preserves and jelly.

—The Newark, (N. J.,) *Advertiser* says that a low estimate of the cranberry crop this season in and around Manchester and Tom's River will not come short of 15,000 bushels, worth at a fair valuation $100,000. In two years the present area already planted will yield at a moderate estimate 45,000 bushels.

—Mr. G. Sillar, of London, has discovered a process which will make the sewerage of towns invaluable as manure. His purifier consists of blood, clay and other ingredients. In an experiment at Tottenham, England, he purified 36,000 gallons of sewerage in twenty minutes, and the solid residuum was found to be worth twice the amount of money expended in the process.

—The report of the committee on swine at the Hubbardston, Mass., town cattle show was as follows:—

"No swine to-day, not even one,
We know not what it means;
We hope that those who slight these shows
Will get no pork and beans!
No swine to-day, oh what a pity—
And five old men on the committee."

—The shipment of cheese from St. Albans for the month of September was 1443 boxes; of spring water, 2015 boxes, and of butter 4005 firkins. The total weight of the butter was 236,290 lbs. The average price was forty-one cents, which shows the receipts of the farmers of that section, from this one product alone, to amount in a single month to $96,778 90.

—The old story, that was shown to be a mere fiction years ago, about one A. M. De Sara, near Paris, making an annual income of $175,000 clear of expenses, by keeping hens on dead horses, has been re-vamped by the *California Farmer*, and "takes well" with a portion, at least, of the agricultural press.

—Boys, did you ever think that a potato's skin was designed to protect the mealy part from the action of the atmosphere, much as your own skin protects the more sensitive parts from the air, and that you ought to be about as careful not to break the skin of a potato as you are not to bark your own knuckles, or to bruise your choice winter apples? But who cares for a potato skin? And so they are knocked, and bruised, and barked, and people wonder they don't come out mealy and sound.

—An Illinois correspondent of the *Country Gentleman*, says that in that section a new style of rearing Osage Orange plants for hedges has been recently adopted. It is to plant the quicks from sixteen to eighteen inches apart, allow them to grow until the third year, and then *plash* them; that is, cut the plants a little more than half off, close to the ground, and then lay them flat in the line of the hedge. The shoots that then break from every bud, and grow upright, making a fence that will turn a rabbit or a cat.

—A writer in the *Country Gentleman* believes that when whole tubers are planted, the stalks or vines of potatoes grow too succulent and rank, and says he succeeds best in growing healthy potatoes by sprouting them in a heap, and then removing and planting the sprouts and the fibrous roots adhering to them.

For the New England Farmer.

THE GARDEN FOR NOVEMBER.

This month will close the income from the garden for this season; yet there comes a somewhat busy time, not only in finishing all our harvesting, but also in preparing for spring work, and looking to the proper protection of the various crops and plants that are to be kept through the winter, either for consumption or spring culture.

After having gathered the crops it is well to review the labors of the season, and see wherein we have worked at a profit, and where at a loss, and to plan for future improvement. And here I would suggest that if a memorandum of all the operations in the garden was kept, it would afford great interest and satisfaction as a matter of reference. By it we could ascertain the date of planting any particular crop, the time it came up, how fertilized, when it ripened, and in short the whole history of its culture and produce. Such a record will not only be an assistance to yourself, but to your children who follow you. With a plan of the garden on paper, and each plat numbered, a much more definite record can be made, and easier referred to. But it may be objected, that this takes time and labor. Very true, but how are you going to find out the proper time and manner of cultivating the various crops if no one keeps a record, or remembers better than most people do? And does it not also require time and labor to hunt up the information when needed?

Much may be done towards interesting the children, and inculcating a love of rural pursuits, as well as encouraging them to form habits of industry, by allowing them a small patch for a garden of their own. Now is a good time to set off a plat for their exclusive use and occupancy. Do not locate it in some out of the way corner, but give them a pleasant, good plat, and then instruct and assist them, if necessary, in preparing it. The thought that they have something of their own, and that you take an interest in their pursuits, will encourage them, and once interested when young, they are much more likely to be contented on the farm, and to form habits of industry and economy, than when nothing of the kind is allowed. If they desire to plant a few flowers, encourage them in that,

and endeavor to interest them in all laudable rural pursuits, and lead them to cultivate a taste for the ornamental as well as the useful.

My notes for November in the garden will be brief. If previous directions have been attended to, little remains to be done.

Asparagus is a luxury, in early spring, which many scarcely know anything of, but which is easily secured; and every garden ought to be supplied with a bed. In some localities new beds may yet be formed, by trenching and working in good strong manure, bones, old leather scraps, salt, &c., in the bottom soil, making it rich and deep, for once well formed it lasts many years. Procure and set good strong plants, as heretofore directed, and cover with a heavy mulch of manure, &c., for winter protection. Clear off old beds and mulch with coarse manure.

Cabbage.—Put those not already harvested, into the cellar, or in trenches, before hard freezing weather, as that injures their keeping qualities, though they will stand something of a freeze. If stored in the cellar, they keep best set out, not leaned against the wall or each other closely. They keep well buried in well drained, dry soil, out doors, by digging a trench wide enough to receive the heads and so deep that the heads may be covered four or five inches. Pull off some of the loose leaves and set them heads down, close together, and fill in the soil, raising a ridge, and leave only the roots above it; spat it with the spade to shed water, &c. With this practice I have been conversant many years, and they come out as wanted in the spring, fresh and crisp. I have known others to be set with the heads nearly level with the top of the ground, and then covered with corn stalks, boards and earth. When so covered they can be got at more readily during winter.

Celery.—Dig and store in boxes in the cellar, setting the plants in the box as they come out of the ground, filling in dirt, and using care not to get any into the centres or heart.

Currants and Gooseberries.—Make cuttings at once, if not already done, and pack them down in sand in the cellar bottom. Give the old roots a good mulch of manure.

Grape Vines.—By many, this month is considered the best time to prune. To produce choice fruit they need cutting back, the new growth, to two or three buds, and the vines taken down and covered, to protect them from sudden changes in the weather. As you prune make and save cuttings, and preserve by burying in sand, or packing in damp moss.

Squashes and Pumpkins.—These have all been gathered before this, and now we have to see to their winter keeping. They keep as well as any where in a dry, cool cellar, laid singly on shelves. I once knew a man who kept winter crookneck squashes, good and sound, on a swing shelf overhead, in an old-fashioned kitchen till warm weather came. The main thing is to have them well ripened, and perfectly sound, and then kept dry, and from freezing.

Turnips.—Late crops will continue to grow as long as the ground remains open; but there is danger of their being frozen in, if not gathered the fore part of the month.

W. H. White.

So. Windsor, Conn., Nov. 1, 1868.

Potato Digging Bee.—The *Vermont Record and Farmer* furnishes the official report of a Potato Digging Committee, represented by F. June, Chairman; Z. Nearing, Secretary; and T. Clark, Weigher, which performed the distinguished duty of digging 809 pounds of the Early Rose, from a field belonging to H. C. Merritt, of Brattleboro', we presume, though not so stated. These 809 pounds were the produce of 7¾ pounds of seed, reminding us of the wonderful production of the Rohans, a few years since. In rows of equal length, those planted with one eye in a hill yielded 139½ pounds; those with two eyes in a hill, 203¾ pounds per row. The product of a single eye in one case was 6¾ pounds.

Illinois.—At the annual meeting of the Wool Growers' Association of this State, held at Quincy, Sept. 23, A. M. Garland was elected President; S. P. Boardman, Secretary; J. L. Mills, Treasurer, with thirteen Vice Presidents. Resolutions were adopted recognizing in the existing tariff equitable protection for the growers and manufacturers of wool; in favor of selling wool on its merits, and in favor of a hearty co-operation with the manufacturers of the West in an exhibition of wools and woolens in 1869.

FARMERS' SHOE GREASE.

Put into some fire-proof vessel one-fourth pound of lard or soft grease like lard, one-fourth pound of tallow—beef or mutton tallow—one-fourth pound of beeswax, half a pint of neatsfoot oil, three or four tablespoonfuls of lampblack, and a piece of gum camphor as large as a hen's egg. Melt the ingredients over a slow fire, and stir them thoroughly after they are melted. Never heat it so hot as to make it boil. Soft grease which has salt in it will not injure the leather. Now, have the leather warm, and warm the grease, not so it will flow, but have it so soft that it may be put on with a brush. Should the leather seem to need it, give the shoes or boots an oiling occasionally. It is not best to dry this shoe grease all in before the fire, but allow it to re-

main on the surface of the leather. A light coat of this kind will exclude the water even if the boots are exposed to the wet all day. This shoe grease will not injure leather by rendering it hard and inelastic. When a man's boots are exposed to wet, he should wash them clean at night, and hang them up in the kitchen where the leather will dry gradually, and put on a little grease every morning. It is far better to grease a little often than to grease bountifully every ten or twelve days. Leather should not be allowed to become very dry before greasing. Always apply the grease as soon as the leather is almost dry; then the leather will be mellow, and never become hard. Nothing injures boots or shoes more than to set them aside to dry when covered with dirt. Keep boots and shoes away from the fire when they are liable to be heated. Heating the leather injures it.

LAY UP THE PIECES.

Any farmer who does not practice saving pieces would be surprised at the real profit derived by laying up the odds and ends about his premises. Every day almost there are bits thrown away, at the time considered of no value, which perhaps not many days subsequent would save both time and money. How many times a year does a farmer want a strip of board, a piece of wedge or pine timber, something for a hammer handle or rake tooth, which cannot be obtained without spoiling valuable material, or going to some carpenter shop, and perhaps while this delay is made, a team and hired man are standing still waiting for a broken tool to be put in order?

But very little would be required while working at the wood pile to sort out and split into proper shape bits of tough timber and lay them up in some out of the way corner, and also to throw up small pieces of boards, such as are usually used for making kindling wood. A strip of board not more than two inches wide may be wanted sometime in a hurry for cleat upon a wagon box, or of some other size for another purpose, and the saw have to be applied to a whole board to obtain it. The repairs upon buildings, making board fences, splitting stakes or stove wood, always makes pieces in just about the shape that will be wanted at some future time, and they should never be wasted. These fragments possess of themselves no real value at the time of laying them away, but their worth is in supplying a want, and saving hinderance and perplexity in a busy time.

It is just as essential to save pieces of leather, scraps of iron, screws, nails, bolts, hinges, wire, buckles, rings and rivets. Any amount of this material is cast away annually, or sold for one cent per pound, which if saved would have been worth dollars perhaps. By this we do not intend to advocate that when a breakage occurs upon any farm implement, patching up will answer for permanent repairs, for all tools should be kept in the best of order, but there are times when plowing, harrowing, or at some other work, that the harness or some tool will give out and by the aid of wire, nails, buckle or a piece of tough timber the breach may be quickly repaired, and with sufficient strength to last until the hurry is over, and time can be spared as well as not to take the implement to the work shop.

A stitching awl and a few waxed ends kept on hand will often save a hundred times their cost.—*Ohio Farmer.*

WINGS OF BEES.

Here is something relative to the formation of the wings of the honey bee, which seems to have passed unnoticed by the bee experts of the country, probably I might say by the world in general,—at least I never saw it spoken of in any work on bees. The propelling power of the honey bee consists of four wings, two on a side, and the peculiar construction of the wings is such that they can form two (one on a side) out of the four. Examining a cluster of bees, some could be seen with two broad wings, like those of a fly, while others would have the four. To solve the mystery, I placed a wing underneath a powerful microscope, which unfolded the mechanical means whereby the four wings were made two. The peculiar feature consists of twenty minute hooks upon each back wing, hooking upward, and a sort of ledge upon the underside of the front or large wing, which the hooks match into, forming one wing of two. Upon examination I found that queen, workers and drones all have the same number, and in the same relative position. The question is, do they avoid using the back wings, except in case of heavy loads, to preserve them from wear, (the wings of old bees become so worn and ragged that it is difficult for them to fly) or can they fly faster while empty with only the two forward wings? Be it as it may, I leave the question for conjecture.—*M. S. Snow, in Co. Gent.*

Decomposing Sods.—Every farmer, gardener and fruit grower should gather sods whenever opportunity will permit, and pile them up in some corner or out-of-way place to decompose. Sods are the cream of the soil, and wonderfully supplied with fertilizing properties, making one of the very best invigorators for trees, vines and plants. They may be easily obtained from fence corners of tilled fields, or gathered from the surface after ploughing and harrowing sward land. Pile them up grass downward and cover the heap with a coat of ashes to keep grass from growing. A year or two will be required for them to thoroughly decay. Water should be applied at intervals sufficient to keep the pile moist in a dry time to prevent a dry mouldy rot.—*Ohio Farmer.*

THE SPANISH, OR TEXAN CATTLE.

We take much pleasure in giving our readers this month a capital picture of a group of this half civilized, wild-looking race. Our cattle reporter assures us that it is a correct and life-like representation of the specimens he has often seen at Brighton. Their connection with the late cattle disease will give an interest not only to the cut, but to the history of the race, both of which we copy, by permission, from Mr. Allen's valuable work on "American Cattle."

We should hardly speak of this strange race of animals, were it not that of late years they have found their way, to some extent, into our sea-board markets. They are descendants of the early Spanish stock introduced into Mexico in the sixteenth century. What they were

when first imported there, we have no knowledge, but presume them to be of the same race as those long kept by the Moors on the plains of Andalusia, and by their successors, the Castilians, for many centuries—of no great excellence in Spain, and not at all improved in Mexico.

In a recent letter from Mr. A. B. Allen, of New York, (received in July, 1867,) then travelling in Spain, between Gibraltar and Granada, he thus describes the Spanish cattle of the present day, as he saw them there: "I have seen numerous Spanish herds. They are about the size of our old-fashioned common cattle. They have large, coarse, long and wide-spread horns, mostly with a half, or full twist to them, and set back, rather than forward, with the points outward. Their colors are black, dark brown, reddish-brown, light yellowish-red, with some white on the throat and belly, and occasionally a black and white roan, or dark grey. The cows are nearly as large as the oxen, with the same style of horn. They do not appear to be good milkers. The heads are long, and rather fine. The herdsmen attend them in droves with dogs, like the short-haired Scotch Colleys."

In this brief description, may easily be detected the origin of the modern Texan cattle, run wild for many generations, while the Spanish are thoroughly domestic in their habits, and treated with care, as the density of population, and close husbandry of the Spanish people at home, compel them to be. Undoubtedly the originals are much better animals under the treatment they receive, than their half-savage cousins, at such a far distant removal.

The Texans are, in fact, a semi-wild race in America, the mild climate of the tropics, with its abundant perennial herbage, affording them all of food which their natures require. There they range, propagate and grow, with little care, congregating in large herds, and known by their owners only by the marks, or brands, they put upon them. They are annually gathered for identification, when the young calves are castrated, and those fit to sell, selected and driven to market. The cattle pay little attention to the widely scattered ranches of their owners, and rove for miles away, attracted by better pasturage, the scattered salt-licks, or in the indulgence of their own vagarious habits. We illustrate a group of the bullocks, drawn by our artist as they stood in a cattle yard, on their arrival at market.

These portraits are truthful, as we saw them in a herd of about forty in number, and know them to be correct. Their live weights, at the time—the animals ranging from five to seven years—averaged 1,008 pounds. A short description will suffice.

They are tall, lank, and bony, coarse headed, with enormous horns; (only exceeded in length by a pair in our own possession, brought from the Island of Sicily, in the Mediterranean. The shells of these Sicilian horns, are three feet four inches in length, spiral, and gracefully turned, thin, and almost transparent.) Their legs are long and coarse; they have much dewlap, and little brisket; are flat-sided, swayed in the back, high in the flank, with narrow hips and quarters, great offal in proportion to their consumable flesh, and coarse all over. Their meat must be stringy, tough and of coarse quality. Wild and savage in appearance, they looked scarcely more civilized than a herd of Dacotah Buffaloes.

In contrast to the specimens above described, it is but fair to say that we have since seen better animals, so far as flesh and condition was concerned, of the Texan cattle. They were a small herd of some thirty in number, which had been brought by the cars to the Buffalo Cattle Yards for sale. They had been well fed on corn and grass for several months, and looked sleek, and in good flesh, so far as such raw boned and loosely made up cattle could be. They were six to seven years old, and made an average weight of over 1200 pounds each. Good four year old grade shorthorn Western steers were selling at the yards, the day we saw them, at 7½ to 8 cents per pound, live weight. The Texans were sold the same day for 6 cents.

Now, adding the two or three years additional forage which the latter had consumed, the interest on their value after four years old, and then deduct the one-fifth to one-fourth less price they sold for, together with the contingencies of disease or loss by death meantime, and the comparative economy in breeding and grazing such cattle by the side of those of good flesh-producing breeds, or their crosses, is easily solved.

Great numbers of these cattle are driven from northern Texas and New Mexico, up through the Indian Territory into Kansas and Missouri, thence into Kentucky, Illinois, and so on eastward. They stop little to graze on their journeys, as they gain but a small increase of flesh in a land of civilization, and the sooner they arrive at the shambles the better. They are worth little to the butcher or consumer, and, but that they cost little to their breeders, would, as a commercial article, be comparatively worthless.

Their colors are red, dun, yellow, black, brindle, and blue roan, all mixed more or less with patches and strips of white.

As an economical animal to a farmer of the Northern, Middle, or Western States, they can be of little value, as the cows give no more milk than will raise a calf till it is old enough to graze. The bullocks are too light for heavy work, although sufficiently active; and for beef, where a choice article is in demand, their value must be low. Some of the improved breeds may be crossed upon them to advantage, no doubt, but it would take sev-

eral generations to breed their coarseness and wild nature out. It is a question whether it would not be cheaper to introduce our better natives, even into their own country, with which to commence a profitable herd. The common run of Texan cattle must be doomed to extinction, ultimately, before the better breeds.

We only mention them here, because in their own ranges, and over an extensive territory, they are the prevailing cattle, and many of them there must be of better quality than we have described. A few short-horns, from Kentucky, have, years ago, been taken to Texas, with an effort to improve the native Mexican stock, but we hear of no results worth noting; nor can there be much improvement, so long as they retain their wild and vagrant habits. These cattle, in addition to Texas and New Mexico, are extensively kept by the natives in the Mexican territory of Lower California, the adjoining Provinces, and to a considerable extent in our own State of California itself.

There should be a *sanitary* law, if nothing else, to regulate the introduction of these cattle into the States north of Texas or New Mexico, as they have either brought with them, or originated within themselves on the way, deadly diseases, which have spread from them while in our Western States, into which they were driven for market, and large numbers of valuable cattle have died from their contagion. We give an extract from one of our agricultural periodicals, touching the disease we have alluded to:—

"The Texas Cattle Plague. — The troublesome and dangerous disease introduced occasionally among the cattle of Missouri and Kentucky, by those driven from Texas, to which we have heretofore referred, is now called by this name in our Western exchanges. The *Farmer's Advertiser*, (a periodical just established at St. Louis, under the editorship of Dr. L. D. Morse,) says:—

"'We have seen a letter addressed to a friend, from a gentleman in Southwest Missouri, which details his experience with the cattle plague from its first introduction to the present autumn—the substance of which is, that there was no such disease known prior to the introduction of Texas cattle; that up to 1860, he was a heavy loser annually by it. That from 1861 to 1865, the rebellion broke up the cattle trade from Texas. During those years he lost not a single head, though a large dealer in cattle all the time. That in the present year, soon after the first appearance of Texas herds, the disease broke out again, and he had lost upwards of 150 head during the season—as many as 20 dying in a day. He recommends that the present law be so amended, as to entirely prohibit the introduction of these cattle, from the first of April to the first of October; and that from the first of October to the first of April, there be no restriction.

"'There are not sufficient data to determine how early in autumn they can be permitted to come in with safety; but as the disease this year broke out in the vicinity of St. Louis (at Cheltenham,) late in October, it appears that the first of October is too early by a month at least. The first victim was a fine cow, bought out of a Texas drove; in the course of ten days, seven other cows running in the same pasture took it and died. On the 30th of October, we had the first white and killing frost; since then there has been not a single case. It would then seem that the disease is checked and controlled by frosts; the inference therefore is, that there is no safety in suffering them to come in until cold, frosty weather sets in, which hardly ever comes earlier than the first of November.'"

As to their value for any economical purpose, beyond their hides, what little tallow they have, their horns and bones for manufacturing or fertilizing purposes, we consider them of little consequence within the bounds of modern civilization, or intelligent agriculture.

Remarks.—It may be proper to say that the foregoing remarks on the Texan cattle disease were written several months previous to the late excitement upon the subject.

For the New England Farmer.

FARM PRODUCE IN MARKET.

Why all these stale eggs, this bad butter, poor cheese, bruised, decaying fruit, coarse and worthless vegetables, lean and tough meats? In short, why is so large a part of the products of the farm of an inferior quality and in a damaged condition when they reach the consumer? Do not farmers yet know how to raise, prepare for market and sell the staple and common crops, or are they catching the spirit so prevalent in American manufacturing of slighting and shamming everything they do. Surely with all that is said and done for the promotion of agriculture, people have a right to look for a steady improvement in the quality of provisions.

To answer these questions, it is necessary to consider who establish the standards for which farmers aim, and who fix the system of marketing. Farmers, like manufacturers, cannot alone create their own market, or dictate what articles shall be sold. To a certain extent they cater to the public taste. A prominent feature of trade is that any article to sell well, to be popular, must be offered at a low figure. This desire to get everything at the lowest price possible, extends to the provision trade and inclines many to buy the lower grade of goods. A mistaken idea of economy leads others to select goods of this description.

Hence the bulk of the provision trade cannot be rated higher than second or third quality, while the portion that can rightly be called first quality, is a very small part of the whole. If the public only demanded a better quality of goods, and would willingly pay the corresponding increase in the cost of production, it would be easy to comply with their request. But consumers, generally, do not appear to realize that there is a difference in the expense of raising a good and an inferior article.

Take for example the potato. All readily perceive the great difference in their qualities, but few will willingly make a corresponding distinction in the price. They wish to buy the better kinds at nearly the ordinary price of the poorer varieties. The truth is the coarser and more hardy varieties always give a larger and more certain yield than the finer and delicate kinds, and can really be afforded from twenty to fifty cents per bushel less than the latter. As this difference cannot be easily obtained,—the prices of all sorts in market being very near the same,—farmers at once learn it is for their interest to raise the coarser and more hardy kinds. So with all vegetables and fruits, those varieties that give a large and certain yield of only a fair quality are the most remunerative. Before there is decided improvement in the quality of eatables, then, consumers must offer greater inducements to produce the best.

In Boston and other Eastern cities, the consumer does not usually come in contact with the producer, and the latter receives less encouragement to excel from the long array of middle men who intervene; for as a class they adhere more tenaciously to the one-price or same valuation rule, and consequently put a lower premium upon quality than consumers themselves would do. At their stores, or through agents along the railroad lines, these middlemen offer certain prices for the various kinds of produce. Good, bad and indifferent are brought to them, and generally received without variation of price; or, if varied at all, it is but slightly. Perhaps the poorer lots might not be received alone at the given price, but they help make up a large quantity, and, as a part of the whole, may pass inspection.

Even for an article that varies so greatly in quality as butter, the wholesale selling price among farmers is nearly uniform. The wide difference of prices the consumer observes in the retail trade is not made in the wholesale The painstaking dairyman gets but a trifle more for his superior article and extra labor than the careless do for their inferior.

In collecting eggs about the country, an egg is an egg. One price is paid, although a dozen of them, from some breeds of hens, weigh from four to six ounces more than from others. By the time these arrive in the markets of the large cities they have lost much of their original goodness, from repeated handling, long transportation and keeping, and whosoever purchases these in warm weather, makes a doubtful investment. Although the producer near by may bring in his eggs clean, fresh, uninjured by carriage, and warranting every one sound, it is with difficulty he can get two or three cents per dozen above the price of railroad eggs, and take store pay at that. All know the greater value of freshly laid eggs, and traders admit it by carefully putting them aside for "particular customers." But why not make a corresponding difference in price? Why not hold out inducements for producers to take more pains to bring a good article to market?

Again, the milk trade affords another illustration of this one-valuation system. Here it is one price for the producer, and one price for the consumer. Mr. C. may feed his cows upon the best of roots and grain, the sweetest of grass and hay, and have thereby milk that pleases every one, yet not one cent more per can does he receive for it, than his neighbor B., who, by feeding upon slops, swill, sour grass, coarse and poor hay, produces, at less cost, an inferior article that nobody wants. These different qualities are all taken, and the load made up, but the milkman knows the contents of every can, and the "particular customers" again come in for their share of good things, without extra charge, while the inferior stuff is put upon the par, and those of doubtful credit, or should the dealer be strictly impartial, he mixes the different qualities together, making the good sell the bad. Thus these "particular customers," in buying many kinds of produce, receive the better portion without paying a full equivalent, while those who take the lower grades from necessity or choice, pay too dearly. To say nothing of the injustice of this mode of dealing to either party, it is manifest that its practical effects among farmers is, to give *quantity* precedence of *quality*.

But who is responsible for the damaged condition which produce presents in market? Farmers know what will keep, and generally take care to sell such in season; but when they sell they cannot dictate how long the article shall be kept, or how far transported. Your butter was not rancid, cheese mouldy, fruits decayed, vegetables withered when they left the farm. All these imperfections are the result of frequent and rough handling, too long keeping and transportation. Once in the hands of the middlemen they do with it as they please, and they exercise the right to mix, compound, extend, re-sort, or re-mark as circumstances may favor. And if the profits can be increased by storing the commodity, they do not hesitate to indulge in speculation to the sorrow and expense of the hungry public. It is well known that all kinds of farm produce deteriorate if kept beyond a certain limit, and always suffer more or less loss by transportation. Even hardy vegetables, like potatoes, cannot be exposed three or four

weeks to air, strong light, and great changes of temperature in cars, stores, and to all the rough handling they get thereby, without losing much of their goodness. A large portion of early vegetables, and perishable fruits brought long distances,—as from the Bermudas, Charleston, Norfolk, New Jersey, and the Western States,—by the time it is retailed in our markets is dear food for the human stomach at any price. All delicate fruits, in order to be transported long distances at all, must be picked before they are ripe and fit for eating. Deducting what is lost by fermentation and unnatural ripening, jambs, bruises and heating, fermentation and withering, it is strange that what remains can tempt any appetite. What man, cultivating a garden, would gather his peas, salads, tomatoes, peaches and small fruits four and six days before wanted for use, or would think eggs would improve by a week's ride in wagon? It would require some persuasion, or the artifices of a clever cook, to induce gardeners, who know what good fruit and vegetables are, to eat these articles treated in this way. They would also doubt their ability to sell such stuff. But middle men, through the position they hold, or the credit system, or superior tact as salesmen, can sell what the producer cannot. Such damaged stuff is bought, sold, and consumed, and serves to depress prices to the discouragement of home production.

Therefore, before the inhabitants of any city congratulate themselves upon their ability to obtain their supplies from remote districts, they should consider that as the distances lengthen the middlemen multiply, and the produce is placed more completely under their control, and speculations and all the evils alluded to above increase. When it is remembered that the losses incurred thereby fall chiefly upon the consumer, it would be a safe conclusion to say it is far better economy to pay a little more for products raised near by and brought in as needed, in a fresh and healthy condition. Under the stimulus of liberal patronage for home productions, many thousand acres now lying waste, or only partially improved, around every city, would be converted into gardens; consumers and producers would more frequently meet face to face, and the wants of the former would be more easily gratified. If all kinds of produce shall be graded strictly according to quality, and sold at corresponding prices, the producer of inferior articles will find little profit in bringing such to market, while those whose productions always displayed care, neatness, and skill, would realize a more adequate reward for their labor and would be stimulated to attempt still higher perfection. N. S. T.

Lawrence, Mass., Sept. 1, 1868.

—A widow woman at Concord, N. H., who had an income of over $6000 last year from her investments, does housework for weekly wages.

For the New England Farmer.

THE LAW OF THE ROAD.

Thinking it possible that your readers might be interested in knowing what this is, I herewith give my *experience* and investigations, hoping that none may ever be betrayed into submitting a question of collision to arbitration, if they should be so unfortunate as to collide or have an employee do so. My experience was this: one of my teams was passing a carriage that had stopped just outside of the usual travelled rut, standing on a forty-five degree angle with it, and, according to the teamster's judgment, at a sufficient distance to allow him to pass. His whippletrees to the forward horses cleared the carriage, and he felt all was right as they were longer than the hind ones, but to his surprise the hind ones hit the wheel of the carriage enough to say they hit. The horse in the carriage then went ahead all clear, and the team went on, the teamster supposing that all was right again—but was immediately startled by the scream of the woman who was in the carriage, but too late to prevent the breaking of the carriage which had backed into the hind wheel of the team. Now it appears the woman *backed* the horse each time the carriage was hit, and that owing to this backing it was broken. I offered to settle the matter with the owner of the carriage. He declined making or receiving any proposition, but sent me an attorney's letter which I did not heed. After a time, finding I was not to be driven, he came and proposed an arbitration. I felt he would gain a point if I refused. The result was I had to pay *costs* and expense of repairing the carriage, making it much better than before. All I have stated here as *facts* were proved by the testimony of the chairman of selectmen of the town. The *ground* of the decision was, that my team having bells, caused the horse in the carriage to start, the woman was frightened and pulled back on the lines, and I must pay for it, as my team did not leave one-half the road for the carriage to back and go ahead in.

Our laws require turning to the right, giving one-half the road. Loaded teams are by courtesy allowed the whole road when it can be done without too much inconvenience. Almost all men driving a light carriage will do this, especially on bad roads, or up hill. If collisions occur when the party is out of his proper place in the road he is liable to damage for the injury sustained, unless the being there was unavoidable by reason of the horses being unmanageable. In this case it becomes the other party to give way, even if he has to take the *wrong side* of the road. If both parties are in fault *neither can recover.*

When carriages are going the same way, the foremost driver is required to turn to the left and allow the hind one to pass him on the right, if driving faster than he is.

This law is too often disregarded, and in

fact, I suspect is not generally known. It would seem as if common politeness ought to be sufficient to enforce the practice, did we not have such abundant evidence to the contrary in our experience.

The law also requires that we should not stop our teams in the *middle* of the road, which is designed for travelling purposes only. We have no right to obstruct it. These are the principal provisions of the law respecting travelled highways. K. O.

Broad Brook, Ct., 1868.

REMARKS.—We cannot endorse the advice of our correspondent against submitting disputes and controversies to arbitration. Judges and juries are liable to err as well as referees, and we believe that it is far better for neighbors to adjust their differences among themselves than to incur the expense and delay of a law-suit.

THE DEVONS.

This beautiful race has been considered, by some authors, aboriginal, and are claimed to have been known in England at the time of its invasion by the Romans. It is certain that their fineness of limb, uniformity of color, delicacy of proportion, and depth of breeding, give them claims to a distinction which no other race of English cattle exhibit; and be the fact of their remote origin as it may, there is no necessity of disputing it, or speculating on other probabilities. They are like no others, and by no intermixture of any other known breeds have they been, or can they be produced.

In what degrees of excellence the Devons existed during past centuries, we are unable to say; but that they possessed valuable qualities which endeared them strongly to the people who bred them is certain. Great attention has been paid to their improvement during a century past, and probably not neglected for centuries before. Not a single infusion of the blood of other known cattle can be detected in them, and for their improvement, as Devons, none other can be devised. In the good judgment, sagacity, skill, care, and pains-taking of their breeders alone, must be sought the means by which they stand in their present condition of excellence and beauty.

Description.

The head—lean in flesh, is rather short, the forehead broad, the face slightly dishing, and tapering gracefully to a fine, clean *yellow* muzzle. The eye—bright, prominent, and surrounded by a ring of orange colored, or yellow skin. The horn—upright, and curving outward, cream colored, black at the tips, graceful in its setting, and rather long, for the size of the animal. The ear—well set, and lively in action. The neck—on a level (in the bull slightly arching) with the head and shoulders; full at its junction with the breast, clean, and without dewlap. The shoulders—fine, open, (somewhat slanting, like those of the horse,) and on a level with the back. The neck-vein—full, and smooth. The arm—delicate, and the leg below the knee, small, terminating in a clean, dull brown, and somewhat striped hoof The brisket—full, and projecting well forward. The crops—well filled, and even with the shoulders. The back—straight from the shoulders to the tail. The ribs—springing out roundly from the back, and running low down, to enclose a full chest, and setting well back towards the hips, giving a snug, neat belly. The flanks—full, and low. The hips—wide, and level with the back. The loin—full, and level. The thigh—well fleshed and full, the lower part somewhat thin, and gracefully tapering to the hock; the leg below, small, flat, and sinewy. The twist—(the space between the thighs) well let down, and open. The tail—taper, like a drum stick, and terminating with a brush of *white* hair. The color—invariably a cherry red, sometimes showing a lighter, or deeper shade, and the skin, under the hair, a rich cream color. The bull, of course, will show the stronger and masculine character of his sex, while the ox will develop the finer points of his condition, and the cow, all the delicacy and refinement belonging to her race.

In the roundness, and fulness which accompany the proper development of the points named, the silky, wavy laying of the hair, and the elastic touch of the flesh, as the finger is pressed upon it, every beholder will at once see, in appearance, a most bloodlike and graceful animal.

In size, the Devon is medium, compared with our native cattle. A well grown ox, in good working condition, will range from 1400 to 1600 pounds, live weight. The bull from 1000 to 1200, and the cow from 800 to 1000 pounds. They sometimes exceed the heaviest of these weights, but such are the average. Fatted to a high degree, they will, of course, weigh heavier. In size, it is said, in England, that they are larger than they were a hundred years ago, before the attention of their breeders was thoroughly attracted to their improvement. From time immemorial they were chiefly bred in the northerly part of Devonshire, (and thus called North Devons,) one of the southwestern counties, in a mild climate, abounding in good pasturage. They have since spread into the adjoining counties, and many years ago, (within the present century,) were taken into the higher county of Norfolk, on the Eastern Coast, by the late Earl of Leicester, (then the noted Mr. Coke, of Holkham, a distinguished farmer, and landed proprietor,) as he considered them eminently fitted for grazing on the light sandy soil of his estates. They are now bred in many other counties of England, and are decided favorites

on hilly soils, where their lighter weights and activity in movement are better adapted to grazing and labor than the more sluggish cattle of the heavier breeds.

As a Dairy Cow,

The Devon may be called *medium*, in the quantity of milk she yields, and in its quality, superior. The older, or unimproved race, were somewhat noted for the quantities of milk they produced, as well as its good quality. A gallon of Devon milk yielded more butter than that of almost any other breed, as it does now, except the Alderney. But the improvers, in the attainment of a finer form, and heavier substance in their animals, perhaps sacrificed somewhat of the quantity of milk, for the more liberal development of flesh, well knowing that both flesh and milk could not thrive equally *together* in the same animal; although, when the milk ceased, the flesh came on with due rapidity, under generous feed. Yet, with an eye to breeding her solely for milk, she is well fitted for a dairy cow. Docile in temper, easy of keep, placable in disposition, she is readily managed. Her udder is soft, tidy in shape, with thin, silky hair upon it, clean, taper teats, easily drawn, and every way satisfactory to her keeper.

We have kept thoroughbred Devons thirty-four years—sometimes as high as twenty-five or thirty (not all milk cows) in number. Many of them have been excellent milkers, and some of them extraordinary, *for their size*. We once had two three-year old heifers, with their first calves, which gave for some three months after calving, on pasture only, with steady milking, an average of eighteen quarts per day; and from cows which we have at different times sold to go to other States, the accounts of their milk have been equally good. It is but fair to say, however, that after we commenced crossing our cows with bulls of later importations, some fifteen years after the commencement of the herd, the large milkers were not so numerous, although the cattle from these crosses were somewhat finer. The bulls we used were apparently bred from stocks highly improved, with an effort more to develop their feeding properties, than for the dairy. After all, our Devons yielded, on an average, quite as much as any *common* cows we ever kept, with much less consumption of forage.

With all her alleged deficiencies, the Devon possesses the *inherent* qualities of a good milker. Her dairy faculties may be bred out of her by neglect of that important item, and with a view to give her an earlier maturity, and more weight of flesh; but even under that system, she will occasionally persist, as we have known in various instances, in giving a large flow of milk, exceeding many common cows of equal size. On the whole, from the accumulated accounts we have received from time to time, coupled with our own experience, we pronounce the Devons, as a race, *when bred with an eye to the development of the dairy quality*, considering their size, and consumption of food, good dairy cows, both in the quantity of milk they give, and the butter it yields.

As a Working Ox.

In this valuable quality, no animal of the same size and weight equals the Devon—for the following reasons: They are, among cattle, what the "thoroughbred" is among horses. According to their size, they combine more fineness of bone, more muscular power, more intelligence, activity, and "bottom," than any other breed. They have the slanting shoulder of the horse, better fitted to receive the yoke, and carry it easier to themselves than any others, except the Herefords.

With all workers of oxen, the nearer a beast approaches in shape, appearance, and action to the Devon, the more valuable he is considered, *according to weight*. For ordinary farm labor, either at the plough, the wagon, or the cart, he is equal to all common duties, and on the road his speed and endurance is unrivalled.

Their uniformity in style, shape, and color, render them easily matched, and their activity in movement, particularly on rough and hilly grounds, give them, for farm labor, almost equal value to the horse, with easier keep, cheaper food, and less care. The presence of a well-conditioned yoke of Devon cattle in the market-place at once attests their value, and twenty-five to fifty dollars, and even more, in price over others of the common stock, are freely given by the purchaser.

As a Beef Animal,

We must place the Devon in the first class, for fineness of flesh and delicacy of flavor. Its compact bone gives it the one, and its rapid and thorough development under good feeding gives it the other. In growth and size it matures early, equal to the short-horn, and its meat is finer grained, juicy, and nicely *marbled*, (the lean and fat intermixed.) In the London markets, Devon beef bears the highest price of any, except the Highland Scot—usually a penny a pound over that of larger breeds, and our American butchers quickly pick the Devons from a drove, when they can find them, before most others. They feed well, take on flesh rapidly, and in the quality of their flesh, are all that can be desired.—*Allen's American Cattle.*

LINCOLN SHEEP.

The following notice of a late importation of this English breed, belonging to Hon. Samuel Campbell, of Oneida, N. Y., is copied from the editorial correspondence of the *Journal of Agriculture*:—

We were much interested in viewing Mr. Campbell's Lincoln sheep. The original stock of these

were imported by him from Lincolnshire, England, about two years ago. He has forty-five now. Two have been sold for $300, and one, a buck, was sold to a long-wool breeder in Canada for $120, in gold. The weight of the bucks is about 340 lbs., and the ewes 250 pounds each. Weight of fleeces: bucks, 15¾ and 17¾ pounds; ewes about 12 pounds each. The wool is very long, 12 to 15 inches, and sometimes even 20 inches in length, it is said. It is wavy, silky, and a remarkably fine specimen of luster wool. These are probably the only Lincolnshire sheep in this country. They are peculiar, and we judge that for mutton and combing wool they are the most desirable of any.

JERUSALEM ARTICHOKE.

This root possesses a high value for stock feeding. Upon its introduction into this country, it was called the "Canada Potato," and is so called by some aged people to this day. It was also known by the name of "Virginia Potato." It has ever been regarded as a sanative production, possessing considerable alimentary powers, and as a prolific bearer. Its flavor is mild and agreeable, but it is not, like the potato, dry and "mealy" when cooked, but solid and "soggy." Most domestic animals are remarkably fond of it, and prefer it, occasionally, to all other roots, and even to grain. The yield of the artichoke has been estimated as high as a thousand bushels per acre, on good soil, and is said frequently to have exceeded it by several hundred bushels.

In some sections, the artichoke is had recourse to for stocking pastures, in which swine are confined, and for this purpose is said, by those who have experimented carefully with it, to possess a high value.

We do not know that any one in this section has as yet given much attention to its cultivation; but we incline to the opinion that it will ultimately become a favorite production, —particularly as a food for stock. We have sometimes grown it in the garden, and have been surprised by its wonderful hardihood and remarkable power of prolification. It requires a rich, warm and mellow soil, and when once planted, no fresh seeding of the land will be needed for years,—the small tubers remaining in the earth, after digging the larger ones, being amply sufficient to make it propagate itself, without any further care of the producer.

From certain indications, we are inclined to the opinion that the potato plague has reached its limit, and hereafter we are to have a return of sound crops of that most useful vegetable; but should the limit of the disease not have been reached—and the evil still continue to develop itself—the artichoke will furnish one of the most valuable substitutes, and be no doubt competent to supply, in a considerable degree, the loss of so important a vegetable.

There is one characteristic appertaining to the Jerusalem artichoke which may be regarded as an important commendation. It is not, like the potato, injured by shade, but flourishes almost with the same vigor in orchards as in localities where it is favored with the direct influences of the solar rays. The tops, also, are far more valuable than those of the potato, and if fed to milch cows in seasons when the herbage of the pastures is short and unsucculent, will induce a copious flow of excellent milk. They possess a pleasant aromatic flavor, which renders them highly palatable to the animals, and are sanitary and stimulating in their effects. We suggest an experiment with them by many of our farmers,—but in a small way at first.

IMPROVED KENTUCKY SHEEP.

The best mutton at Faneuil Hall Market is from Kentucky. Within a few years past the supply from that source has largely increased. Messrs. Geo. W. Hollis and Dan Brown, the leading dealers in Kentucky sheep, and who keep buyers constantly in that State, estimate that their receipts of Kentucky sheep at this market is at the rate of $12,000 per year. The fine appearance of these sheep, both on the hoof and on the hooks, has led us to inquire into the history of a class of animals which give such great satisfaction to both producer and consumer. In the last Report from the Agricultural Department, we find the following detailed statement of the course of crossing and breeding which has been pursued for over thirty years by Robert W. Scott, of Frankfort, by which he claims to have established a race, known as the "Improved Kentucky," which have been widely diffused, and are essentially alike and uniform, and maintain their identity and impart their qualities as surely as sheep of any other breed.

In the beginning, about thirty ewes were selected from a flock of unimproved common sheep, and they were bred to a very large and fine Saxony or Merino ram; the object being to give in the offspring, more thickness to the fleece and more fineness to the fibre of the wool. This step was thought advisable before

uniting the coarse fleeces of the native sheep with the coarse and still more open fleeces of the large imported varieties, and the effect was satisfactory. The ewe lambs of this cross were bred on the first of October, after they were one year old, to an imported Bakewell buck, of large, full, round carcass, and a heavy fleece of long wool. The ewe lambs of this latter cross were also, in due time, bred to an imported Southdown buck, of large size and high form; the object now being to infuse into the progeny that active, sprightly, and thrifty disposition, and highly flavored and beautifully marbled mutton, for which the Southdowns are so justly celebrated. This object was also successfully obtained. The wethers of this cross were the delight of the epicure, while the value of the fleece was not diminished; as much being gained by increasing the number of fibres to the square inch as was lost in the length of them.

The next cross was made by a ram which possessed, in combination, many of the good qualities which it was desired to perpetuate in the flock. He was three-fourths Cotswold, and one-fourth Southdown—a large, hardy, active sheep, with a thick and heavy fleece, and his progeny possessed the same qualities in an eminent degree. The two next crosses were made by pure-blood Cotswolds; and the next by a very fine full-blood Oxfordshire ram, of remarkable softness and silkiness of fleece. They were all animals with short necks, round barrels, broad backs, and full briskets. They added to the flock still more weight of carcass and fleece; while the texture of the latter and the delicate flavor of the former were not perceptibly impaired, and therefore, in the next fall — of 1853 — the flock was divided between two fine full-blood Cotswolds.

Every one of these crosses was perceptible in the flock, (blended, but still manifest,) in the character and habits, as well as in the carcass and in the fleece; but in some a particular cross predominated, which was naturally to be expected, on account of the recentness of the improvement. In order to obliterate these discrepancies, and to produce complete uniformity in the flock, it was bred, in 1854, to five select rams of my own breeding. The progeny showed a reasonable accomplishment of the object; and, though there was some variation in their carcasses and fleeces, still they were in all respects beautiful and valvable animals of their kind.

In the fall of 1855, in order to carry out the same design, I bred chiefly to a mixed ram, whose pedigree showed Cotswold, Oxfordshire, Teeswater, and South Down blood. He was a highly formed and finely finished sheep, of large size and a thick fleece, of medium length and fineness of fibre, and his lambs possessed great beauty and value.

In 1856 I bred chiefly to a large and fine Cotswold, and in 1857 to him and to a ram of mixed blood, the ewes being so selected and bred as to produce a more complete uniformity in the progeny — those having a predominance of South Down and Merino being bred to the Cotswold, and those having a predominanee of Cotswold qualities being bred to the mixed-blood ram. In 1858 two large and fine rams of my own breeding were used in the same manner, and for the same objects chiefly, viz: to give uniformity and stability to the flock. A few ewes were also bred, in 1858, to a very fine mixed-blood ram, which was a perfect model of symmetry, and which had taken a premium at the State fair, in Louisville, in that year. In October, 1859, the flock of about one hundred ewes was again selected, and bred with a view to the same object, about one-half being bred to the the above premium animal, and the remainder to a fine "Improved Kentucky" sheep, which had a fleece of remarkable length, fineness of fibre, and was of good size and fine form.

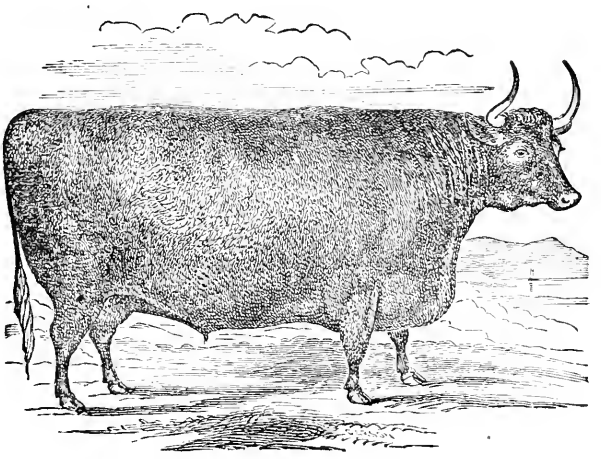
Since 1860 well-selected rams of my own breeding, and those of Leicester and of Cotswold blood, have been used in such manner as to impart some valuable qualities either to the fleece or the carcass, or to the constitution of the progeny; pure Cotswolds, superior in form and size and fleece, being raised in 1865 and 1866.

Mr. Scott says that these sheep have always faced the bleakest winters, wettest springs, and dryest summers, without any protection, and seem at all times comfortable and sprightly, being clothed to the ears and knees by a thick, long fleece. He has rarely failed to raise as many lambs as ewes, and in small flock one-third more. His flock of over 100 breeding ewes have averaged over eight pounds per head of merchantable, unwashed wool. It has generally commanded from three to five cents per lb. more than the ordinary wool of that section. A manufacturer of Louisville says, "It seems to have a length, strength, and texture, and at the same time, firmness, fineness, and softness of staple, which render it peculiarly adapted to southern and western manufacture and wear."

—Sir David Brewster has published a description of the manner in which a stack of hay was struck by lightning in Forfarshire, Eng. It was on fire but was extinguished before much of it had been consumed. On examining the stack, a circular passage was observed which extended to the bottom, and terminated in a hole in the ground. In the hole was found a foreign substance which proved to be silex, obviously formed by the fusion of the silex contained in the outer coating of the hay. It had a greenish tinge, and contained burnt portions of the hay.

THE NORTH DEVON CATTLE.

We copy this month from Mr. L. F. Allen's "American Cattle" a cut of a prize stall fed, four-year-old Devon steer. As this race is particularly popular at Brighton market as working oxen, we should like to give an illustration of some of the nicely matched pairs that have been sold there within the last year, but have not seen any cut that does the Devons justice in only fair working order. The engraving, however, is a beautiful illustration of them as beef animals.



The history of this race is interesting to New England farmers from the fact that many ascribe the acknowledged excellences of our "native stock" to their supposed descent from the Devons. In a brief history of this race which accompanies his American Devon Herd Book, Mr. Sessions says that "the descendants of the first cattle imported into New England, in the spring of 1623, show by their color that they were Devons or Devon grades." And Mr. Allen also says, "there is little doubt, from the appearance of many of the New England cattle, of the last and present centuries, that some Devons, in their purity, were early brought into Massachusetts. Traditional tales of their neat-limbed, sprightly, red, high-horned cattle have existed, and that they sprung from a Devon cross is beyond a question." We publish on another page some extracts from Mr. Allen's history of the Devon race of cattle, copied from his late excellent work on American cattle.

LARGE FARMS.

We, in New England, have very limited ideas of farming as carried on in some of the Western States.

A writer in the *Prairie Farmer*, Chicago, has been giving an account of a few of the farms which he has lately visited. One in Champaign County, called "Broadlands," contains 20,000 acres, or seven by six miles. This was owned by J. M. Sullivant, who wanted a bigger farm, and has sold it to John Alexander, and purchased one of 40,000 in Ford County. On the Broadlands farm there are this season 5000 acres in corn and a large quantity in oats. There are now 4000 head of cattle on the place—divided into *small* herds of 500 each. Many miles of hedge have been set. This is being extended every year.

Hickory Grove is the name of a farm of 26,000 acres in Benton County, Indiana. This is entirely prairie, except a magnificent hickory grove. A grove of twenty acres of poplar has been planted, and another of maples is to be planted. Thirteen thousand acres are under post and board fence, making forty-two miles. Seventy miles of Osage Orange hedge have been started on the place, and preparations are making for setting a large amount more next season. There are about 4000 head of cattle on this farm. They are divided into herds of from 500 to 700, and kept in pastures of from 2000 to 3000 acres. A part of them are herded outside of the enclosed portions in the daytime, and driven within for the night. Four years ago this farm was unbroken prairie. A farm adjoining the above contains 12,000 acres, and is devoted to stock raising, and another of 8000 is occupied in the same way.

In the Wabash Valley there are many farms from 1000 to 3000 acres, on which stock raising is carried on with eminent success. The

cattle are represented as in fine condition, and perfect health, and their sleek and glossy coats shine in the sun like silver.

FARMING IN GERMANY.—A correspondent of the *Iowa Homestead*, travelling in Germany, after alluding to the entire absence of fences and to the rows of shade or fruit trees on the highways, which give the traveller the impression of riding through a long and beautiful lawn, says:—"The fields of grain will compare well as regards size, with an ordinary city lot. Indeed, many of them are much smaller. Perhaps two by eight rods would be their average size. This, of course, refers to the fertile plains, where the entire surface is under cultivation, and not to the highlands that are approriated to raising timber, or to pasturage. Little corner stones mark the boundaries of these small farms and lots. Side by side, with only a deep furrow between, one sees there little patches of wheat, oats, barley, peas, potatoes, &c., which succeed each other in a regular course of rotation."

FALL SEEDING OF GRASS LAND.—The fact that timothy grass is naturally perpetual and self-sowing is used by the *Ohio Farmer* as an argument in favor of seeding down grass lands in September, which is the season that nature has appointed for the seed to fall, germinate and grow, and consequently the proper time for husbandmen to apply it to fields which are to be converted into pasture or mowing lands.

EXTRACTS AND REPLIES.

GARGET OR CAKED BAG.

I have seen in the FARMER many remedies for this disease among cows. I have adopted a treatment which I like better than any I ever saw in print. It has never failed with me, and others have tried it with the same result. It is very simple and safe. It is merely to give the cow beans once or twice a day until a cure is effected. In the early stages a few messes will be sufficient, of about half a pint at a time. They may be given either dry or green, with the same result. If green, a few hills of the vines and beans may be given, as cows will eat them most readily. I have tried the above several times the present season. It has been my remedy for several years, and always with good results. W. B. H.

Roxbury, Vt., Sept. 15, 1868.

REMARKS.—Before the above recommendation was in print we suppose it could not justly be called "book-farming." If it shall prove as efficacious with other farmers whose cows are troubled with garget, as it has with our Roxbury friend, he will receive many thanks for his communication. One of the exhibitors of thoroughbred Ayrshire cattle, at Burlington, Vt., claimed that that breed was entirely exempt from garget.

TRANSPLANTING SHADE TREES.

Please say something through the columns of the FARMER concerning the transplanting of shade trees (maple). Which is best, fall or spring? I would be glad to transplant this fall if as well, having more time for it than in the spring.

I have set out maples in my yard twice, and all have died but one which is now a nice tree in the dryest part of the yard. The soil is a rich loam, quite moist. How would it do to excavate the ground for the trees this month, filling the excavation with the soil removed, mixing in fine manure made in the barn-yard this season, and then transplant at the proper time this autumn? W. S. A.

Leicester, Vt., Sept., 1868.

REMARKS.—Shade trees of almost any size may be transplanted with much certainty of their living, if *proper care is observed in doing the work.* We have elms and white pines which we transplanted when they were from six to nine inches in diameter, and of proportionate height. Some of them are now nearly two feet in diameter and are forty feet high. They were transplanted eighteen years ago. These trees were dug about in November, had a heavy ball of earth—some two or three tons—left about their roots, and propped up with blocks of timber. When the base was frozen solid, the tree was removed on ox-sleds to the ample hole previously prepared for it, and set down. Just before dropping the tree into place, a cartload or two of rich garden soil, which had been placed in the barn cellar to prevent its freezing, was thrown into the hole and the tree let down upon it. When the tree was in proper position, all the vacant places about the roots were carefully filled with rich soil, and pressed under with a stick. A ton or two of stones were then placed upon the surface in order to prevent the tree from swaying in high winds, and thus disturbing the roots. When managed in this way, every tree set has grown well.

You state that *one* tree out of several that were set, lived and grew well. Is that not sufficiently evident that the fault was not in the soil? On the same soil where one tree would grow, any number would be quite likely to, if the trees were all equally good, and the treatment of them the same.

Success in transplanting depends, mainly, on the *manner in which the tree is taken up.* Most person suppose that if they preserve the large roots the tree will live. But it is the small fibrous roots which spring from the larger ones, and the bundles of little roots that usually cluster under the main stem of the tree, that go to work immediately and feed and sustain the tree. If these are torn off, badly broken, or their surfaces chafed, the tree has little or no means of immediate support, and will die.

It is much better to spend a good deal of time in taking up and setting six trees and have them all live, then to take up and set 12, hurriedly, and

lose one half of them. The work should be commenced farther from the stem than is usual. Find the extremity of a root, then trace it to the tree by digging under it, and saving all the smallest roots. When they are loosened, cover them with soil again to keep them from sun and wind.

The hole in which the tree is to be set should be amply large, and the soil loosened to the depth of a foot or 18 inches. The soil upon which the roots are spread out ought to be a good loam, and if mixed with a fine compost manure, so much the better. The drainage should be such that water will not remain long in the holes in which the trees are set.

The plan you suggest about excavating immediately is an excellent one. You can then transplant at any time after the leaves have fallen—perhaps November would be better than October.

TILE FOR COVERING ROOFS.

1. Are *Tile* used anywhere at the present time for covering roofs?
2. Of what dimensions are they usually made, and in what manner are they affixed to the roof?
3. What is the cost of them at the manufactory?
4. Are they burned like bricks, or baked like pottery ware? A. N. TOWNSEND.

New Ipswich, N. H., 1868.

REMARKS.—We are always glad to notice inquiries going on tending to find some material for covering roofs which will be more permanent, and less costly in the beginning, than our perishable shingles. Anciently, clay was moulded into curious forms, in various parts of Europe, and used for covering roofs. The pieces were called "tile," were baked or dried in the sun, and were fastened to the roof with pins of oak. Many of the old churches, cathedrals, and other buildings were covered with them, and some are remaining to this day. We have never known them used in this country for covering roofs. They would probably be more expensive than the slate which is so abundant in our country, and which is so well adapted to the uses for which it is employed. Tile are also exceedingly heavy and necessitate large and expensive timbers to support them.

PICKLING CUCUMBERS.

My method for preserving cucumbers for pickles, which I think preferable to any that has been given in the FARMER in reply to the inquiry of your Subscriber in Shelburne, is as follows: For a barrel of cucumbers, say of thirty or thirty-two gallons, make a brine of five quarts of salt and five ounces of pulverized alum, with three or four pails of water. After preparing your cucumbers, put them in, adding water if required so as to keep them under the brine with a follower on top of the pickles. This method will be found to be much the best. It saves salt as well as labor in freshening or preparing them for vinegar, and it preserves them fresh and sound; better, I think, than it does to saturate them with salt. LORENZO J. DAY.

Bristol, Vt., Aug. 22, 1868.

REMARKS —One of the West Cambridge market gardeners informs us that in preserving cucumbers for market pickles he uses less than a peck, but more than half a peck of salt to a barrel of cucumbers. The salt is added, with a little cold water, as the cucumbers are put into the cask. Thus salted they will keep a long time. Before putting them into vinegar they are freshened and "greened" by being kept several days in water, changed once a day, when they are put into vinegar.

CANCER IN A COW'S EYE.

I asked a few weeks since what I should do for a cow that I feared had a cancer in her eye. You expressed a hope that it was not cancerous and wished for a more particular statement of the case. Sometime last January I noticed that the eye was constantly weeping. The discharge continued and increased until the eye has entirely disappeared, leaving the whole socket an unsightly sore.

East Jay, Me., Sept. 1, 1868. JACK.

REMARKS.—We now think it probable that the disease in the cow's eye is cancerous, in which case remedies will do little good. A strong solution of alum applied to the ulcerated surface may be useful. Powdered bloodroot and iodide of potassium are recommended by Dr. Dadd. The following fatal case was reported by an English Veterinarian, and shows that in animals, as well as in human subjects, the cancer is a most malignant disease, and one over which we have but little control. He says:—"On examination we perceived a cauliflower excrescence growing from the membrana nictitans, [the inside "winker"] about the size of a strawberry, from which issued an ichorous discharge that excoriated the adjacent parts, and which bled on the slightest touch. We at once decided upon taking it out, and this was accordingly done, the parts being subsequently touched with argent. nitrat. After this, the cow appeared to go on well for about twelve months, without any re-appearance of the cancerous growth. At the conclusion of that time, we were again sent for, and found the cornea had become of a bottle-green color, and that the sight of the eye was completely gone. About three months after this, a fungoid growth sprouted from the cornea, which, increased in size very rapidly, but was repressed by the application of a little burnt alum. Shortly after this, the eye receded considerably into the socket, and eventually it sloughed entirely away. Some weeks afterwards, she became partially paralyzed, and was unable to masticate. The lower lip was pendulous; the ear hung down by the side of the neck on the affected side; difficulty of deglutition was experienced, and the saliva flowed from the mouth, mingled with the partially masticated food. Attenuation of the paralyzed muscles quickly followed, and much general emaciation of the frame. The animal was then killed, to avoid a more lingering and painful death."

PEAR SHAPED APPLES.

I send you a curiosity worth noticing,—a pear and apple growing on the same twig. They grew in the orchard of N. O. Phelps of this town. The tree on which they grew is an apple tree of the

Sopsovine, grafted by Mr. Phelps; and there is no pear tree in the same orchard, and none nearer than the other side of the street. We have other specimens at the store of Mr. Pike, where any one can see them if they wish. There are several of the same sort on two trees. Now, Mr. Editors, can you or some of your learned contributors explain the philosophy of this uncommon occurrence. I have one specimen where there are three in one cluster, two apples and one pear. Mr. Phelps has tasted those of the pear shape, and says that the pear is pear flavor and not apple.

P. S. Since writing the above I have cut one of the pears, and it cuts, looks, and tastes more like pear than apple. Z. E. Woodbury.

Groton, N. H., Aug. 31, 1868.

Remarks.—We have also received from O. H. Vaughan, Esq., proprietor of the *Laconia Democrat*, specimens similar to those above described, which grew on a limb of a Sops of Wine tree, of one of Mr. Vaughan's neighbors, in Laconia, N. H. There were pear trees within a few feet of the apple tree, but not near enough for the limbs to intermingle.

Wishing to obtain the opinion of pomologists as to the probability of the apple blossom being impregnated by bees or otherwise from the pear trees in the neighborhood, we submitted the specimens to the fruit committee of the Massachusetts Horticultural society, and they were placed on exhibition at their rooms in Horticultural Hall, where they attracted considerable attention. Col. Marshall P. Wilder, Charles M. Hovey and other experienced pomologists, regarded it as a mere freak of the apple,—a sport neither very common nor very rare,—and not the result of impregnation, which they regard as impossible. Keith's Botanical Lexicon was referred to for the assertion that "no one has ever yet succeeded in fertilizing the apple with the pollen of the pear, or the gooseberry with the pollen of the currant," which opinion is also confirmed by Wilson's Cyclopædia. Mr. J. Breck, however, was disposed to admit the possibility of impregnation. The Horticultural committee do not agree with our correspondent as to the pear taste of the pyriform apple, as they thought it had none of the peculiar flavor of the pear.

A BLIND COW.

I have a cow that has become blind. I know of no cause for it unless it may have been caused by lightning. The cow went out apparently all right in the morning and came home blind at night. She has every indication of perfect health, save the loss of her sight. Can I do anything for her?

D. M. Hodge.

Grafton, N. H., Aug. 28, 1868.

Remarks.—If the blindness is caused by lightning, we should expect that the nerves of sight would gradually recover their natural functions. The causes generally assigned for occasional blindness in cattle, such as congestion, tumors or water on the brain, afford little hope for successful treatment. An English writer, Mr. Percival, says blindness may proceed from some disease of the retina, or from some abnormal condition of the optic nerve or brain; or it may prove the last link of a series of morbid phenomena, originating in some remote part of the body, operating sympathetically on the nervous system, and through it, extending to the eye. If there is no obvious improvement within a few weeks, the butcher will aid you to dispose of the cow.

SPECKLED AND STRIPED BUTTER.

In the Farmer of August 22, I find an article on White Specks in Butter. It is asked, "Did any one ever keep spotted butter in a cool place twenty-four hours, then work it till it was waxy, and find any white specks in it? Now if there are white specks in butter they were there when churned, and no amount of working will entirely free the butter from them. I, for one, do not wish you or your many readers to think that we dairy women, of twelve or fourteen years' experience, do not know the cause of and remedy for striped butter. Butter should never be worked with the hands. The salt should be thoroughly worked in with a ladle, and after standing twenty-four hours in a cool place worked with a butter-worker until free from buttermilk, and then packed, using a pestle to pound it down, and a ladle to smooth the top of the tub. If this is done, there will be no striped butter, though at times there may be white specks in it, the cause of which we dairy women are not agreed upon. Sue.

Royalton, Vt., Sept. 14, 1868.

A HORSE BLEEDING AT THE NOSE.

I have a five-year-old horse that occasionally bleeds at the nose. The blood will flow from the nostrils almost as freely as from a stuck pig, until the horse falls to the ground from weakness, and the flow of blood will cease, apparently because it is all out of his body. After resting a while he will get up and gradually gain strength, until from exercise or otherwise, another bleeding spell occurs. What shall I do for him? Jack.

East Jay, Me., Sept. 1, 1868.

Remarks.—Give the horse a teaspoonful of oil of vitriol in a pail of water three times a day. It is possible that there is a polypus growing in the nostril, which is the source of the bleeding.

BEST BREEDS OF SHEEP FOR COMBING WOOL.

What variety or breed of sheep is best and most profitable for combing wool? Is the best breed for this purpose good to raise lambs from for market?

One Interested.

North Boscawen, N. H., Sept. 19, 1868.

Remarks.—The English sheep of the Lincolnshire, Leicestershire and Cotswold races, such as are bred in Canada, and such as are being rapidly introduced into various parts of this country, possess in perfection the necessary qualities for producing combing wool, which Mr. Hayes, secretary of the National Wool Growers' Association of Manufacturers, says should "be long in staple—from four to seven inches in length—comparatively coarse, having few spiral curls and serratures, and possessing a distinct lustre." Most of these long wool breeds are also celebrated for their excellence in the production of "lamb" and mutton. Mr. Spooner, an English writer, in his work on sheep, seems to give the preference to the Cotswold, which he says is "a large breed of sheep,

with a long and abundant fleece, and the ewes are very prolific and good nurses. The wethers are now sometimes fattened at fourteen months old, when they weigh from fifteen to twenty-four pounds per quarter, and at two years old increase to twenty or thirty pounds. The wool is strong, mellow, and of good color, though rather coarse, six to eight inches in length, and from seven to eight pounds per fleece." The earliest and largest lambs at Brighton market are from the long-wooled English sheep, and the supply of their wool is far below the demand of our manufacturers.

BRICK AND STRAW OF AGRICULTURAL PAPERS.

Every man to a very great extent is what he is made by surrounding circumstances. If a child from its earliest infancy could be kept free from all untoward influences, he would almost invariably grow up to manhood with refined manners and correct moral habits. On the contrary, if the child is surrounded by adverse influences, and grows up under them to mature years, he will as invariably form evil and corrupt habits, which will cling to him through life. It is impossible to avoid the influence of associations. The same is true of our agricultural papers. The editor cannot make "brick without straw." His paper will be good, bad, or indifferent according as those who take and read it, furnish the material out of which it is to be made; and a large part of this material should consist of carefully studied and well written articles for its columns, containing the practice and experience of all its readers. Without liberal patronage, no editor can long furnish a first class agricultural paper, and without reading such a paper no one will be as good a farmer as with it. The agricultural paper is to the farmer what the political paper is to the politician. It seeks to promote his best interests, and to advance him to a higher plain of experience in his chosen pursuit. Enclosed please find five dollars for myself and a new subscriber. T. L. HART.

West Cornwall, Ct., Sept. 15, 1868.

REMARKS.—Although the correspondence of the NEW ENGLAND FARMER has been unusually well sustained during the late busy season, by its intelligent readers, yet we would remind one and all that if they wish its columns to be still more instructive and interesting, they must improve "each shining hour" of the approaching long evenings by dotting down the facts which have arrested their attention, and the thoughts which have passed through their minds, while at work in their fields, or while comparing the present with the past. Has not each one learned something new by his experience of the backward wet spring, the hot, dry summer, and the pleasant fall, through which he has watched and tended his crops? We do not ask for formal essays. Give us the stray facts and hints of your experience.

P. S.—The publishers suggest that friend Hart has shown in a most practical manner, one *sure* method in which subscribers may aid in improving their paper. Were each of our readers to send a new name with his own, when renewing his subscription we should soon have a circulation unequalled by any weekly paper in New England. The close of the political campaign will give them an excellent opportunity to enlist new members for the ranks of our agricultural corps.

TOP-DRESSING GRASS LAND.

If "Subscriber" of Sabatus, Me., will study he examples of top-dressing to be found upon his and every other farm, he may learn more of the effects of manure applied to grass land than "Early Cut" can tell him. He will find the manure dropped by his stock upon the grass and dried in the sun and wind has produced little apparent improvement of the grass, but that it has become an impediment to the scythe and rake. He will find other places in his field where the water has carried upon the grass, sand, gravel, and a mixture of unknown materials, with no resemblance to stable-manure, that has greatly improved the crop.

It is useless to think of raising herdsgrass on any field that does not contain the roots of that grass, unless the seed is sown. I would not top-dress land that is not well stocked with such grass as we wish to produce. Other fields that are smooth enough to plough well might be turned over in the fall, and a quantity of fine manure harrowed into the soil with redtop or herdsgrass seed, or both, with encouragement for a good crop of hay the next season. In that way the land may constantly be kept in grass. The high price of labor, and the facility of procuring grain has induced many to keep their land in grass as above described.

The amount of manure to the acre should be as much as our liberality will allow. A little is good, we seldom apply too much. For top-dressing, the manure should be fine, and applied at such time as will enable it to reach the roots of the grass the quickest;—just before the fall rains (for we must have water to carry the plant-food to the roots) or in the early spring. The latter season is objectionable because the ground is too soft to drive the team over it without injury to the field.

Water is the best and cheapest manure we have, and in a thousand places upon our sterile hill-sides it might be used for fertilizing purposes. Now is a good time to turn the water from the springy wet places where it is pent up, destroying all good grass, to the dry fields upon a lower level, to the great improvement of both. There are many small streams that with a little engineering and labor may be turned from their usual channels and made to water dry, and now unfertile fields. I can think of no way the same improvement can be made with the same money as by judiciously using the water upon our hills. EARLY CUT.

Mast Yard, N. H., Sept. 14, 1868.

AGRICULTURAL ITEMS.

—The Louisiana rice crop will amount to 60,000 barrels, it is thought—the heaviest crop by far ever yet raised in the State.

—At a late discussion by the Illinois Horticultural Society, many reported an unfavorable experience in raising blackberries.

—There are 7,580,000 sheep in Ohio, 1,481,214 cattle and 2,100,000 hogs. The corn crop this year is estimated at 141,000,000 bushels.

—Near Manchester, Mich., is a hop yard of forty acres. Its manager says it cost twenty-five cents per pound to grow hops and put them in bales, ready for market.

—Milch cows in the vicinity of Newport, Ky., are going blind. Not less than fifty of them have

entirely lost their sight, and it is accounted for by the fact that during the warm weather they would stand in the water, and that the reflection of the sun on the water affected their sight to such an extent as to cause it to be ultimately lost.

—The late warm weather, rain and moist atmosphere, is said to have had a disastrous effect on the portion of hops not previously picked. Prices, however, remain unchanged,—15 to 25c. per lb.

Grapes are said to do best when planted among rocks, because the best of the sun is retained and radiated in the night, giving an equable temperature.

—The Illinois Industrial University commences its first academic year with about eighty scholars, nearly the same number as attended the preliminary term last spring. There is a full *corps* of efficient professors and teachers on duty.

—The Freshmen Class in Dartmouth College numbers about eighty. Five have joined the upper classes, nineteen the scientific department, and the agricultural department, just instituted, opens with a class of ten or twelve.

—To keep dust from cream, take rattans and make hoops a little larger than the pans—stretch thin muslin across, thin enough to admit some air, but not flies and mites. Cover the milk with these *as soon as it is cool*, and they will prove of great value.

—Wool is so cheap and old sheep so plentiful on the River Plate, South America, that many sheep are being "tried out" for grease. As they can be bought at from twenty-five cents to a dollar per head, it makes a very good business at the present time, yielding something like 100 per cent. profit.

—The *Country Gentleman* discusses at length the importance of simple farm machinery, giving instances where complex machinery, although working well when in good order, failed to come into general use simply on account of its cumbersome character.

—The dry weather at the West has affected the hop crop adversely in some sections, especially in Wisconsin, inducing the belief that the yield in that State will not exceed that of last year. The aspects in Michigan are more favorable, while in this and the Eastern States a large yield is anticipated. The picking season, it is supposed, will be two weeks earlier this year than it was the last.

—A new cheese hoop has been introduced among the dairymen in the Eastern section of New York. It is made of metal and has a malleable iron clasp or lock which, when opened with a key, lets the hoop free from cheese and follower at once. These hoops greatly facilitate the labor of handling cheese, a point of considerable consequence in a large dairy.

—In one of the milk dairies near London, England, the cows in full milk each get 13 pounds of hay, 76 pounds of mangolds, two pounds of meal and two pounds of cake per day. Distillery wash is thought to be the most productive of milk of any food, but its use is not common. Distillers' grain is found to be much superior to brewers' grain. In an examination of over 60 cow houses, only one was found where the cow food was steamed or cooked, and in that the cooking was confined to the manufacture of a gruel to be thrown over uncooked food.

—The *Ohio Farmer* says the most rapid potato digging he ever witnessed was done with a common barn shovel. The shovel was driven into the earth beside and under the hill, and a portion lifted out, and by a quick jerk scattered over the surface, entirely separating soil and vegetables, leaving the potatoes clean. Generally two applications of the shovel finished the work upon a hill.

—A correspondent of the *Country Gentleman* is led to ask, does wheat bran diminish the quantity of milk when fed to cows? by the following facts: on the first of September, he commenced feeding two favorite cows on wheat bran, six weeks after their calves, (then five weeks old,) had been taken from them; and although the pasture has daily increased in richness since the removal of the calves, the flow of milk from these cows has greatly decreased in quantity.

—A plant thrives better where the air is "foul" with fertility. Malarious districts are often—and may we not say generally?—the richest. Afterwards, when cultivation has progressed, they are less fruitful, while the air is more healthy. It was in the carboniferous period that vegetation was the most luxuriant. The air, then, was highly charged with carbon, and with other matter deleterious to animal life, but favorable to vegetation.

—The *Prairie Farmer* speaks of the wide spread failure of the potato crop this year, from the amount of rain in the spring, the scarcity of it during the time when it was most needed for the growth of the potato, together with the ravages of insects heretofore unknown, or known only in small quantities, and urges greater care in the growth of this important vegetable. It recommends the ploughing of turf land this fall, which will only require to be gone over with the cultivator next spring to be ready for planting.

—The *Country Gentleman* publishes a lengthy article from its correspondent "F.," who occasionally contributes to our own columns, in explanation of the fact that a good crop of wheat no longer results in a large surplus and low prices. Among the reasons assigned are insect ravages, a greater variety of products, the growth of towns and cities, facilities of transportation, making a market for hay, vegetables, &c., decrease of production in old States, and an annual increase of population that requires an increase of production equal to five or six millions of bushels per year, &c.

STACKING HAY IN THE FIELD.

A correspondent of the *Country Gentleman* who was raised near the rivers Severn and Avon, gives the following plan for facilitating the business of haymaking adopted by farmers who own from 200 to 300 acres of meadow lying on those streams, and whose homesteads were often a mile or two away, and few of whom had more than one team:—

The mowing was commenced early, and proceeded with without any delay, and as fast as the hay became dry it was put in what they call "wind cocks," being about a ton or less in each cock, which were well made by a man building them as the others pitched the hay up to him. They were round and so well made that for a few weeks they were perfectly safe. Thus the work went merrily on, and in any damp parts of the fields the team would be in request to carry the crop from there to a sound and safe spot. Then, when all was mowed and made into hay, there was none but the regular constant men retained, probably only a couple of men and a boy, and these would then fetch home the whole of the cocks, and put them in large ricks in the stock-yard, where they would be thatched with straw according to the custom of the country. This is a plan which might be adopted in this country, where there is a great deal to be done and few hands to be employed, for a very few men would make perfectly safe in this way all that could be cut with two machines running from light till dark; for, with the aid of a tedder and some horse-rakes, the cocking would be nearly all to be done with those using the forks.

The Texas Cattle Fever.—John J. Keller, a veterinary surgeon of St. Louis, who is spoken of as a well educated and intelligent practitioner, attributes this disease to the generation of microscopical fungi or animals. He believes that they are in a state of incubation, whilst on, and when leaving the Texas cattle; that they are specifically attracted to our native cattle, and that they mature in and upon them, and ultimately (if not arrested in their course) destroy them by preying upon the vital parts of the blood, while these microscopical fungi or animals perish in their feast, and consequently cannot pass from one of our cattle to another. This idea, Dr. Keller believes is in accordance with what has been ascertained to have occurred amongst the fungi of the vegetable kingdom, and hence may safely be supposed to happen in the animal—both being so intimately allied.

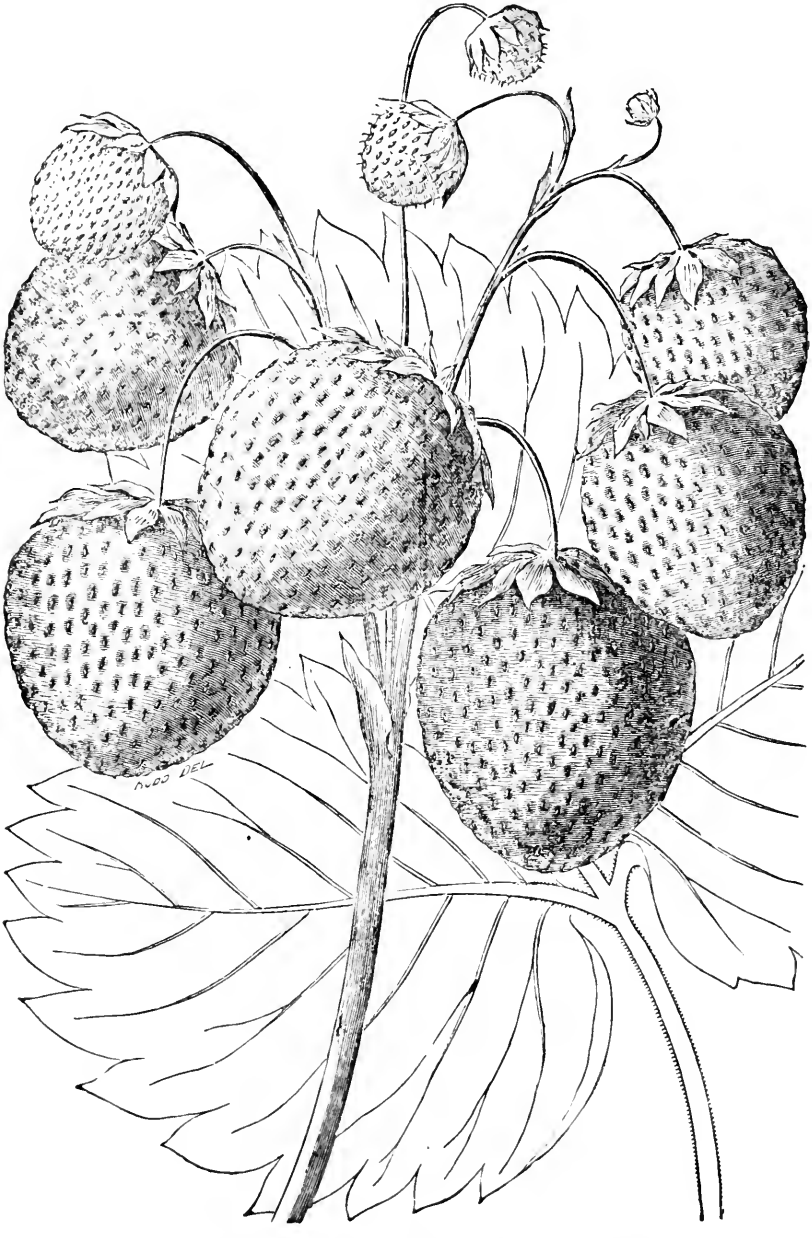
Dog *vs.* Sheep.—The *Vermont Record and Farmer* reports the case of H. N. Burnett *vs.* G. W. Ward, tried at the late session of the Windham County court. The plaintiff's evidence tended to show that seven of his sheep and one lamb were killed and others injured by the defendant's dog. A verdict of $202.50 damages was awarded to the plaintiff under a statute of that State which authorizes double damages against the owner of any dog that shall worry, chase or kill sheep. The attempt of the defendant to show that his dog was of peaceable habits and disposition, and was never known to worry or kill sheep, and that said dog was always at home, and was at home every day during the weeks defendant's sheep were killed, seems to have little influence on the minds of the jury, who assessed the damages as above stated.

A Remarkable Confession.—One of the agricultural editors of a New York city weekly paper says, "The most remarkable thing about Darwin's theory of the variation of animals and plants is, that it teaches us more than *we* knew before."

Sweet Cider.—To all lovers of this excellent and really healthy beverage, I have a piece of useful information to give. Cider, if taken when first made, brought to a boiling heat, and canned, precisely as fruit is canned, will keep from year to year without any change of taste. Canned up in this way in the fall, it may be kept half a dozen years or longer, as good as when first made. It is better that the cider be settled and poured off from the dregs, and when brought to boiling heat the scum that gathers on the surface taken off; but the only precaution necessary to the preservation of the cider is the sealing of it up air-tight when boiling hot.

Last fall my wife canned several gallons of sweet cider in this way, and kept it perfectly pure and sweet until opened for use in the spring, so in making the above statement, "I speak what I do know."—*North West. Far.*

Galled Shoulder.—In reply to a correspondent who asks for a remedy for a two-years old gall on a horse's shoulder, the veterinarian editor of the *Western Rural*, after remarking that a gall of such long standing will require very careful and persevering treatment, advises as follows: In the first place, you must dispense with the use of a collar. The following lotion should be applied daily to the sore:—Sulphate of zinc, one drachm; acetate of lead, one drachm; water, one pint. Where it is very difficult to dispense with the use of a collar, some of the stuffing may be removed from it, so as to make a hollow opposite to the sore part, which is thus relieved from pressure.



THE PRESIDENT WILDER STRAWBERRY.

This is a cross between La Constante and Hovey's Seedling, and is one of many thousand seedlings which Col. Wilder has grown during the past twenty years. The Fruit Committee of the Massachusetts Horticultural Society, who have seen it upon the grounds of its originator say, they "cannot doubt that it is hardy, vigorous, highly productive; of largest size, superior in quality, beautiful in appearance, firm enough for market purposes; and, should it sustain the character with other cultivators which its originator has obtained,

it will prove to be the most valuable of the many contributions which Mr. Wilder has made to horticulture, and will worthily bear his name. With his permission, we are authorized, and do hereby name his strawberry seedling, No. 13, 'The President Wilder.'" It is recommended by others who have seen the fruit and vines, but we are not aware that it has been grown on any other grounds than those of Col. Wilder. How it will succeed in other localities and under less skilful cultivation remains to be tested. Mr. J. M. Merrick who is satisfied that this new variety is all that is claimed for it, remarks:—My experience in purchasing and treating new varieties of strawberries, like that of most other amateurs, has been one of disappointment; and I have become very skeptical about new and highly praised seedlings.

In reply to a writer in the *Horticulturist* who is perplexed with sixty bearing varieties on his grounds, claimed by the originators as particularly excellent, and who asks the Pomological society to weed out the "suckers," a correspondent of the *Country Gentleman* says, "the Society need not trouble itself; these worthless varieties will weed themselves out. Let our perplexed friend make a memorandum this year of all the highly lauded and unproved sorts, and keep it five years, and he will find nearly all forgotten, and very few in cultivation." Still we hope President Wilder will prove as great an acquisition as Hovey's Seedling. But as it is not certain that any plants will be offered for sale this year, the question of its adaptation to general cultivation can hardly be decided the ensuing season.

PREPARATION OF SOIL IN AUTUMN.

We have noticed articles in several western agricultural papers, during the year, in favor of *winter* wheat; and recently we observe correspondents intimating that farmers are at work putting in a large breadth this fall. We are glad to observe this, for we are strong believers in winter wheat.

It is often said that it cannot be raised successfully where the soil is not permanently covered with snow in the winter; that on the prairies the winds blow the soil from the seed, and the freezing and thawing throws out the plants, and renders the crop uncertain. But early sowing with the drill or the plough will obviate this difficulty. Wheat superficially covered with the harrow or the brush is doubtless exposed to injury from the winds and the frosts, but when it is well covered and makes a good stand in the fall, it will be injured but little by the winter, and is a surer crop than spring wheat.

It is earlier and less liable to be injured by the droughts in June and July. We think this has been proved abundantly during the past season. It is the spring wheat that has been shrunken by the drought. The berry of the winter wheat was generally full and plump, and ripened before the dry weather deprived the straw of sap.

Spring sowing is apt to be delayed by the cold and wet. When this is the case, it will be late, and the drought will take it while the berry is forming, and it will be small and shrivelled, and it will be more liable to be attacked by insect enemies. The soil in August and September is warm and mellow, and the grain will germinate immediately, and not lie in the soil and rot, as it often does in the cold, wet lands in the spring.

These remarks are equally applicable to the East and to the West. We usually apply manure with the wheat crop, whether it is sowed in the fall or spring. Manure applied in the fall keeps the ground light and mellow, while it gives access to the sun and air, and the plants make an early start in the spring.

When spring grain is to be sowed on stubble, or after corn, it is best to spread the manure, and plough it in, in the fall, especially if it is not thoroughly rotted, and fine. In the spring, when the grain is to be sowed, the plough or cultivator will mix it intimately with the soil, and it will be, where it should be, in the seed bed, ready to nourish the springing plant. The frosts of winter crumble it, and prepare it to mix with the soil. Little or no fermentation takes place during the cold season, and the gases are not given off until the genial rays of the sun warm the ground, and then they are absorbed by the earth, and pervade the whole mass.

An idea has prevailed that manure applied in the fall loses its strength by the action of the rain and air. If it is covered three or four inches we think it loses but very little. The salts that are leached out by the rain are retained in the soil, and the convenience of ap-

plying in the fall more than offsets any loss of gases that may take place.

Top dressing to grass in the fall and winter may be applied with less injury from the wheels, and the treading of cattle and horses, than in the spring. And where the surface is tolerably level the loss from washing is very slight. Most farmers who make manure in the summer prefer to apply top dressing at this season, and find it efficacious in keeping up the grass crop.

In sod ploughing, if the soil is clay loam or a moist black soil, we prefer to turn it over to a good depth in the fall, and leave it exposed to the action of the weather during the winter. The soil that is brought up from a depth of nine or ten inches, in this way, is mellowed, and mixes better with the manure and the surface soil, in consequence of this exposure, and is ready for the plough or the harrow several days earlier in the spring. Owing to its position, the water drains from it sooner, and the air penetrates it more completely. If the soil is a light sandy loam, it is less important to plough in the fall. Such a soil being finer, may be worked into a good tilth at once, and may be sowed or planted immediately after it is ploughed.

Old grounds, that are infested with worms of any kind should be turned up late in the autumn, just before the frosts set in. This is a good practice, whatever the crop is to be. It is especially important for garden soils, that they should be ploughed or spaded deeply to expose the eggs and larvæ of insects to the weather; and if one has crude or uncomposted cattle or horse manure, it is well to work a good quantity into the garden soil late in the autumn. When a garden soil that has been thus treated in the fall is well stirred in the spring, and a good dressing of well rotted compost, or some commercial manure added, it will be in a condition to receive the seeds and plants at an early day, and to yield them the nutriment they require until their growth is perfected. It will also be in condition to receive a second crop after the first early crop has been removed, if this is desired. Thus the soil is fitted for its office during the whole season, and is always ready for use.

—Two pailfuls daily of flax seed tea has been found to be the most successful remedy for cattle attacked by the "Texas fever," yet tried at Chicago.

For the New England Farmer.

VERMONT FARMS AND FARMING.

An Essay read by Z. E. Jameson, of Irasburg, at the Wednesday Evening Session, (Sept. 9,) of the Farmers' Club, at the Court House in Burlington, during the late Fair of the State Agricultural Society in that city.

The subject is so comprehensive that it will be impossible to do more than glance at a few of its prominent points.

Vermont is emphatically an agricultural State. The first settlers endured great privations, and practiced the most rigid economy to obtain the means of a bare subsistence, in a land full of beauty in summer and autumn, and full of dreariness and desolation in winter and spring. In the seaboard States, the fisheries, the coasting voyages, the factories, and the foreign export trade enabled many a farmer to increase his income from purely agricultural pursuits, by other employments in the winter months; but the Vermonter had no other resources than his home farm. If untimely frosts or adverse seasons cut short his crops, it was true he could convert his wood into shingles for a neighbor's barn, into charcoal for the blacksmith, or into salts for the merchant.

As the years passed by, the pioneer's axe let the light in upon hills of rocks, hills of clay, hills of sand, and valleys of every variety of soil, from rock to the treacherous oozing mud, that our present ditches have transformed into fields of a fertility and depth that can no where be excelled.

Although the State may be hardly larger than a Western county, yet it has a marked variety of climate. The moving waters of the Connecticut on the East, and the beautiful lake on the West, mellow the northern blast and deadly frost, so that the season of flowers and fruit in some sheltered locations will compare favorably with a more southern clime. Even lake Memphremagog, lying at the border of our northern plains, as well as every river that finds its way from our mountains, serves to mitigate the severity of the seasons; so that many a valley farm enjoys, when compared with those on the surrounding hills, a comparatively mild climate. In these favored locations, the corn matures its yellow grain, the pear, grape, and even the peach ripen their fruits.

But not to deal with generalities alone, permit me to bring to your notice some unimaginative and unpoetical facts in regard to Vermont farming. As secretary of the Orleans County Agricultural Society, I issued a circular in the fall of 1867, to be filled by the School District Clerks, designed to exhibit a correct account of the products of the several farms in their respective districts, based on the estimates or positive knowledge of the farmers themselves.

Reports were received of 718 farms, in thir-

teen towns, but no town was entirely reported. On each of these farms there was an average of 32 acres of pasture, 23½ of mowing, and six acres of land in grain and hoed crops,—making 61½ acres of cleared land. The value of all the products of these farms averaged $841.60,—being $13.75 per acre. Besides which, these farms averaged a sugar orchard of 214 trees, yielding 490 pounds of sugar each.

But as the greatest part of these productions must be consumed upon the farm, only a small portion could be exchanged for money. The wool, the butter, a few oats and potatoes that we may suppose could be spared, may bring in a cash income of some $355, on each farm; which must pay the taxes, the doctor, the grocer; clothe the family, provide new and repair old farming tools of all descriptions, &c. It is evident, therefore, that there will be but a small sum remaining to invest in government bonds, or for sending the sons to college. Is this average of Orleans county less than the average income of other counties in the State? I will not admit that it is. Certainly, then, if there were no hope of rising above the average, farming must be considered an unprofitable vocation. But from my own door I can look on two farms that yield an average income of $2000, besides paying hired help and family expenses, and that without counting the forage that sustains the stock.

On one of these farms, there were raised 75 bushels wheat, 600 bushels oats, 700 bushels potatoes, 100 bushels corn, 50 tons hay, a ton of butter, a ton of cheese, 2600 pounds pork, live weight, besides sheep, fowls, calves. On this farm were fattened 500 turkies, for market, that yielded a good profit.

The other farm of the same size as the first —220 acres—yielded 31 bushels wheat, 400 bushels oats, 750 bushels potatoes, 100 bushels corn, 75 tons of hay; 32 cows yielded 3000 pounds butter and 5000 pound cheese, 2100 pounds, live weight, of pork were fattened, 500 pounds of sugar were made, 23 bushels beans raised, aside from many other items of income. Both of these hard-working farmers are increasing their respective incomes, and adding to the wealth of the State, by the bountiful productions of their farms.

Now some may ask, how can the average remain so small, where such farms exist? I answer, that when I turn my eyes from these farms to the west, I see on the side of the mountain another farm, with a log house and a log barn; the axe sticks in the log where the wood was cut to cook the breakfast, and an emaciated pig squeals and roots around the kitchen door. The owner remarked to me that as he could now cut about fifteen tons of hay, and although most discouraged, he didn't know but he had better rub and scrub and set out a few apple trees.

It has been hard work for that farmer to live; and there are many like him in Essex, Caledonia, Lamoille, Washington and Franklin counties, and probably all over the State. These small farms of rough land, poorly tilled, cut down the average production, but serve a valuable purpose in helping to make up school districts, and giving variety to the neighborhood. There are in Vermont many acres cleared, and many farms occupied to-day, that should have had the grand old forests still waving over them. On such land men wear away their lives with small reward. The soil is perverse and obstinate, in its wet, stony or precipitous hardness. Master and mistress show, in their rugged, care-worn features, angular forms, and calloused hands, the evidences of constant industry and economy. At the same time, there are other acres yet uncleared and untilled, that would bountifully reward the labor bestowed.

Having considered the farms, we now turn to the farming. While the farms were being cleared, the crops from the newly burned land were generally satisfactory, and as they were consumed by the cattle, winter after winter, piles of manure accumulated about the barns. After the stumps were rotted, and the plough disturbed the soil for the first time since creation, the crops were still satisfactory. Yet continual cropping soon lessened the yield, and the accumulated manures were gladly applied. Still as the plough made its way from one new field to another, more was taken from the soil than was returned to it, and then a diminution of crops was the result, but not sufficiently perceptible to occasion alarm. Generally one portion of the farm was put into permanent pasture, another into permanent field, and the plough run here and there, as choice or necessity dictated. For a time a scanty dressing of manure gave a fair crop of grain, but eventually the grass seed failed to catch, and if the owner has grown old on the place and has reared a family of children that have left, you see a run down farm and a home for sale.

There are many farms in this condition, and now all depends upon skill. Henceforth it becomes a straight fight of skill against sterility.

Under these circumstances, it may not be amiss for us to study the operations of farmers in other nations, that have accomplished what we must now undertake. In England, agriculture is not only self-sustaining, but constantly improving; barren heaths and downs are, by the assistance of turnips and sheep, of drainage and thorough cultivation, made fertile estates. A system so satisfactory in its results there, must be worthy of our attention. A mere glance at English farming suggests a need of a change of sentiment among us in regard to permanent occupation of farms. This must be one of the first steps towards improvement. For miles, on some roads in this State, every farm has its price, and not a few change ownership as often as once in five years. Now with such feelings, permanent and thor-

ough improvements are seldom undertaken, or if commenced, are not carried to final and successful results.

When we consider our farms as homes that we desire to transmit to our children unincumbered by mortgage, by weeds, or by sterility, then shall we begin to think of, and to practice a self-sustaining system of farming; a system in which the raising of roots, and the fattening of cattle must become more prominent, and the farmer a more thorough business man. He must understand the capabilities of his land and with judgment distribute his labor and crops upon it. He must study the markets and decide when to buy and when to sell; when to hire, how to keep, and when to discharge help. The seasons, too, must be regarded, in sowing and harvesting, in rearing young animals or in fattening the old.

Permanency of residence, then, is one of the first steps toward permanent improvement and high farming. But so long as the middle aged flock into the villages, where they may preside at justice's courts, act as jurors, shave notes for young farmers, sell liquor as town agents, collect taxes and serve writs, at just the age when experience qualifies them to be the most successful, is it not inevitable that the young men, proverbially fickle, should drift in the same direction, and watch for a chance for work in shops or factories, or for situations in stores and offices. The gist of the venerable adage, "Old men for counsel, young men for war," must be recognized on the farm. The wisdom and experience of the father should guide and direct the ambition and strength of the son; and the expression should never be heard again, that "a young man prospers because his father died, and left him property;" but it should rather be said, "the son prospers because the father lives to direct him by his counsel, and to aid him with the capital necessary to success in his chosen vocation." Fathers and sons should be mutually blessings to each other. Our foreign population may become industrious, worthy citizens, but to none can our land be so dear as to those who were bred upon it, who have taxed themselves to found and to sustain its institutions, and to defend its honor. The young farmers must be kept in Vermont, for

> Ill fares the land, to hastening ill's a prey,
> Where wealth accumulates and men decay.

How, then, shall the young men be kept upon the farms? In the first place, the old men must be satisfied with farming, and remain upon the farm themselves. The idea that the disappointments and failures, incident to this calling, are more serious and disheartening than in other occupations, must be corrected by a better knowledge of the disappointments and failures of others.

If the son is thus trained up in the way he should go, then trust him, and believe the declaration of the sage, "that he will not depart from it." Train him to manage and trade, as well as to delve and dig. Don't be too conservative about the purchase of labor-saving machinery. Remember that you yourself were once young and ambitious, and treat your sons as you would have been treated when young.

Then we should gather together the facts which justify a bright-side view of Vermont farming. Do not statistics prove that our grain yields more per acre, and bears a higher price than at the West. What we buy is cheaper, and real estate is advancing, as well as in other sections. As an instance in point, I may allude to a young man who went from Orleans County to the West, obtained a farm under the homestead law, and wrote back urging his brother to come West, where he could double his money in four years! The brother responded, "I can do as well as that here. Ten years ago I was worth $600, now I am worth $3000,"—all made from the crops and from the rise in price of an ordinary sandy farm.

Then our churches, schools, roads, markets, and neighbors make Vermont a desirable place for a farmer's home.

If the young men remain, and the care of the estate is devolved upon them, how shall the old men busy themselves while "the years draw nigh when they shall say they have no pleasure in them, and desire shall fail; and the grass hopper be a burden?"

In referring to a few branches of agriculture adapted to the aged, my purpose is less to advise others, than to map out a road that in due time I must travel myself.

Where the preparatory work for an orchard was made in middle life, fruit raising is a congenial employment for the aged. With their experience every kind of fruit can be made to pay, if the best varieties are chosen and that care given that is essential to success. The markets are never overstocked with these healthy productions of the soil. Fresh, dried, or canned it is always in demand, and a new seedling of rare merit is sometimes a fortune in itself.

Bee keeping is so nearly allied to farming that it is an easy change even for the old to adopt this. On 718 farms in Orleans county there are kept only 614 swarms of bees. Yet their products are in constant demand at full prices, the capital required is small, and where intelligent care is bestowed the profits are large. J. D. Goodrich, of East Hardwick, has this year taken a ton of choice box honey from sixty swarms of bees, at little expense except removing the precious harvest. A thousand farmers might pass their declining years in this employment.

The raising of blood stock is another branch of farming which is well adapted to engage and reward the old farmer who has had the necessary previous training for this pursuit. Almost the last animal relinquished is the cow. Let this favorite one be of some

excellent breed, that shall by her annual calf bring in an income equal to $1000 at interest.

A horse is usually kept for the use of old people. May not this animal be a mare of such merit that the colt that annually sports at her side shall command a price equal to the interest of another $1000.

Then the few acres reserved from the large farm might as well graze a few sheep to keep up the supply of warm flannels and the most nutritious meat. Let them be the beautiful, trim South Downs, which never disappoint their owner, either in wool or meat; or the enormous Cotswolds, which under an old farmer's skilful feeding, should each become so excellent as to afford better returns than $500 at interest.

Many portions of the work in dairy farming on a large scale can be conducted by farmers who could hardly endure constant outdoor work. The care of cheese, the making and storing of butter that brings in an income of $5 or $8 per day, makes a man at the house and a foreman upon the farm almost a necessity.

Thus by adopting any or either of these branches of our glorious calling, the old man never becomes a drone or an idler or a stumbling block to turn others away from this pursuit. His steadfast enthusiasm and devotion ennobles the calling and causes young men of talent to join in the ranks of the tillers of the soil. He stands at his post, and with colors still flying, bears down to that port where he casts anchor in calm, peaceful waters, till he hears a voice saying, "Well done! thou hast been faithful over a few things: I will make thee ruler over many things."

With the strength of the youth and the wisdom of the old combined our prosperity has only commenced; and soon Vermont farming will do justice to Vermont farms, and her farms shall be found worthy of the most intelligent farmers.

For the New England Farmer.

COMBING WOOLS.

Mr. Editor:—Perhaps it may not be lost labor to call the attention of readers of the New England Farmer to the great demand which exists at present for combing wools. The manufacture of worsted goods has greatly increased of late, and is likely to increase for years to come. The United States have been heavy purchasers of dress goods from England; but some of our enterprising establishments are now making certain styles of goods equal to those imported. The Everett mills, Pacific mills, Washington mills of Lawrence, with a number of smaller establishments in that city, are making worsted yarns. Then there are in Lowell, the Hamilton Manufacturing Company, the Carpet Manufacturing Company, and James Dugdale. In Manchester, N. H., will be found the Manchester Print Works, using a large amount of wool of this description, and quite a number of smaller establishments in Rhode Island. The Hamilton Woolen Company of Southbridge are about commencing a mill on worsteds.

These all want pure blooded wool from the Leicester, the Cotswold, and Lincoln breeds of sheep, and the amount raised in the States is comparatively small. The largest of these firms have bought largely in Canada. Some small lots of Canada, now in the Boston market, are held at 70, 72½, and 75 cents per pound, and will be sold at these figures before next May. If the amount of machinery now in operation is kept running through the winter, we shall have to import from England, and that the consumption will not be reduced at all is certain, the business being too remunerative. But while these full blooded wools are bringing such high prices, half and quarter bred are bringing 55 cents per pound, a price nearly equal to fine Saxony, and more than the best Merino brings in the eastern market.

Sheep husbandry has, at the present time, but few advocates, on account of the low price at which wool has been sold lately; but notwithstanding the depression of clothing wools, the price of combing wools has been very remunerative, and pure bred wools will continue to be so for years to come. Machinery will increase faster than the wool; for neither half, one quarter, nor even three quarters will take the place of the pure bred wool. Nothing but the best will make lustre goods. For some purposes the mixed breeds will answer full as well as the best.

The increase of the pure breeds must as a consequence be small, but the price of wool and the increasing demand for good mutton will render the question an important one. I have no doubt that the stock will bring high prices, but the half breed wool will bring a price which I think would be worth the attention of our farmers. A lamb would not be despisable from a Cotswold or Leicester ewe by a good large long wooled Merino ram, but it would be of much more value by a long wooled ram, and were it not such a very great draft on a small Merino ewe. I should say that such an one crossed with a Cotswold or Leicester, would produce splendid combing wool. I do not intend to write an article on cross breeding, but simply to give the price of wool and the prospective demand. With regard to our fine wools, I would say, that prosperity is returning,—wool will be worth more than it has been for some time; the farmer may look for a ready sale for his wool, when well washed, at 40 cents. He may also look for a reduction in the price of corn, grain, butter, cheese, beef and pork, then wool will compare with these in price more favorably than at present. I should not think it advisable for our farmers to sell their sheep, but were any so disposed, I should think it an excel-

lent time for farmers who own good sheep farms to purchase. Farmers ought to copy the business methods of some of our manufacturing companies, when business has been dull and men unfortunate and wish to sell, or are compelled to sell their establishments. They take advantage of other's necessities or follies, and make their purchases, and when business revives they are ready with their cheap mills and cheap machinery to successfully compete with those who have obtained their places less advantageously. Too many of our farmers fail by not being sufficiently quick and ready to take advantage of those circumstances which are continually offering to make such investments as would yield them rich returns. To those farmers who are discouraged about the price of wool, I would say, do not sell your sheep; to those who have money, I would say, if you can, purchase a few Leicesters, Cotswolds or Lincolns; if you cannot do that, then find some one who will not take my advice and buy their Merinos cheap. MENTOR.

Boston, Sept. 25, 1868.

For the New England Farmer.

PREMIUM BUTTER.

MR. R. P. EATON:—*Dear Sir*,—When you asked me at Dedham yesterday for a statement in connection with the box of twenty pounds of butter entered at the Norfolk County Fair, as a sample of what I had made since May 15th, I thought I would not let you publish it. But heeding your suggestion that the public need line upon line in the matter of butter making, as well as on other subjects, I repented, and herewith enclose my statement as you desired.

To the Committee on the Dairy of the Norfolk County Massachusetts Agricultural Society.

This lot of butter, No. 7, is part of one week's churning, and was made on Wednesday of this week. The milk is strained about two inches deep, into tin pans, and set in a room on the ground floor. This room is furnished with movable racks for the milk to rest on, and is used for nothing but milk and cream. The cream is usually taken off every morning and kept in a large tin pail that will hold about five gallons. It has a close-fitting cover and is hung in the well to cool the cream, whenever it is desirable. The well is under a roof, and is furnished with pulleys, so that forty or fifty pounds of cream or butter may be lowered or raised with ease, and remain suspended at any depth desired. The cream is well stirred when more is added, and is churned but once a week, except in extreme warm weather.

Churning is always done with the cream at a *known* temperature, varying from 60° to 64°, according to the outside temperature. Churn about an hour in Davis' self adjusting churn. When the butter begins to "gather," pour in a few quarts of cool milk or water to thin the buttermilk and aid its running off. When it is drawn off, put in more cold water to cool and harden the butter and clear off the remaining buttermilk. If the cream contains little flakes of sour milk that have, by heat or age, become separated from the whey and formed cheese, and known as "white specks in butter," I know of no way of getting them off from the butter as easily as to thoroughly rinse in cold water several times. It must be done before the butter is gathered into a solid mass. If the sour milk contained in cream is thin and tender, as it is in its first stages of souring, it will all leave the butter readily in the buttermilk, but when it has separated from its whey and become cheese or curd, it can only be removed by picking out the specks by hand, while working, or washing off in water while the butter is in little crumbs in the churn.

After the butter has been sufficiently cooled and worked in the churn, it is taken on to a maple board, shaped like a fan, four inches wide at one end and twenty-six at the other, and twenty-eight inches long, with four inch strips at the sides put on with screws. At the narrow end, a three-inch strip is screwed on across the sides, and forms a cap, under which a movable white-oak lever is held down at its small end. This lever is the same length of the board on which it is worked, exclusive of the handle, which is turned at the large end. The face of the lever is about two inches wide at the small, and three at the wide end.

After the worker is scalded and cooled in cold water and fastened firmly in a common sink, with the narrow end about four inches the lowest, the butter is taken from the churn with a ladle and placed under the lever, at the rate of ten pounds at a time. It is then repeatedly pressed and turned till the moisture, (it can hardly be called buttermilk,) is thoroughly removed.

Salt is then worked in with the lever, at the rate of about three-fourths of an ounce to the pound of butter, which is as much salt as my customers will allow. More would be required if it were added while the milk remained in the butter, as much of it would run off with the buttermilk, while working.

If the salt could be worked into every particle of the butter at this time, it might be now ready to stamp for market and deliver to the customers. But as salted butter is yellower than fresh, unless the salt is actually distributed perfectly even through the whole mass, it will, after standing a few hours, show, on being cut, a streaked, spotted or marbled appearance,—coarse or fine,—according as it was worked much or little after being salted.

In warm weather I prefer to hang the butter in the well to cool a few hours before putting it through the mould; again working it evenly at this time, on the worker.

This season, until July 1, my butter was sold at fifty-five cents per pound; in July at

fifty cents, and the last three weeks at sixty cents, delivered to the customers.

During the four months' trial I have had eight cows. One was sold for beef June 22; one heifer, three years old, dried off July 15; one cow came in, August 1. Have now six in milk. Two are in their prime, one of them, the one that come in August 1; the other four are all young. Two calved in August of last year; the other two calved at two years old or under, last spring. The two old cows give at this time about twenty-two quarts per day; the other four only about eighteen; or forty quarts per day in all. One quart and a pint per day are sold; also all the night's milk one day in each week is skimmed at twelve hours old. Have made, in the time between May 15 and September 16, inclusive, 512 pounds, besides what has been used in the family.

The feed is now mostly corn fodder, cut up green and fed in the stall. Some dry hay is given, also three pints of corn meal per day. The cows were turned to pasture about June 1, and had two feedings of hay each day. The pasture has yielded very little feed since August 10, when the corn was ready for them. The cows have run out from six to eight hours per day. The remainder of the time they have been in the stalls, where a large amount of manure has been secured for future crops.

The corn fodder has been about half Southern White, the other half a large Sweet. I prefer the Sweet for the following reasons: it is better liked by the cows; it will bear thinner planting, and is consequently more leafy and does not lodge as much in rainy or windy weather. Land is well manured and furrowed, then the corn dropped by hand thin enough to bear some ears. It is covered with the rear teeth of F. F. Holbrook's Horse-hoe turned outward. All the hoeing may be done with this implement, except perhaps the first planting, as that grows slower, and the weeds might get a start with the corn.

Yours respectfully, BUTTER MAKER.

The following is a copy of the conditions on which the premiums on butter were awarded by the Norfolk County Agricultural Society:

"For the best produce of butter on any farm within the county for four months, from the 20th of May to the 20th of September, a sample of not less than twenty pounds to be exhibited, *quantity* as well as *quality* to be taken into view; with a statement of the number of cows, and a full account of the manner of *feeding* them, and the general management of the milk and butter, first premium $10; second, $8; third $5; fourth $4.

NOTE.—It will be seen that these premiums are offered for the best produce on the farms, and not simply for the best specimens exhibited. Competitors will therefore be required to keep an account, and render a statement of the entire produce within the time mentioned. Each lot must be numbered but not marked; any public or known mark must be completely concealed, nor must the competitors be present at the examination."

You will see by the above that our Society intends to have the Dairy Committee act unbiased, and without any prejudice. They have the butter and the statement only to work upon. I have entered butter and furnished a statement the past six years. Have taken the first premium ever since the first year, when I was awarded the second. There have generally been three or four entries each year requiring statements; but I have never seen the statements of any of the other competitors, and only one of mine has been published by the Society.

The second premium has been taken the last five years by Mrs. Nathan Longfellow, of Needham. I am promised a copy of her statement, and hope it will be published for the public benefit. Truly yours,

A. W. CHEEVER.

Sheidonville, Mass., Sept. 19, 1868.

REMARKS.—We are greatly obliged to Mr. Cheever for his prompt response to our invitation, and can assure our readers that the account above given of his method of caring for his stock, keeping his milk, and making his butter is richly worth a year's subscription to this or any other agricultural paper. We quote occasionally the prices, and remark upon the demand for "fancy butter," in our report of the produce market, and farmers who wonder why their good wife's churning does not rank with the best, may possibly find the reason in carefully reading the above article.

The butter which Mr. C. refers to as taking the first premium, we examined closely, at Dedham, and consider it for richness of color and neatness of putting up fully equal to anything we have seen at any similar exhibition. Had we been among the privileged "tasters" of the butter committee, our praise would not have stopped at color and packing. But knowing the temptation which it offered to longing bystanders, the society wisely provided glass cases, securely locked, and the eyesight alone was feasted.

The simple statement that Mr. Cheever obtains 60c per lb. for his butter, while ordinary dairies sell for 42 to 45c, shows the profit in making a choice article, and we only need add here, what we have often assured our readers, that, in this or any other market, *a fancy article will command a fancy price.* But it must be *choice*—no discount from the *gilt*-edged article.

For the New England Farmer.

THE GARDEN FOR FARMERS,

MECHANICS AND PROFESSIONAL MEN.

The present is the season for enjoying the products of the garden, rather than for talking about its cultivation, yet I wish to say a few words, regarding its care and culture, even at this time; for spring is coming again, and then the garden will claim our attention.

According to my experience and observation, the gardens, too generally in the country especially, has been and is still most wofully neglected. But it would not be so, I think, if there was any just conception of the pleasure and comfort which a well cultivated one affords, and the profit it gives. I say profit, for ordinarily, I believe, no piece of land of equal size will yield so large return to the faithful cultivator for the outlay of time and means as the garden.

I say nothing of the luxury it is to have an abundance of good fresh vegetables of all kinds in their season for the table; but base my argument on its economy. In these days of high prices of all kinds of provision, it is a source of solid satisfaction, as well as profit, to have such a generous supply of wholesome food as the garden affords, without a single demand upon the diminishing purse, to say nothing of the draught upon the temper. And I believe it is a principle of sound political economy,—I know it is of domestic,—to coin the labor of our hands, or the thoughts of the mind into necessary articles of life; to change the useless into the useful; the unseemly into the beautiful. And this is what every one does who cultivates a good vegetable garden, and makes it not only a thing of beauty but of general utility.

But I fear this matter is not so well understood as it should be, by most of our farmers, merchants, mechanics and professional men, especially the ministers, for whose interest, as much as that of any other class, I write. Judging from my experience and observation, and they have been somewhat extended, I am compelled to say, that in the country, the garden is a matter in too many instances most sadly misunderstood.

For the last twenty years, owing to the unsettled state of my professional life, I have had the charge of eight different gardens, and in every instance I have found them in a condition of sad and heart-aching demoralization. During this time I have succeeded to the occupancy of the estates severally of three mechanics and two ministers, one merchant, one lawyer and one farmer; all of which, as I found them, were living witnesses of indolence, indifference, or gross neglect, being filled with rank weeds and foul matter, which I had to remove, to say nothing of their uncounted progeny which afterwards I had to subdue and destroy, before I could make sure of any satisfactory results from my labor. Of these eight gardens the one that was left in the best condition was that cared for by the lawyer; the worst, those that belonged to the ministers and farmer. Now to my mind such neglect of the garden is wrong. I do not say that it is general; I am happy to know that there are exceptions, but as I ride through the country and look into the gardens of friends or strangers, I find too often a more rank and luxuriant growth of weeds than of fresh and needful vegetables.

Much of this is owing to the fact, doubtless, that the garden does not occupy the place in the popular mind which its merits demand; but is regarded rather as a customary appendage to the house, to be attended to at leisure, or put off to a more convenient season; yet we seldom find one who does not truly enjoy the varied production of the garden.

To the farmer, under the press of work that constantly bears upon him in the spring and summer, there may be some show of excuse; but none usually for the mechanic or professional man, and especially the minister. He has or may have time to take the very best care of his garden, and thereby not only improve his health and increase his means, but enlarge his usefulness; for without health a minister is shorn of the right arm of his power. Not that this is all, but without health the finest powers of heart and mind will fail to do their legitimate work,—that of reaching other hearts, and arousing them to activity in the sacred work of humanity and of God. Health is not a thing of luck or chance: it is a manufactured product, as much as a piece of cloth or any machine; and there is no other way by which we can secure this blessing, than by paying its price and complying with its conditions,—one of which is cheap, out-door exercise; nay, muscular labor, which in a measure we get by faithfully attending to our gardens.

In conclusion, let me urge it upon all who are blessed with the privilege of having a garden, to see to it that they are not guilty of letting it run up to weeds, but that it shall produce an abundant supply of useful and wholesome vegetables for the table. S. BARBER.

Bernardston, Mass., Sept. 3, 1868.

REMARKS.—We regard the advice of our correspondent, particularly to ministers, as most timely, and for the purpose of commending his suggestions to their attention we may be excused for saying that the writer is himself a clergyman.

In the early history of New England, the clergy were healthy, and remarkable alike for long lives and long pastorates; while of late they are the most sickly of all the professions and occupations among us, and their "situations" if not their lives have become alarm-

ingly precarious. We believe that our correspondent has suggested one of the causes of this unfavorable change—the neglect of outdoor exercise and muscular exertion. A vegetable and fruit garden, if not a farm, was a necessary part of a New England parsonage of the past generation, as they still are and always have been of the religious establishments of the Catholic church. For the bodily exercise necessary to health, the English clergy have sometimes resorted to field sports and recreations which would hardly be tolerated in New England. But for all these things our clergy have no taste; and we doubt whether history affords an example of such entire neglect of open air exercise by any class of men as that furnished by the clergy of New England during the past fifty years. The result is not only that their "bodily presence is weak and their speech contemptible," but many of the more far-seeing among them are lamenting their loss of influence with the masses, and the growing estrangement between pastor and people. As "with the people, so with the priest," the laws of our being cannot be violated with impunity. And among these laws, must be included the old enactment, that "by the sweat of thy face,"—not mind or intellect, —"shalt thou eat bread." This edict may be evaded, but not its penalty.

NEW PUBLICATIONS.

HOW CROPS GROW. A Treatise on the Chemical Composition, Structure, and Life of the Plant, for all students of Agriculture. With numerous Illustrations and Tables of Analysis. By S. W. Johnson, M A, Professor of Analytical and Agricultural Chemistry in the Sheffield Scientific School of Yale College; Chemist to the Connecticut State Agricultural Society; Member of the National Academy of Sciences. New York: O. Judd & Co. 1868. 294 pages. Price $1.50.

Our first impressions of the value of this volume are so decidedly favorable, that we care not to wait for a more thorough examination before commending it to the notice of our readers. The work is divided into three parts. The first division treats of "the chemical composition of the plant;" the second is devoted to "the structure of the plant and the offices of its organs;" while "the life of the plant" is the subject of the third division. Numerous tables of analysis are also given in the appendix. The author has endeavored in this volume to lay out a groundwork of facts sufficiently complete to serve the student of agriculture for thoroughly preparing himself to comprehend the whole subject of vegetable nutrition, and to estimate accurately how and to what extent the crop depends upon the atmosphere on the one hand, and the soil on the other, for the elements of its growth. For those who have not enjoyed the advantages of the schools, the author has sought to unfold his subjects by such regular and simple steps that any one may easily master them. It is also adapted to the wants of the class room.

Though complete in itself, this volume, which is designed to explain "How Crops Grow," is to be followed by one to tell us "How Crops Feed." Two others,—one on the Improvement of the Soil and the Crop by Tillage and Manures, and the other on Stock Feeding and Dairy Products,—are contemplated.

For the last twelve years Mr. Johnson has delivered lectures annually upon agricultural chemistry and physiology, at the Scientific School of Yale College, and he informs us that this volume is a result of studies undertaken in preparing these lectures. Mr. Johnson, however, is better known to the farming community by his many valuable contributions to the agricultural press, in which he has shown rare ability to instruct and interest the general reader.

The systematic arrangement of topics, and the careful division of the matter into convenient paragraphs, adopted by the author are distinctly marked by the printer. The numerous illustrative cuts, tables and indexes are very neat and satisfactory. The price, too, at which the volume of nearly 300 pages is offered, places it within the reach of every one who can afford to buy books at all. We commend this volume to the notice of all who wish to know "how plants grow."

MR. COCHRANE'S STOCK.

Our attentive correspondent, Hiram French, Esq., of Eaton, Compton Co., Canada East, gave the readers of the FARMER last year a description of the stock imported and bred by his neighbor, H. Cochrane. Esq., of Compton Centre, including cattle, horses, sheep, and swine. We find in the *Country Gentleman* an account, by Sanford Howard, Esq, of a late importation, which was selected with much care by Mr. Cochrane himself and by Mr. Simon Beatte, both of whom personally examined the most celebrated herds of England. Mr. Howard says:—

"The newly imported animals reached their destination safely August 31. The cattle purchased in England are ten Short-horns, nine cows and heifers and a bull calf and two Jersey cows. Two Short-horn calves were dropped on the passage. The sheep comprise forty yearling Cotswold ewes and five rams from the flocks of Messrs. King Tombs, Garne and Lane. Among the ewes are those which took the first and second prizes at the late Yorkshire show. A very handsome young Suffolk mare, and a yearling Suffolk colt (entire,) of extraordinary size and excellent points, with a beautiful Welsh pony made up the lot. The cost in England was equal to $15,000 in gold.

From Harper's Magazine, for October.

HOW WE KEPT OUR TRYST.

The golden summer months had fled
Behind a veil of silvery haze;
With stately march September led
In narrow file the Autumn days.

By many a path her steps were seen
In fields where late the Summer strayed,
And where the woodland's leafy screen
Flecked every winding walk with shade.

Her light breath, moved to gentle gales,
Stirred the long tassels of the corn,
That nurtured 'mid the sheltered vales,
Shone in the golden light at morn.

Within the hemlock's feathery top,
Through all the sweet September day,
With lengthened trill and sudden stop,
The blackbird piped his mellow lay.

An unseen influence working change
A thin veil o'er the landscape drew;
More distant seemed the mountain range;
The clouds to towering castles grew;

And coloring every shade of thought,
Each flight of fancy grave or gay,
With subtle wand of wizard wrought
Some new enchantment day by day;

And in the maple's fretted leaf
Kindled a crimson-tinted flame,
As nearer, now the days grew brief,
October's bannered legions came.

So, in September's soft decline,
When thicker grew the Autumn mist,
And swollen were the grapes with wine,
I sauntered towards our place of tryst.

By pleasant paths my footsteps lay,
Through fields that slowly gathered brown,
Where, sailing past me on its way,
Floated the thistle's ghostly down.

'Twixt stately orchard rows I strolled;
Before my steps the robin fled;
With glints of russet and of gold
The apples ripened over head.

A sudden turn, and full in view,
Across my path, the low stile stood,
Where one wide spreading chestnut grew
Right in an angle of the wood.

And seated, waiting there for me,
Half in the sunlight, half in shade,
Beneath the chestnut boughs was she,
The one with whom my tryst was made.

Oh, sometimes, love, do you recall
That hour, though years since then have fled;
And do you still remember all
The fond, the foolish words I said?

But let them pass (I think we may);
Their absence here will scarce be missed;
What need of more, since on that day
It was for life we kept our tryst.

Wages at the West.—A correspondent who informs us that he has been travelling recently "in pursuit of a home," closes a business letter with the following statement:—"One thing I think should be made public through your columns, and that is a warning to the laboring people and mechanics of the East not to expect great wages at the West, for they will be disappointed, as wages for laborers are from $1.25 to $1.50 per day at harvest and only a limited demand at that, with board at $5.00 per week. The country is overrun with men seeking work, and "few there be that find it." He does not state to what particular portion of the "West" he refers.

CATTLE DISEASE.

The disease generally called Texan fever, or Spanish fever has been long known among the cattle of Mexico and Texas. It was known in the cattle ranches when that country was under the government of Spain; hence its name, Spanish fever.

The idea that the disease does not exist among the Texan cattle themselves, but that, in some mysterious way, they carry with them the seeds of the disease and communicate them by infection to cattle born and living in more northern latitudes, is undoubtedly a delusion. The fact is that the Texan cattle have the disease, though in so mild a form that it rarely proves fatal. Driving them for many successive days, in large herds, in hot weather, or crowding them upon the decks of steamboats, under a scalding sun, increases the intesity of the disease, and renders it more infectious, so that northern cattle, which have never been acclimated to it, take it from them, and undergo it in a form that in many instances proves fatal.

The disease was introduced in the early part of the present season into Southern Illinois by Texas cattle brought up the Mississippi in boats to Cairo, and at once it spread through that section, creating a great panic and occasioning a great loss of property. The weather was very hot and dry in that region when the cattle began to arrive. It is well known that all Typhoid diseases prevail with more intensity during dry and heated periods. This doubtless had an influence in rendering the disease more fatal. But the mode of moving the cattle probably had still more to do with the outbreak.

Until recently few or no cattle have been brought from Texas on boats. They have been driven through the Cherokee Country and Kansas, starting in February and March, moving slowly and stopping to rest and feed, and reaching Illinois in April and May. Here they are turned upon the prairies till July and August, when they become fit for the market. By this slow process of moving, and

gradual approach to a more northern latitude, and consequent gradual change of diet, they get rid of the disease, if it existed at the time of starting on their journey.

When they are brought on boats, the transit is completed in a few days, and they bring with them whatever disease existed at the time of starting, aggravated by the crowding, starvation and thirst they undergo on the boats. The haste of the drovers to get them to market has proved injurious to their own interest.

These cattle evidently require to be subjected to a quarantine of several months before other cattle can be safely exposed to intercourse with them, and before they are fit for human food Such a quarantine they formerly underwent to a considerable degree, in the time and mode of driving them to the north; and hence they seldom introduced the disease, although cases of it were known from time to time.

The disease appears to be most rife in May, June and July; and as the weather becomes cooler, it gradually disappears. Cattle that have been wintered in the north appear to be no longer subject to the disease, unless exposed anew to the infection.

By the report of the Illinois Cattle Commissioners, the 30,000 or 40,000 cattle now undergoing quarantine in Kansas, are in a thrifty and healthy condition, and will soon be in a state to pass on to their destination with safety to all concerned. Such facts will teach the capitalists who are concerned in moving cattle, as well as the Legislatures of the States through which they pass, the proper course to be pursued.

The disease is undoubtedly a Typhoid fever. Its most intense action is found in the duodenum, or upper portion of the small intestines, in which there is inflammation, which causes contraction of the intestines and obstructs the passage of solids, thereby occasioning constipation. When the disease is fatal, it is so usually within 48 hours. At the first outbreak of the disease at any place it is more fatal; most of the first cases terminating in death. As the disease progresses, it becomes milder, many of the cases recovering. This gives rise to the belief that some remedy has been found capable of controling it. Near the close of the disease, or when it is about to disappear, most of the cases get well, and the cattle thrive and fatten rapidly.

Such appear to be facts respecting this disease, as we gather them from those who have been most conversant with it. The alarm is over for this season, and we shall probably hear little more of it, until next season; except in the halls of Legislation, in several of which it will give rise to discussion during the coming winter.

BUMBLE BEES.

There are some very pretty stories told about the domestic bee waylaying the honest bumble bee, and robbing him of his hard earned gains. Such tales are evidently the product of a warm imagination. I find that several bumble bees have forced themselves into my hives this season, doubtless for the purpose of plundering. Several were killed, and, after a time, nothing was found but the bumble bee, whose hairy covering was in general entirely removed, either during his fight with the bees, or by subsequent attempts on the part of the bees to remove him. On one occasion I saw a bumble bee enter a glass hive, and, being curious to know how he would be received, I uncovered the glass, and had a pretty good view of the fight. He was attacked by dozens, perhaps hundreds, of bees who attempted to bite and to sting, apparently with very little effect. The bumble bee, on the other hand, by means of his powerful mandibles, succeeded in killing or mutilating nearly a teacup of bees before he succumbed. I, of course, felt very strongly inclined to move to the rescue; but my desire to see what the result would be overcame my interest in the bees. After a time the bumble bee lay exhausted on the bottom of the hive, which was completely strewed with the legs and wings of occupants of the hive. I then covered the glass, and left the hive till next morning. By that time the bees had carried out all their dead, so that if I had not witnessed the fight, I should not have known that any damage had been done. Remedy—never use large holes or wide slits as entrances to your hives. A long slit which just gives space enough for a drone to squeeze through, will keep out the bumble bees, as well as mice and other large depredators.—*P., in Country Gentleman.*

SOIL FOR FLOWERS.—Leaf mould is good for flowers if two or three years old, and very much decayed; when but half rotten it is an injury. Rotten sod is the best soil for flowers; and cow manure, which has lain two years to rot, the best fertilizer. Where rotten sod is not easily obtained, the edging parings of walks may be preserved in a heap for flower purposes.—*Gardener's Monthly.*

EXTRACTS AND REPLIES.

PROSPECTS OF WOOL GROWING.

I would like to have you inform me through the FARMER as to the prospects of wool growing. Is not the present a good time to start a flock? and are not the grazing lands of Texas preferable to our Northern States, in respect to the quality and cheapness of the land, mildness of climate, and consequent ease with which wool can be grown? Are greenbacks current in Texas? Also, please inform me which is the best work published on wool growing. I. C.

Candia, N. H., Sept. 28, 1868.

REMARKS.—Wool is low; sheep are low; weak-kneed farmers are anxious to sell and go into cattle, horses, or something else, and we believe the present is just the time "to start a flock." But a change from New Hampshire to Texas, is, in our opinion, too great both for one's health and one's habits, and we are disposed to favor emigration on parallels of latitude rather than of longitude. Still we have no doubt that the right man in the right part of Texas may do well with sheep, *after he learns how to manage them there.* We should advise you to spend at least one season with some wool grower in Texas, as an apprentice, before going in for yourself. As to greenbacks, take a pocketful down with you, and our word for it you will soon find out that they pass currently enough. The *Practical Shepherd*, by Dr. Randall, is not only unquestionably the best work on wool growing generally, but you will find therein much information upon the climate, &c., of Texas, with special reference to the production of wool. At pages 431-2 you will find a record of the season and crops in Fayette County, for four years, from which we are tempted to copy entire the remarks for the year 1857:

January.—No rain.

February 6.—Prairies getting green.—10th. Corn, peas, lettuce, and radishes coming up. Rain one inch

March 7.—Corn six inches high; prairies one month forward. 12th. Terrible frost; kills everything—fruit and crops. Rain one inch

April 5th.—All green again; new crops up and vigorous. 6th. Norther, hail, and freeze; all crops, fruit, and mast, killed. 11-12th. Sleet, snow, and freeze, again. 24th. Frost in valleys. Rain, ½ inch.

May 30th.—Rain two inches—not 12 inches in a year.

June 11th.—Wheat reaped; good crop; man and beast suffering for water. 20th. Grass all dead.

July.—No rain!

August.—No rain!

September 7th.—Lakes drying from drought, except live oak. First good rain this year, two inches.

October.—Rain, 3½ inches. The prairies green.

November.—Grasshoppers, wet. Reasonable rains; good fall gardens. 26-7th.—Hard storms very extensive; Nebraska wrecked at Galveston. Rain 2½ inches.

December.—Lowest temperature, 30°.

HISTORY OF THE EARLY ROSE POTATO.

MESSRS. EDITORS:—In your issue of the 29th of August last, I read a communication entitled, "History of the Early Rose Potato," signed "M. P.," Orwell, Vt. As both my reputation and character are assailed by this anonymous contributor to the FARMER, I respectfully ask of you the privilege of presenting to the public a complete refutation of said statements through the same journal which gave publicity to "M. P.'s" communication.

To do this, I give you the facts known to myself with my own experience and observation, testified to and confirmed by the affidavits of several well known gentlemen, among whom is Mr. Chas. Blackmer, of Hadley, Mich., whom "M. P." claims to be the originator of the Early Rose Potato, and therefore justly entitled to the credit bestowed upon me.

In 1860, Chas. Blackmer worked for me, and we occasionally talked about growing seedling potatoes, and were agreed that the choicest kind for that purpose was the Garnet Chili. Accordingly both of us saved seed from that variety. In the spring of 1861, I planted the seed I saved, which failed to vegetate. I informed Mr. Blackmer of this, and he told me that he still had his seed, and as he should not plant it, he would bring it down to me, remarking, "You may plant it if you choose." This I did, the same spring, and produced the potato now called the Early Rose, and also my seedling, No 2.

Besides these, I have other seedlings from the Garnet Chili, but not from the seed which Mr. Blackmer gave me, which I prize very highly; among which, the most promising is No. 4, the one probably to which "M. P." alludes, instead of No. 2, when he speaks of my preparing to bring forward No. 2, of Mr. Blackmer's seedlings, as a variety of my own originating.

This statement of facts confirmed by the following affidavits, will enable the public to decide to whom credit is due in respect to originating the "Early Rose" potato.

It is in justice to myself, not less than in regard to my relation to the public with reference to the originating of the Early Rose potato, that I request you, Mr. Editor, to publish my refutation of "M. P.'s" statements, which were published in the NEW ENGLAND FARMER of August 29th, of the present volume; also to give me the name and residence of "M. P.," all of which is submitted. Respectfully yours, ALBERT BRESEE.

REMARKS.—As stated above by Mr. Bresee we did publish in the FARMER, on the 29th of August last, a communication entitled, "History of the Early Rose Potato," of which the following is a copy:—

HISTORY OF THE EARLY ROSE POTATO.

MESSRS. EDITORS:—The credit of originating the "Early Rose Potato" having been claimed by and given to the "wrong party," and thinking the "right man" should have the honor to which he is justly entitled, I will give you the true facts of the case

In 1862, I think, Mr. Chas. Blackmer, of Hadley, Michigan, then living in Rhodardton, Vt., planted a ball of the "Chili" potato, from which he raised two varieties of seedlings, which he called No. 1 and No. 2. Before he had brought these to maturity, he enlisted and "went to the war;" but before he left for the "tented field," he gave these seedlings to Mr Bresee, at the earnest request of the latter, under the consideration that he should be handsomely recompensed, provided they "amounted to anything."

Mr. Bresee, a neighbor to Mr. Blackmer, brought the potatoes to maturity, and No. 1, was found to be very early, and was quite common as a garden potato for two years in the vicinity and had it not been for Mr. Heffron, of Unca, and some others, who christened it the "Early Rose," and brought it so prominently before the public last spring, it probably would not have been known at this time outside the immediate section where it was raised.

Mr. Bresee is now preparing to bring forward No. 2 of Mr. Blackmer's seedlings as a variety of his own originating. As all these facts are well known in this vicinity, and can be readily substantiated, it is but just that the public should know them M. P.

Orwell, Addison Co., Vt, Aug 17, 1868.

This communication was received and published, as other communications are, in good faith. The parties mentioned in the article were all unknown

to us, so that there could be no possible motive on our part to misrepresent any one; and on the other hand, we could detect no motive in the writer for stating facts otherwise than as they truly existed. The note enclosing the article giving the history of the Early Rose Potato, is now before us, and is signed "Lester M. P. Griswold." While we cannot entertain a doubt that Mr. Griswold has been misinformed in the matter, as we have Mr. Charles Blackmer's statement, under oath, that "he *did not* originate from seed the early potato now called the Early Rose," we feel equally confident that no blame attaches to Mr. Bresee, and that his reputation and good name are sustained by papers which he has laid before us, of which we deem it necessary to publish only the two following affidavits:—

I, Charles Blackmer, formerly of Hubbardton, Vt., now of Michigan, do hereby certify that I did not originate from seed the early potato, now called the Early Rose, but that Albert Bresee, of Hubbardton, Vt., grew it from seed which he says I gave him. I further say, that at my request, Mr. Bresee gave me one tuber of it, the first or second year from seed.

CHARLES BLACKMER.

State of Michigan, Lapeer County, ss. Subscribed and sworn to before me, this 11th day of Sept. 1868.

ALVAH BENTRY, Notary Public, Lapeer Co.

We Chester Roach, James W Gibbs and Stephen A. Fenton, of Hubbardton, Rutland County, Vermont, on oath, say that we are well acquainted with Albert Bresee and Charles Blackmer, of said Hubbardton, having been neighbors to them for many years. We further say, that we have had conversation with Charles Blackmer respecting the origin of the early potato, now called the Early Rose. In said conversation Charles Blackmer said that Albert Bresee grew them from seed or seed-ball, which he, Charles Blackmer, gave Albert Bresee. We further say, that so far as we know, Charles Blackmer has never grown any potatoes of any kind from seed or seed ball. We further say, that we have frequently been at Mr. Bresee's place, and have seen his seedling potatoes in different stages of growth, from the first year up to the present time. We also say that Albert Bresee is a gentleman of irreproachable character, and that entire confidence can safely be put in any statement or claim that he has made or may make.

CHESTER ROACH.
JAMES W. GIBBS.
STEPHEN A. FENTON.

Subscribed and sworn to before me, this 9th day of September, 1868. A. GIBBS, Justice of the Peace.

TICKS ON SHEEP—WILD CHERRY LEAVES—A SICK MARE.

Ticks become very numerous on my sheep in the winter season; is there any way to get rid of them except to immerse the sheep in a strong decoction of tobacco? Will sulphur be beneficial, and how can it be administered?

Will wild cherry leaves injure stock, if eaten when green?

What ails my horse? After having driven him, when I unfasten the check rein and the head is lowered, a white matter will run from her nose. Please state probable cause and remedy.

Holmes Hole, Mass., Sept. 20, 1868. TISBURY.

REMARKS.—A wash made of the extract of tobacco will kill ticks, and so will smoking them with burning tobacco. A small machine is made on purpose for this business. The remedy nearest at hand, however, is the common mercurial ointment which you can procure at the apothecary shops. This should be very carefully rubbed in so as to reach the skin, and then the sheep protected for some days from inclement weather.

We have heard of cattle being injured by eating freely of partially withered wild cherry leaves, after the trees were cut or broken down—but seldom by eating them where they were growing in their pastures.

A statement, however, was published some years since in our columns of some cows in Plymouth county, Mass., from whose milk butter could not be made, and on watching them to discover the cause of the trouble, they were seen to reach over a wall and browse some cherry trees within their reach. On changing them to another pasture the milk soon resumed its former healthy condition. Our opinion is that at a certain stage of growth or degree of maturity, even green cherry leaves may be poisonous.

Your mare undoubtedly has a cold. Such symptoms as you describe clearly indicate it. Give her cut feed, moistened, a warm stable, and some slight medicine, twice a week, that will gently move the bowels.

CRANBERRY CULTURE.

I have a large quantity of swamp land and wet meadow, unprofitable at present. It occurs to me that the cultivation of the cranberry might be instituted upon it so that a future generation might possibly be benefited, if I were informed in that branch of agriculture, which no doubt I should have been, had I remembered all I have read in in the NEW ENGLAND FARMER. Can you without too much trouble give me information as to the best time for setting out and how and where to obtain the most profitable and favorite vines?

Troy, N. H., Sept. 1868. G. W. FARRAR.

REMARKS.—It is too late to transplant the vines this fall. If your lands are covered with brush, that might be removed, and the surface cleared for setting the vines upon it in the spring. In the meantime, we will endeavor to give you such information as we have gathered from those best acquainted with cranberry culture among us, when we have more leisure than at present.

GREAT YIELD OF EARLY GOODRICH POTATO.

As others are recording the produce of the Early Rose potato, beans, &c., I am moved to say that last spring I planted five small Early Goodrich potatoes, weighing a little short of one pound. Hoed them twice, dug them the first part of this month, and had two bushels, weighing one hundred and twenty-six pounds. G. W. N.

Acworth, N. H., Sept. 26, 1868.

SICK TURKEYS.

In the FARMER of September 19, "G. E. H.," of Shrewsbury, Mass., complains that his turkeys are dying off. The same disease is quite common in this section. The first symptom is the voiding of matter about the color and thickness of cream, which continues until the bird either gets well or dies. It frequently happens that a flock which went from home all right in the morning, will return at night with one or two lingering along behind, eating little or nothing, and every few minutes passing this matter. They appear sleepy, often remaining with their eyes shut, until the rest of the flock have passed several rods in advance.

I think they eat some weed or insect which poisons them. It seems to me that it would be useless

to doctor them, for when one has been sick with it for three or four days, and then begins to get better, it takes it a long time to recover so as to thrive again.

I wish to inquire where I can get some young ganders, of the Poland breed, lately figured in your paper. THEO. G. LINCOLN.

Taunton, Mass., Sept. 21, 1868.

SCIENTIFIC AND PRACTICAL FARMING.

In one of your late numbers I noticed a communication in which the writer complained of the contradictory doctrines of writers and speakers on agriculture, and asks what is the use of hearing speakers or studying writers whose teachings are thus diverse and contradictory? The great amount of writing and speaking on this subject is worthless. Yet there are men who are capable of instructing the farmer,—men of science in the full sense of the word. I saw in the *Independent* a short time since a statement of what composed the potato, both the vine and the tuber, and then told what manure would afford the articles needed for their growth. I thought that writer capable of instructing me, and I preserved the piece. Speakers and writers in order to be of service to us must tell what composes the different plants we grow, both stock and grain, and what artificial manure we must obtain to supply any defect in the soil; and also must be able to explain the properties of the different soils, and until a man can do this he had better be engaged in growing potatoes than telling others how to do it.

But this is not the main thing that I wished to notice in that communication. He said that writers differed as to the best way to plant potatoes. Some said cut them in small pieces and put the hills near together, while others said plant large potatoes and put them further apart. When I read that, I was astonished that we should call on writers for information on a subject which can only be obtained by actual experiment of the agriculturist. And yet is there a man in New England who can give us the information on this topic which we need, based on absolute and repeated experiments? I have this year tried, on a small scale, different ways of planting potatoes, and will give the results. In each, the rows were twenty-five feet long.

One large potato in each hill, 2 ft. apart, produced	30 lbs.
One large potato split in two, in each hill, 2 ft. apart produced	22¾ "
Potatoes cut so as to take about one third as much seed, hills eighteen inches apart, produced	21 "

The potatoes were the largest where the large potatoes was planted whole, and the smallest where a potato was split, and both parts put in the hill. Brother farmers, give us experiments, not theory. PLOUGH JOGGER.

West Poland, Me., Sept. 25, 1868.

REMARKS.—The allusion to the contradictory teaching of speakers and writers on agricultural subjects, with which our correspondent commences his article, may possibly lead some of his readers to ask how he can harmonize his idea of the qualifications which a man should possess before he assumes to teach farmers, with his closing appeal for "experiments not theory." This discrepancy is, however, to our mind rather apparent than real. Between the scientific and the practical there is no conflict or opposition. As Mr. Johnson says in his new book on "How Plants Grow," science and art "are, as they ever have been and ever must be, in the fullest harmony. If they appear to jar or stand in contradiction, it is because we have something false or incomplete in what we call our science or our art; or else we do not perceive correctly, but are misled by the narrowness and aberrations of our vision." There is, however, a great difference between scientific dreaming and scientific theory. Science is simply facts reduced to system. And in this sense every practical farmer is, to some extent, a scientific man. "No farm," continues Mr. Johnson, "was ever conducted without physiology, chemistry and physics, any more than an aqueduct or a railway was ever built without mathematics and mechanics. Let the farmer throw away the knowledge of facts and the knowledge of principles which constitute his science, and he has lost the elements of his success. The farmer without his reasons, his theory, his science, can have no plan; and these wanting, agriculture would be as complete a failure with him as it would be with a man of mere science, destitute of manual, financial, and executive skill." So far, then, as the farmer has reduced the facts of his experience and observation to a system, he is a scientific man, while the inferences and assumptions of the learned are often far from scientific. We doubt whether facts have yet been reduced to so complete a system that any man can do all our "Old Subscriber" thinks the man in the *Independent* has done, or all he demands of those who presume to tell others how to raise potatoes. And until such men do arise we join in his appeal, "Brother farmers, give us experiments, not theory!"

TO PROTECT TREES FROM MICE.

Will you or some of your correspondents inform me and others that would like to know, if there is anything in the form of a wash that will not be injurious to young trees, that can be applied to them late in the fall to prevent the ravages of mice during the winter season. I recollect of having seen a number of different ways recommended to prevent mice from gnawing the bark from trees, but all of them seem to be attended with considerable trouble,—such as treading the snow down around them, banking them up with dirt, wrapping them with birch bark and many other similar remedies. If a farmer has from one to five hundred young apple trees, it is no small job to protect them by any of the above modes; whereas if there could be some kind of cheap wash applied that would answer the purpose, it would be but a small job to make the application, and thousands of young trees would be saved annually.

Dixfield, Me., Sept. 19, 1868. J. J. T.

REMARKS.—We should be particularly pleased to be able to give our correspondent the information desired, as he informs us that though upwards of fifty years of age this is his first attempt to write anything to appear in the columns of a newspaper. To preserve trees from rabbits and sheep, a washing with fresh blood from the slaughter house, has been recommended; also soot and milk mixed with a little soft soap; also a wash of old cow manure and water, soaked several days and applied with a brush or swab, when a little thicker than whitewash. But all such applications are lia-

ble to be washed off by rains which beat upon the trunk during the latter part of fall and winter, and need to be repeated frequently to be effective. From our own experience we prefer the plan of throwing a small mound of earth around the trunk, after removing grass, weeds, &c., which may harbor mice. With a sharp spade or shovel a large number of trees can be gone over in a short time. We believe from our own experience that this is the cheapest protection known. A very little earth thrown immediately against the trunk, we have found effective.

NEW AND OLD VARIETIES OF FOWLS.

Having lately experienced a fresh attack of the "hen fever," which prevailed so generally some eighteen or nineteen years ago, I wish to inquire what are now the standard works on the subject of poultry. My own library contains the volumes by Bement, Bennett, Dixon and Kerr, but I do not find the breeds which now seem to be the favorites figured in them, while the Shanghaes and Cochin-Chinas seem to have had their day.

I find the farmers and poultry-keepers in my vicinity prefer the Black Spanish, Brahmas and Leghorns; which two latter varieties are not described in my books. For myself, I confess to a strong predilection for the old-fashiond barn-yard fowl. I wish to know who among your readers has the breed of fowls which I used to see occasionally in our farm yards twenty years ago, called "Creepers." I should like to see a description of these fowls by some one who has them, stating their general color, size, profitableness, &c., whether they are as troublesome in gardens as the longer legged breeds, and how high a fence may be necessary to confine them. The Brahmas I have frequently seen confined with a fence four feet high, while the Bolton Greys will easily scale a fence eight feet in height, and will also wander a long way from home, while the Creepers possess the advantage of being very domestic in their habits. I should judge also that they would be unable to fly over an ordinary fence—the shortness of their legs preventing them from taking the first spring from the ground.

Another fowl that I well remember, and a favorite in my boyish days, was a kind of Polish or crested fowls, of a black or bluish color, with feathers rough and hairy all over. They were a hardy and productive race, as I remember them, but I have never seen them described.

Can you, Mr. Editor, tell me what works on Domestic Poultry have been published since those I have named, and where they may be procured by

AN OLD SUBSCRIBER.

Rockport, Mass., Sept. 28, 1868.

REMARKS.—We hope some of the readers of the FARMER will reply to the above inquiries of our correspondent. A society was not long since formed in New York that assumed the title of the American Poultry Breeders' Association, which has introduced some new varieties, but we do not know that any recent work has been published.

GOOD CROPS OF HAY.

Perhaps a statement of mine in the FARMER of Sept. 5, in relation to the amount of hay cut from two small plots on my farm, will be recollected by your readers. On looking at one of those pieces, that in the garden, of forty-three square rods, I saw there was a large growth of the second crop, and as I could not turn stock upon it, and was afraid it would furnish harbor for mice during the winter and that they might injure it, I concluded to mow it again, which was done Sept. 5. On haying it I found it weighed 1088 pounds. As the first crop, cut July 18, weighed 1860 pounds the amount is 2948 pounds on the forty-three rods, which is at the rate of five tons and 962 pounds per acre. If any of my brother farmers have beat this I want to hear from them and learn how they did it.

ORISON FOSTER.

Tunbridge, Vt., Sept. 21, 1868.

NORWAY OATS.

In the FARMER of August 15, I spoke of the fine appearance of a field of Norway oats before they were laid flat by a sort of young hurricane that we had here one night. I have threshed the piece and have *thirty* bushels of good oats for the *one* sown. My neighbors who saw them before the blow, say I did not get half what the piece then promised. I shall try two acres of Norways next year and hope for gentler breezes. L. E. BICKNELL.

Windsor, Mass., Sept. 21, 1868.

BEANS—"THOUSAND TO ONE."

Being much interested in reading about what others raise, I thought I would tell you what two little beans that I planted (a kind of which I plant but one in a hill) have produced. The produce of one stock which I counted amounted to one thousand and twenty-four; the other had one thousand one hundred and fifty beans. E. K.

Royalton, Vt., Sept. 14, 1868.

GOOD YIELD OF THE EARLY ROSE POTATO.

As others have given their success in raising the Early Rose Potato, I will give mine. From one pound of seed obtained of B. K. Bliss & Son, I dug 133½ pounds. One of the largest weighs twenty-eight ounces. C. E. L. HAYWARD.

Hancock, N. H., Sept. 28, 1868.

MILK.—SERIOUS QUESTIONS.—What kind of milk ought to be expected from milkmen who pretend to deliver pure milk?

We suppose most people who purchase milk expect to be cheated some, and are disappointed if they are not.

Should milk be delivered just as it is obtained from the cow, or may the strippings be retained, or any of the cream taken therefrom?

This is a tough question. We suppose people who sell milk usually consume some at home, and it is human nature to prefer the richer portion. They want some butter and this is suggestive of the saving of cream.

The milk question is a delicate one, and the more it is stirred up the more chalk will be sure to come from the bottom.—*Rural New Yorker.*

COMMON DIARRHŒA IN FOWLS.—A too scanty supply of grain, which necessitates an excess of green food, or an unwholesome diet of any description, are the usual causes of this complaint. The treatment is simple: five grains of powdered chalk, the same quantity of rhubarb, and three of cayenne pepper, may be administered.—*Tegetmeier.*

WILLIAMS' FAVORITE, OR EARLY RED APPLE.

The fair crop of apples which has been raised the past season in many parts of New England will, we hope, encourage farmers and others to give more thought and care to fruit raising. When the country was new and the soil full of vegetable matter in the shape of decaying roots and leaves of the old forests that formerly occupied the ground, apples grew almost spontaneously, and little skill or care was required to secure an abundant supply. But now as one travels over New England the dilapidated old orchards are the most melancholy objects that meet the eye. The gnarled and mossy trunks, dead limbs and bushy tops of the few trees that mark the sites of once thrifty orchards, suggest sad thoughts of decay and ruin.

Still, amid these evidences of weakness, failure and dissolution, one may see just enough vigorous trees and thrifty orchards to inspire hope that successful fruit raising is still possible. Even here in Massachusetts, where the ravages of the canker worm, curculio, and other insects, in addition to the apparent loss of vigor in the soil or the tree itself, have induced many experienced fruit growers to remove their grand old apple trees as cumberers of the ground, there is now and then an orchard that produces almost as vigorously as of old, not only occasionally but regularly. Of one such orchard, that of Capt. George Pierce, of Arlington, we published last year a pretty full account. We might mention another, that of the well known seedsman, and author of a Book of Flowers, J. Breck, of Brighton, who playfully remarked to us the other day that "my greatest trouble is to find barrels enough for my fruit." Neither of these men have any patent right or secret process. Both are sociable, well informed gentlemen, and are perfectly willing to give an individual or the public any information in their power, and are pleased to show visitors their grounds, their trees and their fruit, and

to detail the means by which their orchards are made exceptions to the general decay and failure of those which surround them. One of these men on being asked last year, how is it that your trees hang full while all the rest of us have no fruit, replied, "why, all I can say is, I prepare and till and mulch my ground well, keep off and destroy caterpillars, canker worms, web worms, and prune my trees myself. No matter what I am doing, if caterpillars of any kind are seen on my trees I go and destroy them forthwith; in brief, I comply with all the conditions, so far as I know them, of a good apple crop, and I get one annually, while my neighbors failing to do so, have little fruit, become discouraged, and are and have been for years digging up their trees."

This man regards the Williams' apple (Williams' Favorite, Early Red) which is represented by the above cut, as the very best early market apple. It requires a strong, moist soil and good cultivation, to bring the fruit to perfection, and then it is splendid, and the most saleable apple in the Boston market. Mr. Pierce has thirty-eight of these trees from which he gathered over 200 bushels last year, although it was a very unfavorable year for fruit. The highest price last year was $6 a bushel; the year before he sold some for $8 a bushel. Now

"What others do,
Why, with patience, may not you?"

The only reason is that you are not willing to recognize the fact that trees in our day can no more bear a good crop of apples without proper food and care, than a cow can give a good mess of milk without plenty to eat. As rich men's sons are apt to grow up without a practical knowledge of what a dollar cost, so the people of New England, judging from the almost spontaneous growth of apples when the country was new, have got wrong notions into their heads about what a bushel of apples cost. Instead of setting out one or two hundred trees, as the old settlers did, often on the poorest spot on their farms, let us try five or ten trees in the richest place we have, and take the best care of them we know how, and see if we cannot raise fruit to eat and fruit to sell.

—Dr. Durfee stated in his address at the Middlesex County fair that the value of the farms in that county is $24,000,000, and their products $8,000,000 per annum.

For the New England Farmer.

INTELLECT AND SKILL IN FARMING.

There is no occupation which is so truly scientific in all its bearings as that of farming. It is true, there are few of the mechanic arts that do not involve scientific principles; but none which are so strictly scientific as farming. Planting and growing crops are strictly chemical in their character; every process is a chemical manipulation. The composting of manures is also chemical, whether the operator understands chemistry or not. The raising of stock is strictly physiological, and any person to be a feeder and judge of stock ought to understand physiology and anatomy. And in order to be eminently successful in any of these branches, it is absolutely necessary that the farmer should be a good logician.

Now, I am aware that this will somewhat startle, or may at least move the risibility of a few, because they will readily admit that chemistry, physiology and anatomy are of eminent service to the farmer, but logic, they suppose, belongs to the lawyer, stump orator, or, perhaps, to the minister; but as to the farmer, they cannot see what he has to do with logic. They would, perhaps, be willing to admit,—as did a friend of mine the other day,—who, by the by, is an unsuccessful tradesman,—that it is easy to be a farmer, as all that it required is a good degree of muscle; but it will be found that in order to become a *successful* farmer, not only muscle, but brains are required, as much as in any branch of business, or any profession. If either can be dispensed with, it is muscle, for I am sorry to say that it is easier to hire muscle in any branch of business, than brains. There are numbers who prefer hiring muscle minus brains, to the two combined; in other words, they prefer ignorant to intelligent labor,—hence we find the farm laborers and the factory operatives unintelligent foreigners.

I have of late been reading discussions in farmers' clubs, and have discovered in them a want of knowledge on scientific principles. To illustrate one or two points, I would call attention to the uses of meadow-muck, this being one of the subjects I have seen discussed. While many testified to the increase of the manure-pile by the use of muck, there were those who contended that the hauling of muck to the barn-yard and then to the field was a useless outlay of labor, as the only good the muck had done was to dilute the manure, and the question was, "Is it not cheaper to apply the manure in its concentrated form, rather than in its more bulky form of a compost with meadow muck?" I wish to apply to this question a few scientific principles, logically deduced.

All admit that the greatest portion of meadow muck is of vegetable origin; and, as such, is a valuable fertilizer, for that which has once been vegetable is always a supporter of vege-

tation. But our labor-saver would say, then haul it from the meadow direct to the field. But we must consider that ammonia and its various combinations are our best fertilizers. They are volatile, and continually escaping, as our olfactory nerves often remind us. This loss renders the manure less valuable every hour. But meadow-muck is a great absorbent of these salts of ammonia, and wherever applied, whether in the barn-yard, hog-pen, or on night soil, the offensive smell connected with these places is lost, and the air about them is pure. Consequently, the meadow-muck, by absorbing these salts, becomes enriched by them as a fertilizer. Then, again, the decomposition of vegetation in our meadows liberates an acid which is a preservative of vegetation and resists further decay, so that we find the stumps of trees on uplands entirely moulder away in a few years, while centuries pass away and the peat and muck of the meadow remains the same. For this acid the gases and ammonia of the manure has a strong affinity, with which they combine, forming compounds highly productive of vegetation, leaving the muck free from its preserving influences, and thus prepared for further decomposition.

Manure is matter in a state of decomposition or decay, and matter in a state of decay has the property of producing decomposition or decay in other matter. These different substances, coming in contact with each other, accelerate decay in one another, and as those substances which are the most rotted are the most available as food for vegetation, the one aids the other in this great preparation. Hence we find that muck does not dilute the manure, but really *makes a manure* equally as rich in fertilizing qualities as the pure droppings from the animals, and in doing this, it takes away all stench; and the hog-pen, the vault, and the barn-yard, which have been such an offence to sense refined, are rendered objects which the most delicate would scarcely notice. It will be seen from these deductions that muck is a valuable fertilizer and a reser voir for the fertilizing qualities which most plants need. Whether it is worth hauling to our barn-yards, let the common sense of the farmer determine. T. W.

Boston, Oct. 3, 1868.

For the New England Farmer.

LETTER FROM MAINE.

Imitation grass and woods, and hills, however perfect the imitation, can give none of that gentle impulse to the involuntary side of our physical and mental life, to the pulses of the blood and the forces of brooding reverie, which we derive from contact with Nature. So when the country is "full of invitations sweet," I hie away to its recesses. In the peaceful town of Norway I generally find my Acadia, gravitating toward "Holt's Hill," nearly in the centre of the town, upon whose summit is a farm of about three hundred acres, cultivated by an industrious farmer, after whom the hill is named. The town of Norway is about eight miles square, almost wholly occupied by extensive farms. The village nestles in a valley upon the eastern boundary.

One thing very observable this year is the vegetation. The order of affairs seem to be reversed. Heretofore, Maine has been a fortnight behind Massachusetts, but this summer, the further north we penetrate, the more advanced and luxuriant we find the corn, potatoes and other vegetables. In Paris, I noticed one field of corn, covered with quite large ears, which is something of an achievement "way down East." The heat has been intense. In Gorham, forty miles beyond, the themometer one day reached 125°, and at Mt. Washington 92°, a result never before known, even to the "oldest inhabitant." One would think the South had veered round to the North, for we all know that the Southern States have suffered less from the heat than the North.

How often are we reminded, even when flitting by farms and fields even in the loneliest places seen from the car windows, that "order is Heaven's first law!" In the waving wheat, the rustling corn, the potatoes, beets, peas, beans, &c., order is closely pursued by rows, hills in rows, beds, hedges, &c. If we could throw aside this rule as unnecessary, what a queer looking world we should have! What a bother existence would be! Just imagine!

The crop of apples will be very small. The spring promised much in blossoms, but the wet season, followed by the severe July heat, has covered the ground beneath the trees with deplorable results.

The scarcity of laborers and the high wages demanded, are throwing the farmers more each year upon the use of labor-saving machines. All labor-saving machines, by the way, are but steps to climb towards heaven with, for they afford mankind more leisure for self-improvement, soften the harshness of life, making it seem less like a great working plantation, and make the heart more contented and grateful. Blessed be inventors! This summer, I hear everywhere the singing of the busy mowing machine. The crop of hay will be immense.

Hops, the cultivation of which is increasing rapidly, promise generally a heavy harvest. The Maine farmer is very shrewd. He cannot drink lager beer himself, and rather denounces its use. But he is perfectly willing to aid the Teuton in obtaining it. Each year, as the German population increases, and the American propensity to imitate or imbibe any new doctrine or habit is kept receptive, the demand for hops will increase and the production augment. And it pays profitably here, where small fruits and vegetables find no market.

The one great fault and hindrance to successful farming in this part of Maine, in my esti-

mation, is *too much land.* Many of the farmers are considered "well off." Yet their prosperity gives them no respite from really slavish toil.

"Work, work, work, while the cock is crowing aloof,
And work, work, work, till the stars shine through the roof."

They are rich only in acres, some of them possessing 300 and 500 acres. Of course a man cannot get rich from so much land, without much capital and time. He cannot take care of it usefully or successfully. His acres being far from a market, keep very low in value. Yet the sum and substance of some men's existence, their daily thought, is to add still more to their already many uncultivated acres, for which they must pay taxes, and from which they sometimes cannot obtain even the profit of the grass. Out West, where the mere turning over of the sod, and, as I have seen, the ploughing in of the seed, will produce, without further trouble, the very first year, an excellent crop, and where, also, the increasing emigration and swift, convenient rails are rapidly filling up the country, one can comprehend a man's mania for accumulating land. Every acre, especially in that thriving State, Kansas, doubles its value nearly every year. The soil, so long the browsing ground of the buffalo and wild horse, and enriched by the decay of vegetation for centuries, will need no dressing for *thirty* years. Then the taxes are as yet scarcely noticed. But in Maine, especially the northern part, there are thousands of acres as barren and rocky as when created. Years of the severest toil hardly makes them bearable, yet these mistaken farmers look upon these rocky wastes as desirable possessions. They cannot understand the meaning of "ten acres enough," and do not desire to, either. I cannot understand them. Can any one explain this mania, this "land on the brain?"

THEO. WILLISTON.

Norway, Me., July 30, 1868.

REMARKS.—We owe the writer and the reader an apology for the unintentional delay of the publication of this letter. In reply to her closing inquiry, we may remark that "Ten Acres Enough" has bought more land himself; thus proving, practically, that his theory is impracticable.

MARKETING STRAWBERRIES.—While many superficial or careless managers cannot send strawberries fifty miles in good salable condition, J. Knox of Pittsburgh sends his four hundred miles, and receives double and triple prices for them. The fruit is allowed to ripen before picking: Mr. Knox says, "We allow the fruit to mature enough for our own table before it is gathered for market." It is handled with great care, carefully assorted, and as carefully packed in neat boxes. So largely and finely grown are the berries, that ten fill a pint box. He has sent the Jucunda to New York city on Monday, reaching there on Tuesday, and kept it until the following Friday and Saturday, and sold then at higher prices than other berries brought, raised in the immediate vicinity of the city. So much for doing a thing well.—*Co. Gent.*

AGRICULTURE AT TAMPA BAY, FLA.

We compile from our exchanges some interesting facts in relation to important crops cultivated in a portion of the State of Florida, but such as we do not raise here. We think it would be exceedingly gratifying, and perhaps instructive, for some of our well-to-do farmers to visit that country and look at the modes of culture in practice there. Not that we suppose they could be adopted here, but that the more extensive the knowledge which we possess, the better will be our practice in producing all crops. Such, certainly, should be the result.

The establishment of sugar plantations is so recent, that no planter has succeeded in getting a full crop. Consequently, no well digested system of rotation has been adopted. The system adopted by some is to divide plantations into five equal portions, four-fifths of which will be planted in cane,—the fifth to lie fallow. During the seasons of leisure, this portion will be prepared in the best possible manner for planting in the ensuing spring. Some of the lands are based on marl, having a rich subsoil, but a light silicious surface soil. The fallow land is ploughed very deep with four-horse ploughs, throwing it into lands of seven feet, with deep water furrows. Into these furrows all the trash on the land, and the rotted bagessa, (the canes after they have been crushed between the rollers of the sugar mill) of a preceding crop, together with any manure which can be had, will be collected. The land will be again ploughed with four-horse ploughs, bedding on the deposited manure. When this fifth is planted in cane, the oldest of the remaining sections will be ploughed out, and subjected to the same operation. By this system the plantations will yield from 2000 to 3000 pounds of sugar to the acre.

Rice can be grown very profitably on the high lands in all parts of the State. The yellow or golden rice is best adapted to either wet or dry culture. There are large bodies of land along the Gulf coast admirably adapted to the cultivation of this staple.

The fruit culture is confined to the production of oranges, lemons, limes, guavas, bananas, pine apples, cocoa nuts, &c., &c. On the hummock lands from 300 to 400 barrels of

oranges, lemons and olives to the acre, are sometimes realized; on pine lands, with proper attention, 200 barrels per acre. Wild grapes, some of them very superior, hanging in large heavy clusters, both white and purple, are abundant. The Bermuda arrow root flourishes throughout southern Florida, producing 200 or 300 bushels to the acre, yielding, with very imperfect mills, six or eight pounds of flour to the bushel, worth twenty-five to thirty cents per pound. The country is well adapted to the raising of horses and mules. The climate affords perennial pasture, and renders unnecessary expensive provision of forage and stabling. As many of these animals as might be required for the country, could be raised to the age of three years, without requiring the expenditure of as many dollars. The healthfulness of these animals in this section is notorious.

FUNGI, OR SMUT.

The farmer, in passing through his fields of corn or wheat, has his attention often arrested by ears of the grain which have undergone a most singular metamorphosis or change. In place of the sound kernels, he finds a huge black excrescence, composed of what seems to be an impalpable, sooty dust, which soils the fingers and clothing when brought in contact with it. This smut, or fungoid growth, is a very remarkable production, and, regarded from every point of view, seems to be devoid of all use—a thing to be hated—an abomination. The mass of sooty dust is a regular plant, of most singular and complex structure, and possessing a reproductive power hardly excelled by any vegetable or animal organism. As though the chances of the hateful thing for multiplying itself were not great enough with ordinary organs, it has conferred upon it three or four different modifications of the function. They may multiply themselves by means of the spawn, or mycelium, by self-division or lamination, which may be regarded as a species of germination, or they may be propagated by seeds or their equivalents, produced in special receptacles. Every cell or tissue may contain its germs, and each germ springs up into new forms, equally fitted for propagation, in a few hours or minutes. While examining some of the cells under the microscope, they are observed to pass through the course of their existence, and give birth to housands of new organisms.

The number of germs or other reproductive bodies which parasitic fungi produce, is incalculable—almost infinite. One grain in weight of the black matter found in place of the ear of corn, contains upwards of *four millions* of spores or seed vessels, which are again filled with sporules so minute that the highest powers of the microscope fail to distinguish them.

Doubtless the reader, if familiar with farm-work, and a keen-sighted observer, has often seen a kind of ethereal smoke or evaporation proceeding from the diseased heads of grain, when moved by a single breeze. This apparent vapor is formed of the millions upon millions of the seeds of the fungi, which, proceeding from the ruptured vessels, float like an airy cloud or gossamer veil, whither the winds may drive them. The atmosphere is loaded with these germs in the latter days of summer; and, if it were not for a wise provision connected with their fructification and growth, fungus, or mildew, would spread over the vegetable world like a pall of death. Nothing but fire or strong acids seems competent to destroy the seeds, so tenacious are they of vitality. Summer's heat nor winter's frost cannot kill, nor water drown them.

Fortunate indeed is it, that they require peculiar atmospheric and other conditions for their *growth*. If these are not favorable, they will not spread nor develop themselves. Some seasons are peculiarly suited to the awakening of the dormant seeds which rest upon everything, although entirely invisible to the naked eye. Last year, the fungus peculiar to the grape, called mildew, manifested itself to a fearful extent in many sections of the country, causing great loss. Sometimes the wheat crop is cut off by the fungoid growths called rust; and, occasionally, all vegetable substances suffer from the rapid fructification of these strange parasitic plants.

Sulphurous acid destroys the germs; and this we secure by the application of sulphur to leaves and fruits before the pest fairly manifests itself. Under cover, in glass structures, it can be completely mastered by proper care; but, out of doors, the ruin can hardly be averted.—*Dr. Nichols' Journal of Chemistry.*

BOTS IN HORSES AGAIN.

I see in the last number of the *Homestead*, an article copied from the correspondence of the New England Farmer, taking the ground that the bots in horses are very injurious to the horse, causing death. But the writer is entirely mistaken in his conclusions on the subject.

From many investigations into the subject, and from the testimony of Youatt, Spooner, Stewart, Dadd, and others, I am perfectly satisfied that the bots never turn upon the stomach until it is so diseased that death is certain.

The stomach of the horse is the chosen home of the bots, and why should they try to make a way out of it, until the appointed time? He does not feed upon the stomach, but upon the chyme, and only turns upon the stomach to escape death. Nine out of ten of the horses whose stomachs we have examined, have contained bots. Some of those horses had been killed by accident, while in perfect health. We have found the bots eating through the stomachs of those horses, within three or four hours after death, although they were perfectly

well, till the moment of death. The evidence to me is conclusive, that they in no way injured the stomach until death.

A valuable essay, by Geo. H. Dadd, V. S. on this subject, has recently appeared in the *American Farmer*, and as both he and Dr. Stewart are authority in this country, their evidence is entitled to great weight.

I wish it might put an end to the present system of "doctoring (killing?) horses for the bots." There are hundreds of valuable horses killed by the awful drugging they get to kill the bots, which can't be killed by anything you can put in his stomach.

Mayhew records an instance, in which a portion of the stomach, covered with bots, was corked up in Spirits of Wine for two years, without killing them. Bracy Clark, an English veterinarian, to whom Mayhew says "the public owe all their knowledge of the bot fly," claims that "the bot is harmless if not beneficial."—*C. W. D., Philadelphia, in the Homestead.*

EARTHQUAKES.

"There is," says Humboldt, "no other outward manifestation of force known to us—the murderous inventions of our own race included—through which, in the brief period of a few seconds or minutes, a larger number of human beings have been destroyed than by earthquakes." Lightning and storm, war and plague, are but weak and inefficient agents of destruction in comparison with the earth's internal forces. And as earthquakes surpass all other phenomena as agents of sudden destruction, so the impression which they produce on those who, for the first time, experience their effects, is peculiarly and indescribably awful. Men of reputed courage speak of a feeling of "intolerable dread" produced by the shock of an earthquake, "even when unaccompanied by subterranean noises." The impression is not that of simple fear, but a feeling of absolute pain. The reason seems for a while to have lost the power of separating real from imaginary causes of terror. The lower animals also are thrown into a state of terror and distress. "Swine and dogs," says Humboldt, "are particularly affected by the phenomena of earthquakes." And he adds that "the very crocodiles of the Orinoco, otherwise as dumb as our little lizards, leave the shaken bed of the stream and run bellowing into the woods." Humboldt's explanation of the peculiar sensations of alarm and awe produced by an earthquake upon those who for the first time experience the effects of the phenomenon, is in all probability the correct one. "The impression here is not," he says, "the consequence of the recollection of destructive catastrophes presented to our imagination by narratives of historical events; what seizes us so wonderfully is the disabuse of that innate faith in the fixidity of the solid and surset foundations of the earth. From early childhood we are habituated to the contrast between the mobile element water, and the immobility of the soil on which we stand. All the evidences of our senses confirm this belief. But when suddenly the ground begins to rock beneath us, the feeling of an unknown mysterious power in nature coming into operation and shaking the solid globe, arises in the mind. The illusion of the whole of our earlier life is annihilated in an instant.—*Cornhill Magazine.*

Rheumatism.—What is the matter with my mare? She raised a colt last year, has not been in good condition since the colt was weaned, but I have worked her some, until a short time since. When I took her out of the pasture she was very lame, hind leg was swollen and feverish at gambrel joint. I took some blood from the neck, and bathed the leg with liniment. Next day another leg was swollen, and the swelling seems to go from one limb to another, and now she is so stiff that she can hardly move, with swelling on the belly. She has no appetite and cannot live but a short time without help. H. C.

A dose of physic (seven or eight drachms of aloes) should be given to the mare and a drachm of acetate of potash dissolved in the water that she drinks, so that she may take that quantity each day. The swollen leg should be fomented with hot water for half an hour several times a day, and should be carefully rubbed dry after each fomentation. The swollen part of the leg should also be bandaged with flannel.—*Western Rural.*

Agricultural Jokes.—The Ohio *Farmer* gets off the following:—

Large horses are generally most admired by farmers; but farmers are most admired who *pony* up.

Prosperity is generally based on knowledge and industry; the swine will get most that *nose* most.

Farmers are like fowls—neither will get full *crops* without industry.

Because a man who attends a flock of sheep is a shepherd, makes it no reason that a man who keeps cows should be a *cow-ard.*

We like to see a farmer increase the growth of useful plants and shrubs around his home, but do not like to see him use rails, poles and boards to *prop-a-gate* with.

The *California Farmer* says that Thomas A. Garey and two other gentlemen in Los Angelos are commencing the silk business in earnest. They have now growing about 75,000 good sized mulberry trees, and 125,000 seedlings; about 150 to 200,000 worms will be fed this year. Their work is a success, as is shown by the cocoons now on exhibition in the collection of Mr. Prevost, the pioneer silk grower, at the Pavilion, in San Francisco.

Ladies' Department.

THE EXPECTED SHIP.

BY J. G. SAXE.

Thus I heard a poet say,
As he sang in merry glee:
"Ah! 'twill be a golden day,
When my ship comes o'er the sea!

"I do know a cottage fine
As a poet's house should be,
And the cottage shall be mine,
When my ship comes o'er the sea!

"I do know a maiden fair,
Fair and fond and dear to me,
And we'll be a wedded pair,
When my ship comes o'er the sea!

"And within that cottage fine,
Blest as any king may be,
Every pleasure shall be mine,
When my ship comes o'er the sea!

"To be rich is to be great;
Love is only for the free;
Give me patience while I wait
Till my ship comes o'er the sea!"

Months and years have come and gone
Since the poet sang to me,
Yet he still keeps hoping on
For the ship from o'er the sea!

Thus the siren voice of Hope
Whispers still to you and me
Of something in the future's scope,
Some golden ship from o'er the sea!

Never sailor yet hath found,
Looking windward to the lee,
Any vessel homeward bound,
Like that ship from o'er the sea!

Never comes the shining deck,
But that tiny cloud may be,
Though it seems the merest speck,
The promised ship from o'er the sea!

Never looms the swelling sail,
But the wind is blowing free,
And that may be the precious gale
That brings the ship from o'er the sea!

HOUSEHOLD RECEIPTS.

A reader who says she has tried some of the original receipts published in the FARMER, and found them very good, desires her sister housewives to keep this department well filled, and contributes her share, as follows:—

Making Yeast.

Take five good-sized potatoes; pare and wash clean; grate them fine; add one cup of sugar; two-thirds cup of salt; then pour in about three quarts of boiling water, and keep stirring; when about milk warm, add one cup of hop water and a cupful of yeast, if you have it, if not, take one yeast cake, dissolved in a cup of warm water.

Cottage Pudding.

One cup of milk; one egg; two tablespoonfuls of melted butter; two cups of flour; one teaspoonful of cream of tartar; half a teaspoonful of soda. Bake half an hour and serve with hot sauce. ELLIE.

Chester, N. H., 1868.

TOMATOES NEXT WINTER.—This favorite vegetable is eaten with added relish during winter, when the garden is locked up, and "sauce" is hard to procure. A little painstaking now will secure a good supply for the time of need. Select ripe, sound tomatoes, place them in a colander, immerse them in boiling water to loosen the skins, lift them out, and peel them at once. Cook them in a porcelain lined kettle. Tin will answer if it be not much worn, but iron is easily corroded by their acid, and the fruit will be spoiled in color and flavor by its use. Stir with a wooden spoon or pudding stick. Tomatoes may be kept without very thorough cooking, but as they are largely composed of water the sauce will be much better if boiled down one-half or more of its original bulk. Put them up in tin cans if bottles cannot be procured, and solder the tops tight while the contents are boiling hot. This is a troublesome process, and fruit preserving jars or bottles, which are now easily had at almost every country store, will be preferred. With these, as with all vegetables or fruits to be kept air-tight, the one great point of care is to *make* them air-tight. Have the bottles heated that they may not crack, pour in the hot contents, filling the jar, and fasten the cover at once. By the use of fruit-preserving powders or solution, which prevent fermentation, less care is needed to exclude the air. Many who have used these preparations prefer them to the former method. —*American Agriculturist.*

APPLE JAM.—The apples which should be ripe, and of the best eating sort, being pared and quartered, are put into a pan with just water to cover them, and boiled until they can be reduced to a mash. Then for each pound of the pared apples, a pound of sifted sugar is added, being sprinkled over the boiling mixture. Boil and stir it well until reduced to a jam. Then put it into pots. The above is the most simple way of making it; but to have it of the best possible clearness, make a thick syrup with three pounds of sugar to each pint of water, and clarify it with an egg. Then add one pint of this syrup for every three pounds of apples, and boil the jam to a proper thickness.

SWEET SPICED PEACHES.—Select large freestone peaches with large pits, quite ripe, but not the least soft; remove the roughness of the skin by friction; then halve the peach and take out the pit; fill the cavity with white mustard-seed, one pod of bird or cherry pepper very small, or if these cannot be obtained, two kernels of black pepper, a few cassia buds, and a piece of mace; sew them up,

pour over them hot vinegar, three times; add to one quart of vinegar one pound of sugar; heat the syrup and pour it over the fruit; cover tight and keep the peaches under the syrup; examine often, and keep them in a cool place; if the fruit is very hard, after being scalded, set the bottles in the bath until heated through.

Apple Melange.—The followlng preparations, in which apples are the principal ingredients, make excellent dessert:—

Apple-Snow.—Put twelve good tart apples in cold water, and set them over the fire; when soft, drain the water, strip the skins off the apples, core them, and lay them in a deep dish. Beat the whites of twelve eggs to a stiff froth; put half a pound of finely-powdered white sugar to the apples; beat them to a stiff froth, and add the beaten eggs. Beat the whole to a stiff snow; then turn it into a dessert-dish, and ornament it with myrtle or box.

A Delicious Dish of Apples.—Take two pounds of apples, pare and core them, slice them into a pan; add one pound loaf-sugar, the juice of three lemons, and the grated rind of one. Let these boil about two hours. Turn it into a mould, and serve it with thick custard or cream.

Apple-Pudding.— Pare and stew three pints of apples; mash them, and add four eggs, a quarter of a pound of butter, sugar and nutmeg, or grated lemon. Bake it on short crust.—*Germantown Telegraph.*

Pickle Chow-Chow.—Two quarts green tomatoes, two quarts white onions, two quarts pickling beans, one dozen green cucumbers, one dozen green peppers, one large or two small heads of cabbage. Chop all fine; sprinkle a teacup of salt over it, and let it stand over night. Next morning pour off the brine, season with two tablespoons of ground mustard, two tablespoons celery seed, two of black pepper, one half tablespoon of cayenne, two of ground cloves, two of turmeric, two of curry powder. Cover the mixture with the best of vinegar, with a cup of brown sugar. Boil two hours slowly, continually stirring. When cooked, add two tablespoons of salad oil, while the mixture is hot.

DRESS IN RELATION TO FIGURE.

In adapting the dress to the shape and size of the wearer, a certain knowledge of drawing, and of the proper proportions of the figure is, of course, the chief help. There are, however, a few well ascertained rules which may safely be taught. One, for instance, is that transverse shapes generally tend to lessen height and increase breadth, while longitudinal forms have the opposite effect. Another well-known rule (which I believe is easily explained by a reference to optical science) is the tendency of light colors to increase the apparent size, and *vice versa*. People of more than average size should be cautious about wearing white or very light colors for this reason, although it must always be remembered that proportion and color impress the eye so much more sensibly than mere scale that this rule is a very subordinate one, and only to be applied after those more important subjects have been thoroughly considered. It should, however, be remembered that more than average size naturally involves a certain degree of conspicuousness, which makes any peculiarity of dress doubly undesirable in such cases. A small person may wear with impunity both colors and shapes, which would be inexcusably striking on a large figure. Nothing goes so far to redeem unusual size as complete repose both in form and color. Much trimming, loose ends and streamers, frills, and furbelows, and caprices of all kinds are apt to become intolerable when magnified, while on a small scale they may please, by a certain fluttering airiness which is in keeping with the impression of a tiny creature. But here also proportion may almost reverse the effect of scale. A short heavy figure may even more imperatively need quietness in dress than one of twice its actual volume which has run up into slenderness. And this naturally leads me to the second respect in which dress should be adapted to the wearer, namely, character; which, indeed, is scarcely separable from the form on which it is increased, and according to which such questions as the last should mainly be decided.—*Cornhill Magazine.*

THE CHEMISTRY OF FURNITURE.

Young housekeepers do not always understand the theory of the chemical and mechanical action of different substances on articles of furniture. The substances from which furniture is chiefly exposed to injury are water, oils, alcohols, and acids. Acids act on marble. Marble is itself composed of carbonate of lime; that is, it is a compound of carbonic acid and lime. Now, the carbonic acid has a comparatively weak affinity for lime, and most other acids will prevail over it and take its place when brought in contact with it, thus destroying the texture of the stone, liberating the carbonic acid, and leaving nitrate of lime, or muriate of lime, or sulphate, or acetate of lime, as the case may be, in the form of a white powder, in its place. But oils, alcohols, and water produce no effect on marble. All varnished or polished surfaces of wood on the other hand, while not injured usually by acids, are attacked by alcohol. Varnishes are composed of different gums and resins, which are generally soluble in alcohol. Many of them are made by dissolving the material in alcohol so as to liquify them, and then, when they are applied, the alcohol evaporates, leaving the

gum or resin in a thin, even coating over the surface. If now any alcoholic substance comes upon such a surface, whether it be alcohol itself, as used for lamps, or spirits of any kind, or even wine, which contains but a small per centage of alcohol, a portion of it is dissolved, and the brilliancy of the surface is destroyed. Oils will not attack either marbles or varnished surfaces, and will do no injury except to naked wood or other porous substances which admit them into the pores, from which they cannot afterwards be easily expelled. Water affects no substances except such as have open pores exposed, in which case it enters and causes the substance to swell, or such as are soluble in water, as glue in joints, and mucilage or gum arabic, used sometimes for attaching superficial ornaments to fancy work.

Hair Washes.—It is only right to refer to a source of possible disease which is peculiarly wide spread just now, and against which the public should be cautioned. At the present time there is quite a rage for the use of hair "washes" or "restorers," which, whilst the charge of their being "dyes" is indignantly repudiated, yet in a short time "restore" the color of the hair. The active agent in these washes is, of course, lead. In the majority of cases, probably, a moderate use of such a lotion would be unattended with mischief; but it is worth remembering that palsy has been known to be produced by the long continued use of cosmetics containing lead. But of the thousands of persons who are applying lead to their scalps, there will doubtless be some with an extreme susceptibility to the action of the poison, and these will certainly run no inconsiderable risk of finding the "restoration" of their hair attended by loss of power in their wrists.—*The Lancet.*

The Virtues of Borax.—The washerwomen of Holland and Belgium, so proverbially clean, and who get up their linens so beautifully white, use refined borax as washing powder, instead of soda, in the proportion of a large handful of borax powder to about ten gallons of boiling water; they save in soap nearly half. All the large washing establishments adopt the same mode. For laces, cambries, &c., an extra quantity of the powder is used, and for crinolines, (requiring to be made stiff,) a strong solution is necessary. Borax being a neutral salt, does not in the slightest degree injure the texture of the linen; its effect is to soften the hardest water, and therefore it should be kept on the toilet table. To the taste it is rather sweet, is used for cleaning the hair, is an excellent dentrifice, and in hot countries is used in combination with tartaric acid and bi-carbonate of soda as a cooling beverage.

Ladies' Horns.—We must commiserate the unfortunate Charles VI., of France, who sought to beguile thought in any way, however puerile, when we remember what manner of of woman was his coarse and cruel consort, Isabella of Bavaria. Surely no man in his senses can wonder that the sight of her did occasionally scare the imbecile king, for on her head she wore horns, and these grew wider and wider, and in proportion higher. This formidable horn head-dress, variously decked with jewels and fur, was introduced into France by the queen above-named, and eventually became so monstrous that, the horns growing at least two yards apart from each other, door-ways were enlarged to admit the breadth of them. And not only horns, but tails were at that time worn by ladies; and to these robes *a-queue*, or long-train dresses, were attached sleeves which swept the ground. In addition to all this, it may be observed that ornaments resembling animals' ears were sometimes appended to the horns; but the under-garments of this amazing costume were usually of wool or coarse cloth, for fine linen was at that time so rare in France that the mighty Isabella herself possessed but a scanty supply of it as a luxury.

THE NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

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EFFECTS OF FROST.

The keen, clear air—the splendid sight—
We waked to a world of ice,
Where all things are enshrined in light,
As by some genii's quaint device.

A shower of gems is strewed around,
The flowers of winter rich and rare,
Rubies and sapphires deck the ground,
The topaz, emerald, all are there.—*A. Norton.*

"Blow, blow, ye winds with heavier gust!
And freeze, thou bitter, biting frost!"—*Burns.*

DECEMBER closes the year. It is now winter. The sun rises late and sets early. The trees have shed their leaves, and look like mere skeletons of their former selves, Birds and insects have migrated or hid themselves in the earth. We sometimes call it a gloomy season, and feel that nature is dead. But why so? "A thousand secret operations are in progress by which the seeds, buds, and roots of future plants and flowers are not only preserved but elaborated that when the prolific months of Spring arrive, they may burst into life in all the freshness and vigor of a new birth." The frost which binds the stream loosens the soil, and by disintegrating the rocks adds to its productive power. The old English adage that

"December's frost and January's flood,
Never boded the Husbandman good,"

is far from being correct. The frozen clods crumble down in the spring so minutely divided as materially to lesson the labor of the husbandman in preparing the soil for seed. We might enlarge upon the beneficial effects of frost during winter, but at present will confine our remarks to some of its operations earlier in the season.

The effect of frost upon vegetables depends upon circumstances. If they thraw gradually without exposure to the light, they receive but little apparent injury. Scions, and cuttings of trees, bushes and vines, may be buried a few inches in the ground, and remain all winter without injury. Of course they freeze as hard as the ground with which they are covered. But they thaw gradually and in the dark. Potatoes left in the ground often vegetate the next season. The roots of grass, grain and trees, are frozen solid during the winter. If they were on the surface of the earth and thawed in the light they would be killed, but being thawed gradually and in the absence of light they retain their vitality. Apples are often frozen in the cellar, and thaw without apparent injury.

The effects of early frosts in the Autumn

upon vegetation, varies greatly at different times. Sometimes a slight frost destroys all vegetable life, while another year, a frost in which the temperature is considerably lower, appears to do but little injury. There was a smart frost the present season, September 28, which we supposed would effectually destroy all the vines, but much to our surprise the tomatoes and beans and grape vines continued fresh and green, and we frequently heard the remark, How little injury the frost has done! There could be no mistake about the severity of the cold. There was not only frost, but a freeze. We actually saw ice made on the surface of water standing by the house.

Thinking of the subject, it occurred to us that the frozen articles had thawed under cover, with a partial exclusion of the light. A heavy damp cloud hung over the surface of the earth like a thick blanket, and shut off the rays of the sun, and continued till sometime in the afternoon. The morning was cold and chilly, and the thrawing took place gradually, and under just that combination of circumstances that would be most likely to prevent injury from the frost. If the sun had shone out bright and clear the next morning, the bean and tomato leaves would have turned black, the corn leaves white, and the injury would have been much greater than it proved. A change of wind that cendensed the vapor and suspended it near the surface of the earth, saved the plants.

Light especially when imparted by the direct rays of the sun, is an agent of great power, and although we have lived in it all our days and bathed in an ocean of light, how little do we know of its properties and powers. It is the great organizer by which nature builds up all her living organizations, and it is also a disorganizer, by which organisms are reduced to their elements, to be again used as materials for building up other organisms. It is one of the forces of nature, and the more we understand the laws by which it is governed, the better shall we be able to subject it to our service.

ABORTION IN COWS.

A searching investigation with regard to the cause of abortion in cows has been carried on during the past season by a Commission appointed by the New York State Agricultural Society. They have examined the vegetable growths on a great number of farms, especially with reference to ergot and the plants on which it is found. It is to be hoped that something definite will result from this careful investigation. The veterinary editor of the *North British Agriculturist* says stagnant or foul water is injurious to all animals It causes blood poisoning and thus leads to many febrile complaints. It brings on abortion in other animals as well as cows. Two winters ago three fine mares belonging to a somewhat careless and untidy farmer slipped their colts shortly after Christmas. The mares had been tolerably well kept, and not too hardly worked, but had been watered for several weeks at a pool, by the side of which a large manure heap had been foolishly placed, and into which the highly colored organic matters freely found their way. Some ewes watered at the same pool cast their lambs, while another lot of ewes kept two fields distant, managed exactly in the same way but enjoying a purer supply of water, carried their lambs to the full period. Since better care has been taken to prevent the water supply from being contaminated by the manure heap, neither mares nor ewes have suffered abortion.

INFLUENCE OF THE MOON.

Young plants, like human babies, must have plenty of rest. If they shoot up from the seed in the waning of the moon, they enjoy the repose of the long, dark nights; if in the growing moon, their young life, over-stimulated by the light, perishes or suffers deterioration more or less.

The latest observations make it certain that the sun-heat reflected from the full moon's face is sufficient to dispel clouds, and it must modify therefore, notably, the climate of the kitchen garden.

One of the most brilliant astronomical discoveries of the last ten years is that of the so-called eleven-year cycle, during which Jupiter and the other planets alternately collect upon one side of the sun, and then at other times disperse themselves around it, producing in the one case an abundant supply of spots upon the sun's disc, with a corresponding lowering of the climate of the earth, and in the other, the dispersion and disappearance of spots, and a higher mean temperature of the earth. —*Lesley's Lectures.*

—It has been said that migatory birds prepare for long journeys by purgation brought on by eating the seed of a weed common on its feeding ground.

NON-BEARING APPLE TREES---PRUNING.

Letter from a correspondent at Taunton, "W. H R.," makes several inquiries in regard to the management of apple trees, which seem to require more space than is usually devoted to notices under our head of "Extracts and Replies." We give it, therefore, a position somewhat more conspicuous.

Our correspondent desires to be informed in the first place, "how to make apple trees bear that are standing in grass ground, and that have not been manured for several years."

To this query we reply, that we consider it the most effectual, and the cheapest way in the end, to plough the whole surface this fall, if practicable, manure with compost or fresh manure, and harrow it thoroughly in. Plough carefully, so as not to wound the stems of the trees, and five or six inches deep. If the soil below six inches is ordinarily light, the roots will mostly be under that and will receive but little harm from the plough. If a few small roots are disturbed the damage will be quite trifling. This course will not only enrich the whole soil, but will render it light and porous, and suitable for the roots of the trees to extend themselves and find nourishment in it.

Top dressing will not answer; its effect will be to enrich the surface, stimulate the net-work of grass roots that lie near the top of the ground, cover it with an accumulated growth, and thus rob the trees of the nutriment which you are aiming to supply them with.

It will be best to cultivate the orchard with some hoed crop for a year or two, and manure moderately each season. In this way the soil will soon become light, the atmosphere will have a decided influence upon it, and a paying crop may be the result for several years, and the trees receive much benefit at the same time. These crops may be barley, potatoes, or mangolds. The ground may then be stocked with grass, and a ton to the acre cut for five or six years without special detriment to the trees. They will have an average growth in the extension of their branches of about eight inches annually, and their foliage will be vigorous and of a dark green color. If apple trees do not bear under such treatment—and sometimes they will not— the cause of such barrenness, and the remedy for it, are alike unknown to us. On very rich land, trees occasionally make so much wood that they do not fruit; cropping the land with potatoes or grain has a tendency to check the growth of wood, and induce the trees to bear fruit.

We have very little faith in the efficacy of digging up the earth about fruit trees in a circle whose diameter is only six or eight feet. It is probably better than no digging, but is not, we think, an economical operation.

Our correspondent continues as follows:—

"I have one apple tree that bears one-half one year and the other half the next. I should like to know if it cannot be made to bear every year?"

There are no means in our knowledge of making a "tree bear all over every year," excepting a generous soil and a judicious management of the tree in every respect. It is rarely the case that an apple tree does bear every year. A fair crop of apples exhausts the tree and the soil in a considerable degree, so that both soil and tree must have rest and time to recuperate their exhausted powers. If a tree bears a moderate crop *every year*, whether it be on one-half or the whole tree, it seems to us that it would be about as much as we can reasonably expect. He continues:—

"I would also like it if you would give some directions about trimming, as to time, and about how a tree ought to be trimmed."

We are glad to find that an interest is still felt in the apple crop, although it has been so sadly deficient for several years past. It may flourish again, and afford us a large surplus for foreign markets. Wholesome, nutritious and palatable as the apple is, thousands of families among us have undoubtedly been without it,—unless in the most limited quantity,—for four or five years past. During this period, less attention has been paid to the setting new orchards; those of middle age have been greatly neglected, and old trees have been cut down by hundreds and given to the flames.

Another and prime cause of rapid decay and loss has been occasioned by thoughtless, careless and injudicious pruning. Few of the duties of the farm are so badly performed—bad

in the *manner* in which it is done, and in the *season* usually selected for the operation. Trees are living things, and must be treated as such. Their young bark is as vulnerable to hob nail boots as the back of the hand, and as easily mutilated by a dull saw or knife. No skilful surgeon would amputate a limb with dull instruments, or leave the bleeding wound exposed to the air; but many farmers who have pruned for forty years, and think they "know a thing or two about it," do both.

Every wound made in pruning that is half an inch across should be covered. If the tree is vigorous it will probably grow over without help, but covering greatly aids the effort of the tree in healing up any damage done to its outer garment. The best covering is gum shellac dissolved in alcohol; but as alcohol is quite expensive at present, paint of any color will answer the purpose, if care is used not to let it get upon the bark.

There is need of but very little pruning where an orchard has been properly managed from the start; no large limbs will ever need to be taken away, unless broken by winds or injured in some other way. *Prune but little*, is a good motto, but prune *annually*. Do not allow suckers or limbs that are crossing each other to grow several years before they are removed. Suffer the shoots that start out in spring to remain until the leaves have fallen in autumn and then cut them smoothly off. The tree needs them for a time, and Nature, ever ready with a helping hand, sends them out to aid the leaves of the top in elaborating the sap and increasing the whole growth of the tree.

As to the best time for pruning apple trees we have not a particle of doubt. From a long series of personal experiments running through twenty years, from reliable books recording the experience of others, conversations with practical men and an extensive examination of orchards, we are fully of the opinion that the *middle of the month of June* is the most appropriate time. But as the ground is covered with grass or other crops at that season, and hoeing and other work is pressing, it is not always convenient to engage in it then. The next best time is in *October, after the trees have shed their leaves;* and this may be extended into November or December, if the operator can keep himself sufficiently warm to do the work well.

Where we have carefully pruned at either of these times it has seldom been followed by a flowing of the sap, and the black discoloration of the bark which so often follows spring pruning. The wounds become dry and hard on the surface, a lively growth commences in a few weeks if the pruning is done in June, and early in the following spring if the work is done in the fall, and the tree seems to sustain no check or injury whatever.

The question may be asked. *Why* is it best to prune at the seasons mentioned? We answer, because the tree is then *in a comparative state of rest*. The sap has ascended through the sap vessels in the trunk, followed out the extremity of the smallest twigs, and into the leaves, there to be worked over by the wonderful alchemy of Nature into a thicker and more substantial substance. This thickened, or inspissated sap, as it is called, then passes down directly under the bark, and gives the trunk and branches their annual growth in diameter. Now, then, when the tubes or sap vessels are nearly empty, or are comparatively so, is the time to prune. This occurs, for about fifteen days in midsummer, and after the trees have cast their leaves in autumn, until a succession of sunny and warm days sets the sap in motion again. Such days occur sometime in mid-winter, and it would then be unfavorable for pruning.

In pruning in June or October the saw soon becomes so much covered with gum that it is moved with difficulty, and it becomes necessary to wash it. This has never occurred in March, April, or May, in our experience. The sap is then thin and abundant, and the saw remains clean and bright.

In pruning the aim should be to keep the head of the tree open to the air and light, and free from limbs that are crossing and rubbing against each other. Cut out these and the occasional dead limbs which may be found and the orchard which has been well managed will need little more in the way of *pruning*. Each tree should be examined annually, and whatever is needed for it, done.

—Alexander Hyde, of Lee, has been invited to deliver a course of twelve lectures on agriculture, this winter, before the Lowell Institute at Boston. This gentleman delivered an able address before the Hoosac Valley Agricultural Society at their fall meeting.

For the New England Farmer.

THE GARDEN IN DECEMBER.

Our New England climate will preclude much actual labor in the out door garden in December, unless we have cold frames in which we have plants that are being wintered over. These will need looking to, occasionally, to see that all is right. Give air in the middle of pleasant days, and see that they are properly protected during extreme cold days and nights. Prepare hot-bed frames, sash &c.; paint and reglaze old sash, and if you have none make new and have them ready against spring opens.

Look to the fruit and ornamental trees, and see that the mice do not get at them to their injury, cut and clear away all grass, or weeds from around them, so they will have no shelter to harbor in; see the trees do not get overloaded with snow or ice; shake off the snow, gently, from fir and other evergreen trees in the lawn, yard, &c. Look over, and see that the seeds are all well dried, correctly labelled, and stored away safely in paper bags, boxes, &c., and that no vermin infest them; make a memorandum of seeds wanted ready to order early.

The past season we had, by a few nights slight protection, good ripe tomatoes from our garden as late as the middle of October, and green corn good for boiling as late, although the frost had singed the blades of the stalks. For the first planting we had the Mexican sweet corn, which is good enough for any one; this we planted early in May, and had boiling ears in good season in July; this kind has a small kernel and medium sized ear, but very sweet and good. I then planted Trimbles the 22d of June and began picking it early in August, and in October there were good boiling ears; this is a larger eared, and kernel variety, than the Mexican, about the size of the Evergreen; it is an excellent variety for the garden. I have relied on the Evergreen, mainly, heretofore, which is a larger and later variety and very good, lasting a long time in cooking and eating condition; but I prefer, for my own eating, either the Mexican or Trimbles, as grown the past season; I think they are hard to be beat.

Our pole beans, this season run too much to vines, although they bore a fair amount of fruit. I think we planted them too thick, although the poles were stuck three feet apart, or over; beans, squash, cucumbers, and tomatoes grew largely to vines in our garden. Summer crook-neck squash, I have failed to grow good for several years past till this year, when we had nice ones; heretofore they have turned to hard shell pumpkins-like things, although seed was procured from different sources. We also had nicer Citron Watermelons than for some years; these we shall preserve, using a little green ginger root, lemon, &c. They may be preserved and dried, and make a substitute for expensive dried citron. Strawberries we had many more of than I expected when in blossom, there being so much rain at the time; grapes were hardly dealt with by the cold of the last winter, killing and injuring the vines; although I had two Concords that were not laid down which bore quite full. My Hartford started only from dormant buds. Currants did not do as well as last year; the bunches want taking up and dividing, using only the young shoots and setting in new ground, deeply worked and well enriched. I have yet to learn that the "currant worm" has appeared in this vicinity—*long* may he be in coming. W. H. WHITE.

South Windsor, Conn. 1868.

For the New England Farmer.

BRAINS IN FARMING---No. 1

Not long since, in passing across the meadow of a young Vermont farmer, where old stumps, pieces of rails, sticks, brush, &c. were lying scattered about promiscuously, rendering the use of the mower and horse-rake an utter impossibility. I asked him the following question: "Did you know that *brains* were a capital article to use on a farm?" His reply was,—"Brains! what's that?" To present this case as indicative of the average intelligence of Vermont farmers, would not be, perhaps, exactly fair; and yet, judging from careful observation, one can hardly avoid the conclusion that there is more than *one* farmer among us who does not know *brains*, much less use them in his farming operations. I hardly know how to account for this glaring fact.

It is not that Vermont farmers, as a class, are destitute of brains. But the trouble is, most of them ignore brains altogether, and depend on muscle alone. There are instances, however, I am happy to say, and they are multiplying gradually from year to year, which go to show that when brain-power and muscle-power come into competition in the management of the farm, brains are sure to win. Not that muscle can be dispensed with, but brains render muscle more effective and productive.

There are instances in our State where professional men, such as lawyers, physicians, and even clergymen have been, and are, the most successful cultivators of the soil among us. Does any one wish to know the secret of their success? It is simply this: they put *brains* into the business. Their employees supply the muscle and they themselves furnish the brains and make every blow tell, if not in paying crops, yet in the permanent improvement of their farms.

I have never known an instance where a merchant, or a mechanic turned his attention to agriculture and failed of success. What is the secret of this? It lies in the simple fact that they carry the brain culture, and business habits acquired in mercantile or mechanical pursuits into their farming operations. If they raise a colt, or a yoke of oxen, or a

crop of grain they know what it cost them, and whether it pays or not. If it does *not* pay, they put in a little more brains, and "try, try again" until they do make it pay.

I have an instance now in my mind of a young man who left mercantile business in one of our large cities and came back to the old homestead to take care of father and mother in their declining years. The farm was located in an out-of-the-way place, hard and stony, very little of the land capable of cultivation, but an excellent grass farm.

He went into the stock-raising and dairy business and was successful; while those around him with much better farms, relying on muscle alone made very little head-way.

The waste of muscular power in our State, for the lack of brains or neglect to use them aright is enormous. Were this vast power rightly directed it would make our green hills and beautiful valleys "bud and blossom like a rose."

I have, Mr. Editor, unbounded faith in *brains*,—especially in their application to agricultural operations.

In my next article I propose to bring out some facts which indicate that if our Vermont farmers have brains, comparatively few know how to use them. Uncle John.

Charlotte, Vt., Oct. 28, 1868.

Remarks.—On introducing "Uncle John" as a new correspondent of the Farmer, we may be permitted to remark that however assiduously he may have cultivated "brains" his beautiful chirography shows conclusively that he has by no means neglected the training of "muscle."

For the New England Farmer.

ROVING HABITS OF COARSE AND FINE WOOL SHEEP.

In your issue of Oct. 24th, I noticed a communication from T. L. Hart on "Fine and Coarse Wooled Sheep," in which he assumes that with him coarse wooled sheep have paid a "good per cent. on cost" while the fine wooled were unprofitable.

Without assuming to argue this point I propose to say a word in answer to your inquiry, under the head of "Remarks," as to the roving habits of the coarse wools, as charged by the fine wool breeders.

I cannot write from actual experience as it regards coarse wooled, but as to fine wooled I can. I was raised on a farm that paid some attention to sheep-breeding. We had a flock of some twenty-five to forty, and I have to say that *no* fence or wall would or could enclose them, even though the feed inside was better than elsewhere. Their habits were such that we could only find them by hampering, and even then they would scale the wall. They became a perfect nuisance and the result was, all were sold at a sacrifice, though for more than they were worth, considering the great trouble to take care of and keep them at home. Other farmers in the same neighborhood were troubled as we were. I do not believe it possible for any coarse wooled sheep to be of a more roving habit than these fine wools were.

I have called the attention of prominent wool growers to the subject of the "Remarks" above referred to, and I find that their experience with fine wooled sheep has been the same, some adding "they will go *over* or *through* any fence in New England in which there is so much as a knot-hole."

A gentleman of my acquaintance began several years ago with coarse wools. With only ordinary fences, he has never had the slightest trouble with them, always finding them in the pasture where he put them. He remarked that "they would fill themselves and instead of roving about, would lay quietly down, chew their cud and *grow fat*." He was, however, finally induced to change them for the more fashionable fine wools, and for three years was on the trot after his sheep. He became so much dissatisfied that he changed back to coarse wools and has now a fine flock, which give him no trouble whatever, so far as roving is concerned. I have not as yet seen a coarse wooled sheep hampered on any farm, and from the best evidence I can get they are far more peaceable than fine, under all circumstances.

Many farmers in Maine in possession of the fine wooled sheep are offering them at a reduced price, and no buyers. I know of one who offers his whole flock at $1.50 per head, and is paying $3 50 and $4.00 for coarse wooled sheep. Others are paying $5 and $6 for coarse, after having sacrificed on their fine sheep. Coarse wooled breeders are anxious to have this question discussed as they are positive the verdict will be in their favor.

Wilton, Me., Nov. 2, 1868. Zen.

For the New England Farmer.

LONG-WOOLED SHEEP.

The question is frequently asked, which of the different breeds of the long-wooled sheep is the most profitable? And it is a question which is very difficult to answer. Some prefer one, some another; but the choice ought to be directed to the characteristics which we desire. There is but little difference in the weight of fleece or character between the Leicester, the Cotswold, Lincoln or Teeswaters, and but little difference in the weight of carcass.

The *Leicesters* mature the earliest, but are the most tender, and the least prolific; the latter, perhaps, after all, not so much of a fault; for too many lambs are not always the most profitable; but the Leicesters are bad nurses, as a general thing, and lay on them

fat almost entirely just under the skin, so that the fat lays on the outside of the meat. This would not be so palatable to the American taste, nor is the mutton of the Leicester held in the highest estimation in England. The Leicesters are the most showy of any of the long wools; have clean white faces and legs, a round body, and the quarters very evenly balanced; the wethers weighing at two years old from twenty to thirty pounds per quarter, and the ewes at four years old from eighteen to twenty-six.

The *Cotswolds* are a more hardy breed, more prolific and better nurses; the wool may be a trifle coarser, but if a person desires, he can make his wool finer or coarser by selecting his finest buck and ewes for breeding. His fleeces, however, will be a little lighter. The Cotswold is not so symmetrical an animal as the Leicester; its hind quarters being larger than the forequarters, and it has a tendency to accumulate fat on the rump. The wool grows down on the forehead and the chops, and down on the legs. The fat is better distributed through the whole system than on the Leicester.

The *Lincolnshires* are larger framed animals; the staple is longer and fleeces heavier than either the Leicesters or Cotswolds. It measures from ten to eighteen inches in length, and the fleece weighs from eight to fourteen pounds. The sheep is hardy and prolific, but matures slowly and requires a very rich pasture; fourteen pounds of wool cannot be obtained without good feed and plenty of it.

The *Teeswaters* are the most prolific of the long wooled breeds; their wool is not quite so long or their fleece so heavy as the Lincolns; they require good pastures—as good as do the Short-horn cattle. In fact it will not do to turn the long wooled sheep upon poor, rough pastures for the purpose of exterminating bushes; if you do you may expect to exterminate your sheep. They must be well fed, or their wool is worthless, and if allowed to run among the bushes it becomes filled with sticks and seeds and a large portion of their wool is left hanging to the bushes. The Teeswaters, on good pastures, at two years old, will give from twenty-five to thirty-five pounds per quarter, and some at four years old have been fed to fifty-five pounds per quarter.

There are a number of grades from these breeds of which, as a lustre-wooled sheep, the *New Oxfordshire* is at the head; this is a cross between the Leicester and Cotswold.

The *Oxford Down* as a mutton sheep is valuable, but its wool partakes too much of the character of the Southdown. For some purposes it would be valuable; but for a lustre wool it is of no account. It is an excellent breeder, matures early, and produces good lambs, which bring a good price. It would do better on poor pastures than any of the others, but we should advise our farmers to keep these on good pastures. It is very well on paper to talk about subduing wild lands by pasturing with sheep, but such pastures make poor, wild wool and run out the sheep. If you desire good animals you must feed them. MENTOR.

Boston, Oct. 20, 1868.

GLYCERINE.

This article within a few years past has become of great importance in the arts and in medicine. It was formerly supplied to us from England, at a high cost, and often contaminated with rancid oils. It was chiefly obtained from Palm oil. It is now produced from the waste in the manufacture of star candles, from lard, and until within ten years, was entirely lost.

Glycerine is sweet to the taste, and is not subject to oxidation. It has the consistence of oil, but does not congeal. It mixes readily with water, but does not readily evaporate. It is used internally and externally in medicine. It is used to some extent in the place of Cod Liver oil, and is said to be quite as efficacious, and is certainly more palatable. It is used in surgery in the treatment of burns and wounds, and enters into the composition of salves and ointments. It is applied in rheumatism, sore throat, and diseases of the ear, and is a specific for chapped hands and lips, and for sore teats in cows. It is antiseptic, and as a solvent for many substances, is better than alcohol or water.

It is used for filling gas metres, for it does not freeze like water, nor evaporate like alcohol. Perfumers use it largely in the preparation of hair dressings. It keeps the scalp sound and healthy, and the hair soft and smooth.

Tanners make use of it to keep leather soft, and it is the best oil for harnesses, and is the most valuable ingredient in paste blacking. Combined with printers' ink, it keeps the rollers soft and flexible. It is less effected by the atmosphere than almost any other substance.

About 600,000 pounds of it are now manufactured annually at Cincinnati, which is subjected to various degrees of purification, according to the use for which it is wanted.—*C. Cist, in U. S. Ag. Rep.*

—The most extensive farmer in France is M. de Candaine. His farm in Touraine is valued at two million francs, and the income he derives from it is considerably above 500,000 francs a year. He sells every year one thousand head of fat cattle, and has on his farm a distillery, a beet, starch and sugar factory, and a large linen and woolen factory, and all his factories and farm buildings are lighted with gas. His farm is said to be the most productive in Europe.

NEW PUBLICATIONS.

The Tim Bunker Papers, or Yankee Farming. By Timothy Bunker, Esq., of Hookertown, Conn. With Illustrations, by Hoppin. New York: Orange Judd & Co. 1868. Boston: A. Williams & Co., 100 Washington Street.

This volume is a reprint of a series of articles that originally appeared in a monthly magazine entitled the *American Agriculturist*. As occasional articles in that miscellaneous journal they were sufficiently offensive; as a whole bookful they are more than we can swallow. We are sorry to see the Tim Bunker papers in book form. We regard the volume as a slander on farmers, and an insult to every one engaged in agriculture. The style, the language, the characters and the illustrations are those of ignoramuses and clowns. And yet the writer says these papers "are a humble attempt to represent the average wisdom of the Connecticut farmer," and as we suppose the farmers of Connecticut are as intelligent as those of other States, we conclude he has given us his idea of the average wisdom of the farmers of our country generally. Two examples are all we care to copy to show what that idea really is:—

"Irritation of the land!" exclaimed Kier Frink, as he looked out of his coal cart, where he had stopped to hear what was said by the company. "What does he mean by that? I never heern of that even in the Whiteoaks, where they irritate almost every thing from cats up to old hosses."

"He is gwine to turn a brook on here and git six tun of hay to the acre," answered Tucker.

"If he can," added Jones.

"And blame him, he'll du it neow, ye see, for he's a master hand to carry his pint," said Seth Twiggs.

"Neow du tell," responded Kier, hitting his horse a smart lick, "Tim Bunker waterin a swamp! git up old hoss, this aint a safe place for yew."—pp. 142–3.

* * * * * * *

"Hain't you got most tired on't, Squire?" asked Ben Jones, as I carted along my twentieth load of muck last night.

"Guess not. Why?" I replied.

"It's a mighty deal of hard work for nothing. I'd just as leeves have so many loads of snow banks in a barnyard."

"It's all moonshine about there being any vartu in muck. I'd jest as soon dung a field with icicles," chimed in George Washington Tucker, who gets his ideas and his drinks from Jones.

"Them's my sentiments, exactly," said Jake Frink, as he met us in the road with a load of oats in bags, going down to Shadtown to market.—pp. 182–3.

Is this a fair representation of the "average wisdom" or the average intelligence of Yankee farmers? Are they as utterly ignorant of irrigation, of the value of muck, or of the use of language as these extracts indicate? We were born, brought up, and have worked a good part of our lives among farmers,—they are our neighbors, friends and relatives,—and we regard such slang as a calumny on them and on ourselves, alike false and injurious. We ask that this style of "book farming" be abandoned, and that our agricultural teachers shall recognize the common sense, if not the intelligence of, farmers. We believe that farmers know more, and learned men less, than they have credit for; and that there is less difference between the "average wisdom" of the workers upon the farm everywhere, and the actual knowledge of scientific men, than is generally supposed. Prof. S. W. Johnson, a thoroughly scientific man, and for many years a teacher of chemistry, &c., in Yale College, recognizes this fact in his new work on "How Crops Grow," by the broad assertion, among many similar recognitions, that "*Every successful farmer is to some extent a scientific man.*"

It is therefore with sincere regret that we acknowledge the receipt from the publishers of such books as Darwin's "Animals and Plants under Domestication," of Johnson's "How Crops Grow," &c., a volume of such twaddle as the "Tim Bunker Papers," and that they should illustrate it by caricatures of farmers more offensive, if possible, than the text itself.

We do not deny—we wish we could—that such vulgarisms as we object to in this volume are used by some farmers; neither can we deny that profanity and obscenity are sometimes heard upon the farm. But we do protest earnestly against their repetition in well-printed books.

Side Shows at Fairs.—"The more we see of these exhibitions," says the Chicago *Prairie Farmer*, and we perfectly agree with the writer, "the more thoroughly we are convinced that they are unmitigated nuisances, every one of them, and ought not to be tolerated, and with this conviction we are determined, if possible, to create a public sentiment that shall neither recognize nor patronize them. It is certainly mistaken policy on the part of our agricultural societies, for a comparatively paltry fee, to permit these travelling humbugs to attend their exhibitions, and reap and carry away, without leaving a consideration, thousands of dollars, which remaining with the people, would contribute to the success of future exhibitions. The sooner this truth is recognized, and side shows at our Fairs numbered with horse-racing and gambling, the better it will be both for the societies and the people."

IRISH MOSS.

Chondrus Crispus---Carrageen Moss.

Quite a business has sprung up within a few years past, in the collection of this article on the eastern coast of Massachusetts, especially at Scituate, in Plymouth Co., in the neighborhood of Minot's Ledge. Some 6000 barrels, it is said, are annually gathered. It was formerly brought to this country from the coast of Ireland; hence its name, Irish moss.

It is collected during the summer months, from May to September. A rake with flat iron teeth, some half hogshead tubs, baskets, a

common hay rake, a suitable boat, and some pieces of canvass constitute the outfit of a mosser.

He commences operation at low tide, when the moss is left bare on the rocks. At spring tide, when the rocks are uncovered to a greater distance from the shore than at neap or common tide, he finds the best article. This he pulls by hand. It is more free from admixture with tape grass, and other marine plants, and he bleaches this with special care. This is bought by the druggists, and is used for blancmange.

At common tides, he gathers it with his rake. As the tide rises he runs his boat on to the beach. The moss is then transported on hand barrows to bleaching beds on the higher parts of the beach, where it is turned with a hay rake until it is dry. Then it is washed in salt water, and again spread and dried, and this process is repeated several times, until it is sufficiently bleached, when it is packed in barrels and headed up and is ready for market.

The mossers watch the heavens as carefully as do the hay-makers, and when a rain threatens, they put it into cocks and cover it with canvass hay caps. The prime article constitutes but a small part of the crop. This, as we have said, is chiefly taken by the apothecaries.

Its most important use is in the manufacture of cloth, paper, felt hats and straw hats, in which it is used for sizing. The poorer qualities are bought for size. The second quality is sold to the brewers, by whom it is used for "fining" beer. A quantity of the moss is boiled with the beer, and its gelatine unites with the impurities, and produces the required clarification. It is also used, instead of isinglass, fish skin, and white of eggs, for fining coffee.

A Large Business.—One firm in Cincinnatti made in a single year, star and tallow candles, soap, lard oil, olive oil, glycerine, &c., exceeding the value of two millions of dollars. They are regularly filling orders from California and elsewhere, of five to ten thousand boxes of soap and star candles, the first of sixty and the second of thirty-five pounds to the box. They use up of resin, thirty-six hundred barrels, of soda ash one thousand tons, of candle wick thirty thousand pounds, of sulphuric acid twenty hundred carboys, of tallow five thousand barrels, and their consumption of lard, on an average, equals weekly seven hundred and fifty tierces of three hundred pounds each, per week, for two hundred and eighty days in the year.

No Trials of Speed at the New York State Fairs.—From a table of the attendance at each of the annual fairs of the New York State Agricultural Society for the past twenty-four years, it appears that the average attendance for each of the first twelve years was 51,000, and for each of the last twelve years 53,500. This latter term includes, of course, the several years of the late war, during which many societies held no exhibition. The attendance this year was 68,400. And yet the *Country Gentleman* informs us "that *never* has a horse trotted against another, or against time, on the Society's grounds."

For the New England Farmer.

CULTIVATION OF CRANBERRIES.

I noticed in a late Farmer an inquiry by a New Hampshire correspondent in reference to cranberry culture. Having had a little experience in the business, sometimes succeeding and sometimes failing, an inquiry of that kind always interests me.

Some ten or twelve years ago I conceived the idea of converting what was formerly the bottom of a reservoir, into something that would be of some sort of income. A portion of it was covered with small willows; another portion with sweet flag; and the rest of it was just getting into grass. The willows and sweet flag I took out, root and branch, which left the mud naked and bare. Into this mud and among the grass I put the vines, in little tufts, about three feet apart each way To get the right kind, I carted them seven miles.

The whole process created quite an excitement in the neighborhood. It was a wet, muddy job, in which I had no sympathy from my neighbors. Two strands of No. 9 wire were run on two sides of it, to keep off the cattle. I estimated the expense to be about $12,—possibly it might have been $15. In two years the ground was covered with vines, some of them being six feet long. I soon began to harvest cranberries, and the fifth and sixth years, I think it was, I sold $50 worth each year. Since then the crop has varied from a few bushels to nothing. This year I do not get a cranberry, though at one time they looked well.

With this little experience, assisted by observation, I think now I could select situations

that in six years could be made to be worth $1000 per acre.

The first consideration should be flowage. If a meadow cannot be flooded at pleasure, it will amount to little to set the vines. They should be flooded in the winter, to keep them from the frost. They should be flooded two or three times after blossoming, to kill off the cranberry worm or maggot. He begins his depredations upon the small berries and continues till frost comes, unless he is checked in his evil ways. Flooding will drown him, and not injure the berries. One day under water is all-sufficient to quiet him. The ground should be flooded again at the full of the moon in September, if there is danger of frost, or at any time when they are liable to freeze. It is best to keep them on the vines as long as possible. When fully ripe the flavor is much better than when picked green. If they are flooded again directly after raking, there will be many berries saved by their rising and floating ashore.

The best possible place for growing the cranberry is below a reservoir that can be used at any time. A meadow thus situated, can easily be made to yield 100 bushels to the acre. On that portion of my little meadow, from which I took the turf and the vines got the start of everything else, I raked at the rate of 120 bushels to the acre. The soil should be turfed, which will cost from $50 to $100 per acre. This turf will, in many cases, pay for the labor of removing it. It becomes, by decomposition, an excellent material to use in barn-yards, hog-pens and stables. It is worth much more than nine-tenth of the farmers are aware of.

The final result depends somewhat upon the variety of vines set. A large purple berry sells best in market. The righ tway is to go into a meadow before the berries are gathered and mark those spots with stakes that produce the largest, reddest berries. Let those spots be the ones from which to take the vines. Try no experiments with the half-ripe looking fruit. They do not sell well in market.

Some cultivators cart on a coat of sand after the turf is removed, before setting the vines. If this is done, the sand should be clear from soil, —plastering sand would be best. Two inches deep is enough. It pays to put on the sand, if one can get it. Some cut the vines close to the roots, run them through a hay-cutter, sow them like grass seed, and harrow or hoe in. It is said that from every joint covered by the soil, will spring a root. If this be so, this is the right way to get the vines started all over the soil at once. The advantage is, they get the supremacy, and will not need so much attention to keep out weeds, grass and bushes. At any cost, these intruders should be kept out till the vines cover the ground, so as to leave no room for them.

I have thus hastily, yet perhaps clearly enough, given my notions of cranberry culture, to enable our Troy brother to decide whether he has the right situation for cranberry raising. If he has no reservoir to draw from, perhaps he can flow a portion of his meadow, and put the rest into vines, and thus be able to flood them at will; or perhaps he can find a chance away back in the woods, to build a dam, and thus secure the necessary supply of water.

The reason of the failure of my crop has been the short supply of water, for the last few years, at the right time. I have decided to flow a swamp, above my meadow, and thus have a constant supply at hand at all times. With this arrangement, that will cost me, perhaps, $20, I feel sure that the two half acres will be worth to me the interest of $1000 per year, and pay all expenses besides. My two patches are situated one above the other, so that the water that flows one will run upon the other. The swamp I shall flow is still higher up.

I wish farmers would turn more of their attention to this subject. It is one of the undeveloped interests of our State that should be looked after. The right time to do the work is when it can be attended to. The vines may be set in the fall or spring. Yours for the full development of the farming interests of our country. Z. BREED.

Weare, N. H., Oct. 12, 1868.

REMARKS.—It is with much pleasure that we publish this prompt response to Mr. Farrar's request for information on the subject of cultivating the cranberry. The failure detailed by Mr. Breed is, if possible, more instructive than even his practical directions how to proceed in the preparation and management of a meadow. It is scarcely less important to know how *not* to do a thing than it is to learn how to do it, in any farm work. Many of our readers, as well as Mr. Farrar, will thank Mr. Breed for his valuable article.

For the New England Farmer.

FOOD.

No subject is of more vital importance, either physiologically or economically, to farmers or to others, than that of food; because we are almost wholly dependent on its proper use and distribution for the muscular strength and efficient industry which produces individual and national prosperity.

In a lecture on Food, delivered before the Society of Arts, England, Prof. Letheby, after presenting several elaborate tables of chemical analysis and relative values of different kinds of food, deduces the fact that foremost of all are those which come directly from the vegetable kingdom, and of these those

of the cereals are the most important. His remarks upon wheat seem to be of particular interest.

He says: "Different species of this grain are cultivated, but the most common in this country is *Triticum vulgare*, of which there is a summer and a winter variety.

"The grain varies a good deal in composition, according to season, climate and soil; but as a rule, the wheat of southern climates and warm seasons is richer in gluten, and of harder texture than that of colder climes. They are then called stronger grains, although the latter, from their being softer and kinder, give a larger proportion of flour. Some of the hardest varieties of wheat, as rivets, are used to strengthen the flour of new grain, which is always unmanagable, and to improve that of bad seasons and of damaged quality.

"The structure of the grain is like that of all the cereals; there is an outer siliceous and woody covering, which is altogether valueless as food; then there is a layer of rich nitrogenous matter, containing a digestive body called cerealine, and within that is the flour, which forms the great bulk of the seed.

"When ground whole, it forms brown meal, which is rarely used in England at the present time, although it was the common food of our forefathers, and even now is much employed in Westphalia to make the dark-colored bread called pumper-nickel. It contains from five to twelve per cent. of indigestible matter in the form of bran, the removal of which, according to Liebeg, is only a refinement of luxury.

"The practice at the present time is to bolt or sift the ground meal through sieves or silks of different degrees of fineness, and thus to remove the coarser bran. The products have different names in different places, and have also different values; but generally 100 lbs. of wheat will yield from 78 to 80 parts of good serviceable flour. The other products are about 2 parts of specks, or tails, or tippings; from 3.5 to 6 of coarse pollard; and from 4 to 10 of bran.

"Seconds flour is practically the best for domestic use; and of this there should be at least 80 per cent. obtained from the grain. Attempts have often been made to increase the produce; for as the bran contains a good deal of nitrogenous matter, and is, moreover, rich in fat and saline substances, it has been thought wasteful to remove it; but the experimental researches of Poggiale, the learned Professor at Val de Grace, have shown that at least 50 per cent. of the bran is perfectly indigestible, and may be passed successively through the bodies of four or five animals without undergoing change. It moreover acts as an irritant; and by hurrying the food through the alimentary canal, is very likely to cause waste. Those who labor hard, as railway navigators, invariably choose the whitest bread for food, believing that it is not only more digestible, but it is stronger, and will enable them to do more work. Without doubt, however, there is room for improvement in the treatment of flour, and in the complete utilization of its several constituents. M. Mege Mouries has invented a process whereby the outer skin only of the wheat may be removed, and from 86 to 88 per cent. of flour realized. The process was examined in 1857, and reported very favorably of by Dumas, Peouze, Payen, Peligot and Chevrelel, but I am not aware that it has come into use.

"M. Mege Mouries also directed attention to the fact that the bran contains a portion of very soluble nitrogenous matter, cerealine, which is of the nature of diastase, and has the property of dissolving starch. This, no doubt, might be utilized by treating bran with warm water, and then using the water in the manufacture of bread.

"The nutritive value of wheat is shown in tables No. 3 and No. 4 [These tables are not given on account of their length.] and although the average amount of gluten is there set down at about eleven per cent. it ranges from eight to fifteen per cent, the largest quantity being found in the wheaten flour of India, Egypt, South America and the South of Europe.

"It appears, too, that the quantity of gluten, as represented by nitrogen, increases with the coarseness of the flour, and so, also, does the amount of mineral matter.

"The test for a good flour are its sweetness and freedom from acidity or musty flavor; and its nutritive value, as far as gluten is concerned, is estimated by the process of Beccaria, who discovered gluten in wheat more than a century ago. A given weight of flour (say 500 grains) is made into a stiff dough, and is carefully washed by tender manipulation under a small stream of water. The gluten remains, and when baked it expands into a clear looking ball, which should weigh, when thoroughly dried, about fifty-four grains.

"Of all the preparations of flour, bread is the most important. I shall hereafter describe the process of making it, but I may here remark that it should not contain more than from 36 to 38 per cent. of water, and the other constituents, excepting salt, should be the same as of good flour.

"In practice, 100 lbs. of flour will make from 133 to 137 lbs. of bread, a good average being 134; so that a sack of flour of 286 lbs. should yield 95 four-pound loaves. The art of the baker, however, is to increase this quantity, and he does it by hardening the gluten through the agency of a little alum, or by means of a gummy mess of boiled rice, three or four lbs. of which will, when boiled for two or three hours in as many gallons of water, make a sack of flour yield 100 four-pound loaves. But the bread is dropsical, and gets soft and sodden at the base where it stands. A good loaf should have the following characters: kindness of structure, that is, not chaffy or

crumby or sodden; and sweetness to the palate and to the taste. Wheaten bread is best eaten on the day after it is baked, for new bread is difficult of mastication and still more difficult of digestion, because of its gummy nature. When it becomes stale it does not really get much dryer, but it undergoes a molecular change, which may be restored by heating the bread in a closed vessel to a temperature of 212°.

"Wheaten bread is preferred to all other varieties of bread, because of its sweetness, and because it may be eaten alone. The nutritive constituents of it are in the same proportion as in wheat—namely, as 1 to 6.5, and a little more than 2 lbs. of bread will supply the requirements of the system; although, as I shall hereafter explain, it cannot be used alone without loss of health and strength."

Thus I have gone on quoting, not knowing where to stop, till nearly all that he says upon wheat is given; and, if it is as interesting to others as to me, I am satisfied. The subject of our food is one of far too great importance to be passed over as lightly as many are inclined to do. Were they thrown daily into the haunts of disease, caused by imprudence in food, for one month, perhaps, a new field of labor would be seen, with but few laborers to stretch forth a helping hand. O. W. True.

Farmington, Me., 1868.

For the New England Farmer.

SUPERPHOSPHATE---NORWAY OATS---MANURE.

The secretary of the Irasburg, Vt., Farmers' Club, Z. E. Jameson, Esq., furnishes the following brief report of the discussion at a meeting, Sept. 29, on the subjects of Superphosphate, Norway oats, and Manures and their use.

Z. E. Jameson had used one barrel of Vermont superphosphate. On corn it caused a better growth than ashes used in adjoining rows, but not so good a growth as that where a handful of compost from the hen house was used. The soil was sandy, the crop good, and no manure applied except in the hills. On turnips the result was satisfactory.

Wm L. Jameson had used Croasdale's superphosphate on four rows of corn, horse manure on four rows and a compost of muck, lime, ashes and decomposed bones on four rows. The corn was all alike, and he concluded that it would not pay to buy it as a fertilizer.

Wm. L. Locke, Jr., used half a barrel of the Vermont superphosphate on hops with no visible benefit. On corn, the rows manured with superphosphate were not enough better than the unmanured to be discernable, until the stakes were pointed out that marked the rows.

The subject of the growth and production of Norway oats from seed obtained from the originator, being introduced, Wm. L. Locke, Jr., remarked that he sowed half a bushel where the ground became wet by rains, and they mostly died out. The result was six stooks, probably five bushels.

J. B. Fassett sowed one bushel; they were badly killed out in the spring by wet weather, but proved twice as productive as common oats, although common oats were not killed so badly by wet weather.

Wm. L. Jameson sowed one pint which yielded half a bushel.

Geo. B. Brewster sowed one bushel and had threshed the crop, which was fifty bushels.

A. Jameson sowed one bushel, which, while growing, seemed three times as good as the common oats by the side of them. Crop not threshed.

Z. E. Jameson sowed twelve quarts. The growth was not much better than common oats. Crop unthreshed.

J. B. Fassett had this year sixteen rows of potatoes sixty-seven rods long. At one end, on sandy ground, there were good potatoes; along further the ground was damp and the potatoes were excellent. These were manured by ploughing in strong manure. A part of the same field was manured on top after ploughing. Here the vines were large and the potatoes small. Will never manure on top for potatoes again.

Capt. E. Grant bought last spring some horse manure that was burnt very badly by its own heat; so much so, that what was called twenty cords, made in a barn cellar, shrank to five. He applied it to ground for oats, and in comparison with other cow stable manure it proved as good a fertilizer, and he made up his mind that burnt or firefangled horse manure is as profitable to buy as any, and he did not care how much it was burnt. When he lived in Maine, a farmer there bought horse manure and piled it in large heaps where it would heat, and when applied to the land for corn, gave most excellent results.

The secretary suggested that it might be more profitable to buy manure after twenty cords had been reduced to five, than it would be for the farmer or stable keeper to allow his manure heaps to shrink at that rate.

ART AND SCIENCE OF FARMING.

The following extract from the introductory chapter of Mr. Johnson's new book, "How Crops Grow," will illustrate the author's style of writing and manner of treating his subjects. After having read the volume carefully, the editor of the *Country Gentleman* says: "In style, Prof. Johnson, is exceedingly condensed and concise, although clear and logical. We have not found an indistinct expression, while repetitions are avoided, and there is no attempt at anything like fine writing—the work is one

of fact and not of the imagination. With all that has been written on corresponding subjects during the last generation, we cannot be far amiss in asserting that the volume before us is *wholly new*—new in its language, as in its illustrations and arrangement, a product from the virgin ore and not from the scraps and waste metal of the past. We venture to add that it fills a place now entirely unoccupied in English literature."

We hope the annexed extract, with the favorable opinion of our contemporary will induce many farmers to purchase this book and make it their winter's study. Farmers' Clubs are often at a loss for fit subjects for discussion, and the introduction of frivolous ones sometimes offends sensible men, and proves fatal to the success of the association. Might not this volume be adopted as a sort of class book, by farmers' clubs? The book might be placed upon a stand or table, and each individual in turn called upon to read a page, more or less; all present having the privilege of asking any question as to the meaning of words or expressions used by the writer. A little experience would soon regulate details of procedure, and bring out thoughts and knowledge of facts from the various members of the club in such order as might be agreed upon. But to the extract:—

The *art* of agriculture consists in certain practices and operations which have gradually grown out of an observation and imitation of the best efforts of nature, or have been hit upon accidentally.

The *science* of agriculture is the rational theory and exposition of the successful art.

Strictly considered, the art and science of agriculture are of equal age, and have grown together from the earliest times. Those who first cultivated the soil by digging, planting, manuring, irrigating, had their sufficient reason for every step. In all cases, thought goes before work, and the intelligent workman always has a theory upon which his practice is planned. No farm was ever conducted without physiology, chemistry and physics, any more than an aqueduct or a railway was ever built without mathematics and mechanics. Every successful farmer is, to some extent, a scientific man. Let him throw away the knowledge of facts and the knowledge of principles which constitute his science, and he has lost the elements of his success. The farmer without his reasons, his theory, his science, can have no plan; and these wanting, agriculture would be as complete a failure with him as it would be with a man of mere science, destitute of manual, financial, and executive skill.

Other qualifications being equal, the more advanced and complete the theory of which the farmer is the master, the more successful must be his farming. The more he knows, the more he can do. The more deeply, comprehensively, and clearly he can *think*, the more economically and advantageously can he work.

That there is any opposition or conflict between science and art, between theory and practice, is a delusive error. They are, as they ever have been and ever must be, in the fullest harmony. If they appear to jar or stand in contradiction, it is because we have something false or incomplete in what we call our science or our art; or else we do not perceive correctly, but are misled by the narrowness and aberrations of our vision. It is often said of a machine, that it was good in theory, but failed in practice. This is as untrue as untrue can be. If a machine has failed in practice, it is because it was imperfect in theory. It should be said of such a failure—the machine was good, judged by the best theory known to its inventor, but its incapacity to work demonstrates that the theory had a flaw.

But, although art and science are thus inseparable, it must not be forgotten that their growth is not altogether parallel. There are facts in art for which science can, as yet, furnish no adequate explanation. Art, though no older than science, grew at first more rapidly in vigor and in stature. Agriculture was practised hundreds and thousands of years ago, with a success that does not compare unfavorably with ours. Nearly all the essential points of modern cultivation were regarded by the Romans before the Christian era. The annals of the Chinese show that their wonderful skill and knowledge were in use at a vastly earlier date.

So much of science as can be attained through man's unaided senses, reached considerable perfection early in the world's history. But that part of science which relates to things invisible to the unassisted eye, could not be developed until the telescope and the microscope had been invented, until the increasing experience of man and his improved art had created and made cheap the other inventions by whose aid the mind can penetrate the veil of nature. Art, guided at first by a very crude and imperfectly developed science, has, within a comparatively recent period, multiplied those instruments and means of research whereby science has expanded to her present proportions.

The progress of agriculture is the joint work of theory and practice. In many departments great advances have been made during the last hundred years; especially is this true in all that relates to implements and machines, and to the improvement of domestic animals. It is, however, in just these departments that an improved theory has had sway. More recent is the development of agriculture in its chemical and physiological aspects. In these directions the present century, or we might almost

say the last thirty years, has seen more accomplished than all previous time.

* * * * * * *

The farmer deals with the plant, with the soil, with manures. These stand in close relations to each other, and to the atmosphere which constantly surrounds and acts upon them. How the plant grows,—the conditions under which it flourishes or suffers detriment,—the materials of which it is made,—the mode of its construction and organization,—how it feeds upon the soil and air,—how it serves as food to animals,—how the air, soil, plant, and animal, stand related to each other in a perpetual round of the most beautiful and wonderful transformations,—these are some of the grand questions that come before us; and they are not less interesting to the philosopher or man of culture, than important to the farmer who depends upon their practical solution for his comfort; or to the statesman, who regards them in their bearings upon the weightiest of political considerations.

HOGS vs. BUGS.

For some time back the best and most scientific fruit growers in the West have been agreed, that practically there are but two methods universally available for fighting the curculio; namely, either 1st, by jarring the plum trees continually, or 2d, by allowing hogs the run of the orchard all through the summer months. The first method produces an immediate effect, because the "Little Turk" is thus arrested at once in his mischievous career, and prevented from stinging any more fruit. The second method is prospective in its effects, and operates chiefly through the hogs picking up all the wormy fruit as fast as it falls, and thus preventing the larva of the curculio from going underground, and generating a new brood of curculio to sting the fruit at a subsequent period.

We propose in the following paragraphs, without at all undervaluing the first method, to demonstrate by plain, hard, practical facts, that the second of these two methods produces most gratifying results when systematically carried out for a series of years, even without any regular jarring of the trees. The only exception to be made is in the case of the cherry, which unlike all other stone fruit, does not fall prematurely to the ground when bored up by the larva of the curculio. Hence, so far as regards the cherry, we must depend entirely upon the jarring process to subdue this insect.

But the plum curculio and its allies are not the only insects that we can successfully attack through the instrumentality of the hog; neither is stone fruit the only crop that can be protected in this manner. For the last fifteen years or so, pip fruit, namely, apples, pears, and quinces, have been annually more or less deteriorated by the apple worm or larva of the codling moth boring into their cores, and filling their flesh with its loathsome excrement. Unlike all the snout beetles that infest stone fruit in America, this is an imported insect, which was originally, about the beginning of the present century, introduced from Europe into the Eastern States, whence it has gradually spread westward into the Valley of the Mississippi. The facts which we shall presently quote prove that hogs are death upon this insect, as well as upon the plum curculio, picking up the wormy apples as fast as they fall, and greedily devouring them without any squeamish misgivings as to the wholesomeness of their living inhabitants. It is not at all improbable, either, that hogs may pick up and devour the larva of the codling moth after it has left the fallen fruit, and while it is on its travels for the trunk of the apple tree. For instead of going underground, like the larva of the plum curculio, this larva spins a cocoon above ground, and usually in the chinks of the bark of the tree upon which the apple that nourished it grew. Hence, as the apple worm is of some considerable size, some specimens being almost an inch long, a hungry hog would scarcely consider it "too small business" to pick up and devour as many as could be found travelling along the surface of the earth.

David E. Brown, one of the largest fruit growers near Alton, South Illinois, has for about five years kept both hogs, and, at times, sheep, in his apple and peach orchards. His fruit is not infested by insects nearly as much as that of his neighbors, although he employs no other precaution whatever to guard against the depredations of fruit-boring insects. His peach trees are also free from borers, though he takes no pains to worm his trees. His hogs keep in good condition on the fallen fruit. These facts were confirmed both by Dr. E. S. Hull and by Mr. B. L. Kingsbury, of Alton.

Mr. Caughlin, in the Report of the Alton Horticultural Society for July 2, 1868, "gave favorable experience in regard to hogs eating fallen peaches. His peaches were very free from worms this year. He attributes this to the fact, that the hogs in his orchard destroyed so many of the larvæ last year."

We know a cultivator who had heavy crops of plums for seventeen years in succession—his swine for these seventeen years, without a season's interruption, being allowed the run of the yard.—*Country Gentleman*, 1868.

Jotham Bradbury, residing near Quincy, Ill., has an old apple orchard, which many years ago used invariably to produce nothing but wormy and gnarly fruit. A few years ago he ploughed up this orchard and seeded it to clover, by way of hog pasture. As soon as the clover had got a sufficient start, he turned in a gang of hogs, and has allowed them the range of his orchard ever since. Two years after the land was ploughed, the apple trees produced a good crop of fair,

smooth fruit, and have continued to bear well ever since.

Suel Foster, of Muscatine Iowa, reports as follows in the *Transactions Ill. State Hort. Society*, 1867, p. 213—: "I have twenty-four acres of my orchards seeded to clover, and last year I turned the hogs in. I now observe that where the hogs ran last year, the apples have not one-fourth the worms that they have on other trees. I this year turned the hogs into my oldest (home) orchard."

It is important, when hogs are employed for the purpose of picking up fallen fruit, that they should be kept moderately hungry, and not be gorged every day with corn so as to make them too lazy for work.—*American Entomologist.*

ECONOMY OF KEROSENE.—By a recent experiment, it was ascertained that one pint of coal oil, costing six cents, fed one lamp during six evenings, or for the space of twenty-eight hours, averaging four hours and forty minutes each evening; two lamps of lard oil having been required for the same service. The cost of the lard oil was four cents per evening; that of the coal oil one cent. The advantage of coal oil over sperm oil is about the same.

EXTRACTS AND REPLIES.

KEEPING CABBAGE THROUGH THE WINTER.

Can any of your readers tell me the best way to keep cabbage through the winter till the middle of March? Will they not keep just as well with the stump cut off? PHILIP.

Middlesex County, Mass., 1868.

REMARKS.—The method which we have practiced for years for preserving cabbages for family use, is as follows:—Cut off the stump close to the head and pull off loose leaves. Cut clean straw or hay and cover the bottom of a barrel or box with it and sprinkle the straw with clean water until it is quite wet. Add a layer of heads, then cover with more wet straw and go on. Put the whole in a cold place and they will keep until May in excellent condition. No matter if they freeze a little. This is a clean and easy method. The barrel need not be headed.

Our correspondent L. M., of Hatfield, Mass., says, "I have tried hanging cabbages in the cellar, but they wilt and lose all their flavor. My way is this:—I let them stand in the fall as long as possible; dig a trench about a foot deep, cut off the stumps close to the head, strip off the loose leaves and cover them with the earth taken from the trench. They must freeze and thaw with the ground, which makes them brittle and tender, and very much improved in flavor. They must be taken out of the ground as soon as the frost leaves, otherwise they rot. I have practiced in this way for forty years and never had a head rot. By way of experiment I have thrown in a few apples with the cabbages; they all came out sound in the spring. Try it.

The *Prairie Farmer* gives the following, as the method practiced by the gardeners of Chicago. Select a dry knoll where the water will not settle, dig a pit say five feet wide, twelve feet long and two feet deep, throwing the dirt a little back from the edge of the pit. Set strong posts eight feet long, two feet in the ground in the middle of each end, and lay on these a good stiff ridge pole and pin it fast. Make a roof of stakes or planks long enough to reach from ridge pole to edge of pit, and cover them with a little straw and six or eight inches of dirt, digging a trench around the pit; beat down the dirt hard and smooth, so that it will shed water, or, what is better, sod it over in the spring. Make a door in each end of pit to ventilate in mild weather. Store the cabbages head down, two layers deep. A pit of the dimensions mentioned will hold nearly 200 heads of cabbages. In very severe winter weather bundles of straw may be set against the doors. A very cold winter may require a thicker covering than here recommended. But generally we think this will do.

CEMENT WATER PIPES.

The danger of the poisonous effects of lead pipes for the conveyance of water for domestic purposes has caused much inquiry for some safer material for the construction of aqueducts, and we have received several inquiries for information and advice upon the subject. In reply to a late inquiry by a correspondent, we have received from Benjamin Livermore, of Hartland, Windsor County, Vt., a circular in which he claims to have discovered and patented, after a long experience in the business, a process by which he can lay a continuous cement water pipe at a less cost than lead or iron. Attached to his circular are the recommendations of Hiram Harlow, late Superintendent of the State Prison, for whom he laid 220 rods; of N. B. Safford, of White River Junction, Vt., who has had nearly a mile in length in use for more than three years; of Washington Whitney, of Winchendon, Mass., 42 rods; of L. M. Hills, Amherst, Mass., 180 rods; and of many others. In one case the lead pipe removed was sold for enough to pay the expense of the cement pipe which took its place.

FINE AND COARSE WOOLED SHEEP.

Much has been said in your valuable paper during the past year as to the relative profits of fine and coarse wooled sheep.

I commenced farming life thirty years since with keeping fine sheep, but very soon found it a losing business, and immediately sold my fine sheep at a loss of a large per cent., and bought Cotswolds, which I have been breeding ever since.

It may help some of the readers of your paper to say, that while my fine sheep did not pay for

their keeping in the wool which I sold from them, the Cotswolds have every year paid a good per cent. on cost. The sales from my forty Cotswolds last year were a little short of four hundred dollars, or a fraction over ten dollars a head, besides keeping my flock good. My buck lambs averaged over a hundred pounds a head. Mr. George N. Sanborn, of Laconia, N. H., writes me that a pair of twin lambs bred from a Cotswold buck from my flock on a fine sheep, weighed 109 and 115 pounds. It often happens that a cross of pure blood Cotswold on strong Merino ewes will produce a progeny that will outgrow the parents on either side, and a second cross are always prolific.

I have twice exhibited sheep at our Connecticut State Fair, with three lambs brought up entirely on the sheep. The first three weighed 100, 104, and 108 pounds, the next three 100 each. A cross of the Cotswold on the sheep of the Northern States, will make as good market lambs as can be produced. I once raised a pair of Cotswold lambs, one of which weighed at seven months 144 lbs.

From present appearances it will be a long time before the supply of combing wools will be equal to the demand. T. L. Hart.

West Cornwall, Conn., Oct. 1, 1868.

Remarks.—What say the breeders of the Cotswold and other coarse wooled sheep to the charge of some of the breeders of the Merinos, that the former are of such roving habits, that the common fences of New England are insufficient to keep them in place?

HEREFORD CATTLE.

As I wish to purchase a few "thoroughbred" Hereford cows or heifers, I would like to ascertain who are the breeders of this kind of stock in this country or in Canada. Can you tell me of any way to do so? Is there a Hereford Herd Book? If so, where can I obtain one?

If you can give me the desired information you will greatly oblige a constant reader of your valuable paper.

As I have some of the "Underwood stock," I want something different to cross with it. I have a heifer calf seven months old that girts five feet and weighs 620 pounds. H. C. Burleigh.

Fairfield, Me., Oct. 20, 1868.

Remarks.—We publish in another column some extracts from Mr. Allen's American Cattle in relation to the Herefords. In reply to our correspondent we would say that we know of no thoroughbred Herefords nearer than the herd of H. Cochrane, Esq., Compton Centre, Canada East, or rather Province of Quebec. Some time since we published some account of the herd of Herefords owned by F. W. Stone, Esq., of Guelph, Canada West, who, after having kept the Durhams and the Herefords on the same farm and under the same conditions, gives the latter the preference. Mr. Sanford Howard who examined Mr. Stone's stock last July, says that "all persons who have had any thing to do with them concur in stating that the Hereford cows give, on an average, as much milk by the season as the Short-horns, while some experiments that have been made show that in richness of milk the Herefords are superior." We presume that there has been no American herd bood of the Herefords published in this country. Marks of a Hereford cross are often seen in the cattle from Maine offered for sale at the Brighton cattle market, and it may be an inquiry of some interest, how far the acknowledged superiority of working oxen from that State is owing to a strain of the Hereford blood.

We have also received from "A Subscriber," in Webster, Me., inquiries similar to those of Mr. Burleigh, to whom we must say that we do not know of any breeder of the Herefords in Massachusetts. If there are any they will see the necessity of advertising the public of the fact.

ABORTION OF COWS.

About the first of September, one of my cows slunk her calf, and in about ten days after another, and in ten days more a third one. I can not account for the facts. Can you give any information upon the case through the Farmer?

Benjamin Adams.

Amherst, Mass., Oct. 23, 1868.

Remarks.—This disease began to manifest itself in the dairy sections of New York about twelve years ago, and has been gradually increasing ever since. In a memorial presented to the Legislature of that State in 1866, by the President and Secretary of the State Agricultural Society, it is estimated that in that year one-quarter of all the cows in Herkimer County aborted; in Oneida, 20 per cent; in Otsego, 15; in Lewis, 12 per cent. This was an alarming statement, and the legislature at once appropriated a liberal sum of money for the expense of a thorough investigation of the causes of the disease. The first report of the State Commissioners was made last winter, and was mostly of a negative character—affirming what did not, rather than what did, cause the disease. The few practical lessons of this report are summed up by the *Country Gentleman* as follows:—that farmers should raise their own heifers—that the farmer should not sell to anybody else the cow which he thinks too likely to abort to be retained in his own herd—in other words, that determined efforts should be made, in the districts specially concerned, to prevent the dissemination of the difficulty by the purchase and sale of animals not known to have been free from it previously—to secure the feeding of cows so affected for the butcher, or their isolation from all unaffected animals, if the owner choose to retain them,—and, in case new and healthy cows are brought upon a farm, the thorough purification of the stables, and, if possible for a season or two, the use of different pastures from those which the diseased animals have lately grazed.

A correspondent of the same paper, who acknowledges himself indebted for his facts to Mr. J. Barlow, of the Veterinary College, Edinburgh, thus speaks of the fact that odors arising from cows that have aborted give rise to abortion in other cows:— "It is a well known fact, that by the sense of smell cows detect when one of their companions has calved. If the birth takes place in the pasture, cows will smell the place of its occurrence, and loiter about it for days and weeks after. When a cow calves in the stable, other cows

are at once aware of it, since they look about them, snuff their noses, and make the fondling noise usually uttered towards their young. When in a herd of cows, one or two cases of abortion occur, or delivery takes place, from whatever cause, other pregnant cows will cast their calves, and that *timely separation of those aborting from the yet pregnant cows, saves these latter from abortion.*"

It is said that cows in the wheat raising districts of New York, where they feed largely at straw stacks, are nearly exempt from this trouble; hence a feed of wheat shorts, or oats, has been recommended, in connection with good care generally.

The New York commission have been prosecuting their inquiries and investigations during the present season, and it is to be hoped that they will be able to make a report this winter which will throw some light upon this subject.

We might give our correspondent any amount of theory upon this subject, but our stock of practical information, we are sorry to say, is exceedingly meagre. The Little Falls, N. Y., Farmers' Club have debated and investigated this subject extensively during the past five years or more, without arriving at any satisfactory conclusion as to the cause or cure of this disease; but we believe that it is generally agreed that an animal that aborts, or shows any signs of doing so, should at once be separated from other cows, with the most careful removal of all evidences of the disorder. Many advise that such animals should not be suffered to remain upon the farm.

HEADS OF A DISCOURSE ON BUTTER-MAKING.

I have been thinking, Mr. Editor, of the request that you made last week, while examining the three tubs of 165½ pounds of butter that we have made from our two cows since last spring, besides what milk, cream and butter a family of seven have used, to write out a statement of our process for the FARMER. But as I am not great at sermonizing, at the best, and am particularly busy just now with my fall work, which, in consequence of dull weather, has got rather behind hand, I will not attempt to elaborate the following points, or heads, which have been suggested to my mind while thinking over your request.

1. Healthy and well fed cows. Mine, you know, have a little cob meal.
2. A sweet airy place for the milk and cream.
3. Thoroughly washed and scalded pans.
4. Milk to be skimmed before too sour.
5. Cream in the pot to be stirred often in hot weather.
6. Cream to be churned twice a week.
7. The buttermilk to be thoroughly worked from the butter.
8. The butter, if to be kept, must be well salted.
9. One week previous to putting the butter into the firkin it is filled with sour milk, which should be stirred every day and changed every three days; then washed, scalded, cooled with cold water and rubbed over with salt.

The importance of my "secondly"—a sweet, airy place for the milk and cream—is not, I think sufficiently appreciated. Few would think of stirring into their milk or cream, portions of their boiled victuals, pickles, bacon, lard, baked beans, pot skimmings, &c., but many do permit the essence or smell of these and many other things, both good and bad, to mingle themselves with the milk, cream and butter. But as I do not propose to argue any of these points, I will close with the remark that the merchant who had my butter, gave me quite a puff for its appearance and good quality.

Felchville, Vt., Sept. 30, 1868. T. S. F.

REMARKS.—At the time these three tubs were sent to market, we understood that the fourth had been commenced upon; showing an amount of produce creditable alike to the little dairy of two cows, and to the five motherless girls, the oldest of whom is only sixteen, who have had the charge of the milk and the other household work, and who with a younger brother and their father make up the family of seven persons before alluded to.

POULTRY AND POULTRY BOOKS.

In reply to "An Old Subscriber's" inquiry I would say:—First, I think he cannot better his stock of hen literature unless he procures a late English work by Tegetmeier, which costs nine dollars and is a valuable treatise.

Second, there are no pure Creepers in this section, still they are to be seen, one or two in a place, hereabouts. In color, the gray seems to predominate, while some are of a reddish brown and others of a cinnamon color, and occasionally a few white ones are to be met with. They all seem to be highly prized as good layers, setters and nurses, and for their heavy plumage and short legs. From my own experience, however, I find that their short legs are both hardy and strong for scratching, and that they do twice the amount of it that the Brahmas do. If "Old Subscriber" is not satisfied with Brahmas, Leghorns and Black Spanish, I should advise him to try the Golden Pencilled Hamburgh, as the handsomest, best layers, and in my experience, the most profitable fowls ever kept, and they seem to sustain the same good name with all who are acquainted with them. My neighbor, from whom I got mine, calls them superior to any of the many breeds which he has ever raised. His first trio he told me cost him $18, but he realized $9 from eggs sold, and also some twenty chickens from them the first season. He received them June 2, and from that time till September 8, there were but eleven days in which he did not get two eggs per day, and only three in which he got none. I see that Tegetmeier recommends them very highly. He calls them truly the cottager's fowl, and they are known in some parts of England as the "Dutch Every-day Layers," and are very minutely described in his work. I do not know where this variety of fowls can be obtained, but I understand their eggs are to be advertised the coming season. AN OLD READER.

Worcester, Mass., Oct. 21, 1868.

EXPERIMENTS WITH HAYWARD'S FERTILIZER.

Last spring I planted some cucumbers, alternating the hills with manure and the mineral fertilizer of Dodge Hayward, by using half a bushel of fine manure in one hill, and one quart of the fertilizer in the next. Both were forked in, to the depth of a foot. The plants came up and grew about alike, until two inches high, when the weather continuing dry, the manured hills got the start and outstripped the others. Coming on rainy, the fertilized took a new start, kept it, and gave the first and last cucumbers, as well as two-thirds of the whole crop, as the manured hills dried up three weeks in advance of the others.

On one rod of ground I forked in fourteen pounds of the Hayward fertilizer and sowed to onions. None came up. I then forked the bed over and sowed again to onions, after testing the

seed and finding it good. Result, same as before, no onions. Having planted Brussels Sprouts on the fertilizer, at the rate of 500 pounds to the acre, I transplanted some fine plants to the onion bed. They are now, on an average, 15 inches high, with no heads, while those on the fertilizer at the rate of 500 lbs. per acre, are very fine and thrifty,—some of them being three feet high, and full of heads.

I planted half an acre, four rods by twenty, to potatoes, Davis' Seedling. On one-half of the strip I spread 450 bushels of fine old barn manure, occupying man, horse and wagon one and a half days. On the other half, I sowed broadcast 200 pounds of the fertilizer, which occupied man, horse and wagon half an hour. Cost of fertilizer, $3. Both manure and fertilizer were harrowed in. The potatoes were planted in drills. Used ten bushels of seed on the half acre. On the 9th and 10th of October I dug eight rows of the twenty-seven on the strip,—rows running lengthwise. On the manured half of those eight rows I had 14½, and on the fertilized half of the rows 15½ baskets of potatoes, weighing 63½ pounds to the basket. Deducting the small potatoes, one and a half baskets, the result of my crop will be one hundred bushels of as good Davis' Seedlings as one could wish from the half acre, or 30 bush from the eight rows. This ground failed to produce crops of either carrots, beets or parsnips which I planted and sowed upon it last year.

On the last heavy snow which fell in the spring, I sowed broadcast 250 pounds per acre of the fertilizer on twelve acres of grass. I have cut more than double the hay this year that I did last, and the roots are spreading and covering the ground very remarkably. These experiments have convinced me that a reasonable amount of this fertilizer is preferable to a large quantity. I shall never again use to exceed 500 pounds per acre in any one year, that being in my opinion sufficient for two to three successive crops.

Edgar A. Robbins.

Wrentham, Mass., Oct. 20, 1868.

EXPERIMENTS WITH HAYWARD'S FERTILIZER.

I planted an acre and three-fourths of corn with 2800 pounds of this fertilizer, spread broadcast, and the land cultivated thoroughly. Furrowed and planted with no other fertilizer. This land was light and loamy, and produced last season one ton of hay. There were about forty-five bushels of corn to the acre. About a week ago, I called on Prof. E. A. Robbins, of Wrentham, and found him ploughing out his potatoes raised on this fertilizer. The potatoes looked very nice and fair. I examined very closely to see if I could discover any disease in them, but could find none.

Foxboro', Mass., Oct. 18, 1868. H. C. Perry.

CURES FOR A COW'S COUGH AND WARTS.

I cured my cow of a severe cough by giving her three eggs a day for three mornings in succession, shells and all, by putting them down her throat; then gave her a large spoonful of pulverized saltpetre every other morning till I had given her a pound. She is entirely cured.

I cured an innumerable quantity of warts on the same cow with salt grease, made very salt, and applied every other morning. Milkmaid.

Machiasport, Me., Oct. 7, 1868.

HARRISON POTATOES.

During the present season Mr. Benj. Young, of Danversport, has raised from *one bushel* of Harrison potatoes *forty three bushels*, which are of fine quality and appearance. They were raised on about fifteen rods of land that had been very lightly manured, and while other kinds of potatoes, growing at the side of these, were found affected with rot, these were entirely free. J. S.

Danversport, Mass., Oct. 10, 1868.

HAY PRESSES.

Will you or some of your many subscribers, inform me which is the best kind of hay presses now in use, and where it can be obtained.

Alburgh, Vt., Sept. 21, 1868. B. H. B.

PATENTS ON VEGETABLES AND FRUITS.

In his *Magazine of Horticulture* for October, Mr. Hovey, the editor, and also the originator of the valuable strawberry bearing his name, discusses at some length the question, "How shall we encourage and stimulate the production of new varieties of Fruits and Plants, and in what manner secure a proper reward to the producer?"

After alluding to the great value of some of the varieties that have been introduced within a comparatively few years, and to the great amount of time and labor expended on their production, Mr. Hovey reviews the arguments of those who would extend the laws which protect the inventor of a "clothes pin or a goose yoke" so that the propagator of a new plant or fruit should receive a patent for it; by which, as suggested by the *Horticulturist*, he could "require payment, when he sells the plant, for the right to manufacture and sell other plants in a specified territory. If it be valuable, the purchaser of the right to that territory may dispose of rights to others, and thus refund himself for what he paid the patentee. Should the plant be offered for sale beyond the limits of the territory sold, the patentee will become aware of it, and can prosecute for infringement precisely as in the case of a machine or process."

Mr. Hovey then gives his own views of the subject as follows:—

We must admit that this appears to be a very good mode of protecting the originator of new plants, and securing to them the profits of their sale, if it can be carried out. But there are many objections to it which the writer has not stated, and we fear that infringements would be so general that little good would be effected after the first sale to local agents.

After all, it is a question whether horticulture would secure any permanent benefit to be hedged about with patents, and subject to the injunctions and litigations which would be sure to follow; it would, we fear, lose much of its character as a science and art, and lessen its hold upon those who view it not as a commercial speculation but as a source of pure enjoyment and delightful recreation. The benefits which might be secured to the inventor of plants, would in the end hardly compensate

for the injuries which would result from any attempt to render art subservient to the "almighty dollar."

It is not to be disguised, that of all the new fruits, or new plants, or new vegetables which are yearly originated and brought to notice, not one in fifty is worthy of notice, and the few which are really meritorious scarcely ever fail to bring a reasonable reward to the producer, not by any means oftentimes in proportion to their value, but sufficient to stimulate and encourage to continued exertions

A patent which would have secured to Mr. Knight ten thousand pounds sterling for the various fruits which he originated, valueless as they mostly are now, would have been of far less value than the gratitude of millions for his life-long labor in the hybridization and production of new varieties; and the same may be said of those who have succeeded him in similar works. The inventor of the clothes pin or the goose yoke will be forgotten, if indeed he be known at all, when the originator of a really valuable fruit or flower will be known to millions.

We would do all in our power to encourage and reward the producer of new varieties. But first educate the public taste to the appreciation of those only of superior excellence, and to ignore those which do not come up to the standard. This having been accomplished, the really meritorious will never lack appreciation or the originator fail to receive his due reward.

Chester Pig.—At a late meeting of the Irasburg, Vt., Farmers' Club, Dea. Fassett, on being asked how he liked the Chester pig that he bought of Mr. Baker, replied, "At the time I carried home that pig I had some others that I called good pigs of about the same age. Out of curiosity I weighed them. I put the Chester pig with one of mine that weighed ten pounds the most, and have fed them together. The Chester pig will now weigh ten pounds more than the one I raised. This shows that there is something in blood." These were July pigs put together when five weeks old. October 24 our cattle market reporter mentioned a Chester hog that he saw at Medford, which weighed 855 pounds, having gained 531 from the 10th of June, till he was sent off to market,—a little short of five pounds per day. It was raised in Burke, Vt., by J. Hunter, Esq.

Corn Harvester.—A machine was exhibited and tested at the late Fair at St. Louis, which is claimed to be the first machine ever invented and successfully used for harvesting corn. In company with a special committee, a large number of gentlemen witnessed its operation in a field of corn, and after explanations and speeches it was voted a complete success. The *Journal of Agriculture* says it is pushed before two or four horses, and in general appearance resembles Rugg's Reaper. Its shucking or snapping principle consists in two grooved cylinders which are turned by a drive wheel with great velocity. The stock is passed between these cylinders, and the ear being larger is caught, snapped, thrown into a receiver, and from thence carried by means of an elevator into the wagon, which is driven alongside of the machine. It is designed to take two rows at a time, and to be managed by one man, so that by means of two or three wagons, some fifteen or twenty acres of corn can be gathered in a day.

For the New England Farmer.

FERTILITY OF OUR FARMS.

How can an Upland Farm be Cultivated and kept from Running Down?

The following abstract of the discussion of this question by the Irasburg, Vt., Farmer's Club, was written out by the Secretary, Z. E. Jameson, Esq., for the Farmer.

Geo. B. Brewster said that, in his opinion, it is a difficult matter to keep a farm up, unless you can draw on muck or manure. By doing this you can get the farm started in raising good crops, and then by feeding them upon the farm, more manure is made and good crops can be raised right along. He thought it one of our greatest errors to graze our fields in spring and fall. We should have pasturing enough to carry the cattle all through the grazing season till winter. Cattle in the fields will tear up the roots of grass and diminish the hay crop. If we plough up pastures we should manure them, unless it may be some knolls enriched by sheep.

A. Jameson thought it a good plan to plough the pastures, as the crops raised will make manure to bring up the rest of the farm, and then when they are stocked to grass again, the feed is sweeter, more of it, and cattle like it better. He had seen pastures in New Hampshire ploughed up in June and summer fallowed, that yielded first-rate crops of wheat, rye or potatoes, especially on ground where sheep had lain. He thought that muck, unless mixed with manure or something else, is poor stuff,—hardly worth drawing. He had tried it on his land, by putting a number of loads on a dry knoll and ploughing it in, and he never could see that the crops were a mite better, and where Mr. Brewster used it he could see no benefit from it.

Geo. B. Brewster admitted that pasture turned over will give a good crop, but asked will it be as good in future? His experience is that where he ploughed his pasture the feed is much less than on land adjoining which has been in grass ever since it was cleared. On the unploughed part, the feed is a complete mat; but where it had been ploughed and

grain raised it is mossy, with but little grass. His muck had been referred to. Where he put it on near the road, the soil was sandy and so light that he thought manure would have made little show; but further back where he raised his Norway oats, he had a good crop of corn, with no manure but muck that had lain in the barn yard. He intended to use more in future, and believed it would pay.

Wm. L. Locke, Jr., said he thought we plough too much land and sell too much grain. We plough more than we can manure. To keep our farms up we must increase the manure piles. He had used sawdust for bedding for cattle and hogs, and it prevents all smell in the pens or stable and keeps the cattle clean. He manured some of his corn with sawdust from the hog pens and it gave an excellent crop. In feeding grain, we not only get more and better manure and keep more stock, but get more profit from the stock. He knew one man who makes from 200 to 240 pounds of butter from each cow, and he keeps ten or twelve. This is more than we average, and it is done by good feeding to good cows.

Z. E. Jameson said the question is not how shall we get good crops next year and the year after, but what plan of management will allow us to sell all animal products, such as beef, pork, wool, butter and cheese to pay expenses, and yet have the land continue fertile as does the land in China, and the plains where the Patriarchs pastured their flocks. There must certainly be a way to make and keep land fertile, for I have read that there was once a heath or moor in England of such extent that persons would often become lost and wander days and nights on its broad expanse, but now, by the culture of turnips, the land has become fertile, and flocks of large Lincoln sheep surround the white cottages of the tenants. It seemed to him that where land will produce a fair crop of clover, it would be best for us to plough in green crops as well as feed animals, and if the result is here as in other sections of country, we shall find it possible to cultivate an upland farm and keep it fertile.

Wm. L. Jameson said that some think muck is of little value. What is muck? Vegetable matter. What is manure? It is simply vegetable matter. Some muck, to be sure, needs preparation to make it valuable, such as exposure to frosts through the winter or mixture with ashes or lime, while from other deposits it is good to apply directly to the land as topdressing or in any other way. He had used a good deal, but not half as much as he wished he had, nor half as much as he should in future. If we keep one hog supplied with plenty of this material it will not only absorb all odors but make enough good manure for an acre of corn. He knew it could be done. He had raised, year after year, at the rate of 120 to 180 bushels of ears per acre with such manure. Then a compost heap of a layer of muck with a layer of manure, till you get it as deep as you wish, will in a few months, become equal, load for load, to barn-yard manure. He believed in a theory lately published that manure in a compost acts as yeast, and causes a change in the whole mass.

This ploughing of pastures is a grand way to run down a farm. You take off crops and give back no return, and if the cattle gradually enrich it again, it impoverishes some other portion, and all sink together. Our children will not be contented to till acres that are made barren by our mismanagement, when they read of the fertile lands of the West or South. It is better to invest all surplus income in improvements, rather than in bonds or interest bearing stocks. He bought his farm for $800 about sixteen years ago. Its produce is doubled and its value is now over $3000. An adjoining farm of twice the acres, was then valued at $2500. Its produce is much decreased, and its price is about $3000. To pay for a farm, raise good crops, for good crops pay debts.

A short discussion then followed in regard to hiring help, in which two opinions were expressed,—one that when there was work to do it would pay to hire it done; the other that it is best to let some things go undone, rather than hire.

For the New England Farmer.

GOODRICH SEEDLING POTATOES.

We read of enormous yields from single pounds of potatoes cut to a single eye and spread over a large surface of no doubt the very best land, with care and treatment to correspond; but what farmers want to know is how these varieties yield with ordinary field culture.

I planted two and three-fourths acres to Goodrich Seedlings this year. The yield was six hundred and fifty-two bushels.

The Harrison was planted on a quarter of an acre of dry old ground, with no manure but a handful of hen droppings and ashes in the hill. The piece was planted to potatoes last year, with very little manure. Used one barrel seed. Yield fifty bushels.

The Cusco was planted on three-fourths of an acre of greensward, dry except at one corner. Manured with a compost made of a large quantity of raw muck and a little fish guano, about two quarts in a hill. Used three and a quarter barrels seed. Yield one hundred and seventy-two bushels.

The Gleason was planted on seven-eights of an acre of old land, naturally wet, but worked so deep and thoroughly, both last year and this, that it was rather too dry this year. A very light dressing of manure, cultivated in, and a handful of hen manure and ashes in the hill. Raised potatoes on the piece last year, with very little manure. Used four barrels

seed. Yield one hundred and seventy-eight bushels.

The remaining eighth acre, too stony to work well, was wet, and was planted to Cuscos. Used three-fourths barrel seed. Yield forty bushels.

Early Goodrichs were planted on one-half acre of very wet greensward, with a heavy shovelful of manure in the hill. Used three barrels seed. Yield one hundred and fifty-two bushels.

Then I planted one-fourth of an acre to Gleasons. Land and manure the same as with the Early Goodrich, and seeded about the same. Yield sixty bushels.

Taking into account the different amounts of seed and manure used, and also the fact that in this section dry land did not give as heavy yield this year as wet, I cannot see any difference in the productiveness of these four kinds. All of them are dry and mealy from dry land and not so good from wet land.

The Gleasons are entirely free from rot on both dry and wet. The Early Goodrich affected a very little on land that was very wet indeed. Of the Harrison one-half bushel in the fifty were affected. The Cusco was affected badly on wet, and somewhat on dry land.

A year ago last spring I paid twenty-five dollars for nine bushels of these potatoes which gave me my start, and I am satisfied that my discarding the old varieties has so far been at least two hundred dollars in my pocket. The Calico, one of the Goodrich Seedlings, I threw aside after one year's trial. The Cusco rots too much. The Gleason, Early Goodrich and Harrison are my favorites.

L. E. Bicknell.

Windsor, Mass., Oct. 15, 1868.

For the New England Farmer.

HOME EMPLOYMENT FOR WOMEN.

We often hear the exclamation from ladies whose household cares keep them at home, "How I wish I could get something to do to earn money." There is plenty to be done in the school, the shop, the factory, the sick room, &c., if one can go where the work is; but it is almost impossible to get work which can be done at home. Some indeed find their housework and family sewing sufficient to employ their time, but there are many who have considerable leisure, which they would gladly spend in something more profitable than "fancy work," if they could. This is proved by the avidity with which work that can be taken home, often laborious and unprofitable though it may be, is sought after.

There is a natural feeling of independence which makes one dislike to receive every dollar of spending money from another, though cheerfully granted; besides it would often be a great help in the family if the wife and daughters could earn their own clothing.

But what can they do? I shall not attempt to settle the entire question, but will leave it to the professional philanthropist, with the assurance that it is worthy of special attention. As regards farmers' wives and daughters, however, I think the exigencies of the case may be met at least half way. There is, or might be, for them healthful, pleasant and profitable home employment Is there not, worthy farmer, some little spot of unimproved land near your house, which you have often thought might be made profitable, if you had but the time to take care of it? Just step into the house and look at the plants growing in the window. What care they receive! Not a dead leaf, not a scraggy branch, but all fresh, thrifty, and beautiful. Notice that elegant shrub, growing from less than a cubic foot of earth,—there is high culture. Now if the same care and culture were applied to that bit of waste land, what might it not produce? The delicate skill which has brought these plants to such a degree of perfection, is just what is required in the successful cultivation of many desirable fruits and vegetables.

Suppose then, that just for the sake of novelty, the ladies try the experiment of "gardening for profit." Let the ground be prepared this fall for the spring cultivation. There will be plenty of time during the winter to decide what it will be advisable to raise, and the best methods of so doing. Do not undertake the care of more land than can be properly managed. The same system and order upon which the skilful housewife so justly prides herself, should be extended to the garden.

I have forgotten how the question which was discussed in one of the Vermont Farmers' Clubs, "Does Slick Farming Pay?" was decided; but I am quite sure that *slack* farming does *not* pay.

Gardening is certainly an honorable employment for every one. A little improvement in public sentiment which shall make it customary for ladies is very desirable.

These suggestions are not for those who live in luxury, and have a retinue of servants to attend them, nor for those who in the midst of a large family are already overburdened with care. They are made rather, that those who have spare time and are not afraid of work, may not overlook the pleasant and remunerative employment that is waiting their attention.

Marlboro', Mass., Oct., 1868. Mattie.

For the New England Farmer.

DAIRY STOCK---BUTTER-MAKING.

IRASBURG, VT., FARMERS' CLUB, OCT. 18, 1868.

G. B. Brewster said that in a dairy of twenty-five cows two or three, on an average, will fail every year. To supply these, somebody must raise the heifers, and if others can afford to raise cows to sell, cannot dairy farmers

raise them to keep? He had noticed that the cows he purchased did not do as well the first year as they did afterwards. They must have a fight with every cow in the herd to settle the great question of supremacy, or be gored and beaten about by others, so that they cannot feed or rest in yard or pasture in peace. Then we are not sure of getting good cows after spending much time in inquiry and examination, as it is not safe to take any man's recommendation of a cow, or to depend entirely on appearances. He acknowledged that his practice thus far had not corresponded with his theory After we get fairly started in farming and are really masters of our business, he thought we should raise our own stock. It is sometimes difficult, as we are situated, to raise all the stock necessary to keep a full herd of milking cows, and are compelled to buy to replace those that fail. He thought the true way was to have the best cows come in early, say in February or March, and to raise the most likely heifer calves from these cows. He thought we should generally fatten and sell cows at about twelve years old. We can, it is true, keep them till they are sixteen, but at that age they do not fatten easily, and are apt to prove almost a dead loss.

Of other stock, also, he said we should try to raise what we want. He had raised a few sheep that have paid as much clear profit as any stock. He keeps them, and also some colts, with the cows. They seem to eat feed that cows refuse. Near his milking yard the grass is very rank and the cows leave it. The colts graze there an hour or two almost every day, but he believed it is an injury to cows to be pastured with colts, as the colts frequently run and chase the cows, which are not specially built for speed. He thought it an injury to use a dog in driving cows, for the same reason.

Most of our stock should be dairy cows. He believed it would be best for this neighborhood to devote our whole attention to dairying, and make a tip-top article; one that we could sell to regular customers in the city where they are willing and able to buy a good article. Butter is a most delicate thing to make, but with proper attention and the necessary facilities any one can make it so that the flavor will be right.

Salt does not *preserve* butter; it flavors it. Fresh butter will keep as well as lard under proper conditions. Milk will become corrupt and decay, consequently, the cream must be taken off at the right time. As there are some particles of milk still in the cream, it must be churned before these particles corrupt the whole mass, if we would have clear butter to pack. It must also be made at a low temperature so as to be hard.

He formerly soaked his tubs in water previous to using them but now only washes them out very quickly with hot water, then wipes dry and sets a dish containing a piece of brimstone, into the tub, drops a good live coal upon the brimstone and puts on the cover, as it is just as necessary to have the cover cleansed as any part.

Water in the tub is very bad. Any one who lets butter stand for days in a pail knows how the wood causes it to taste. It is just so with a butter tub. The water in the wood acquires a very bad taste, which it imparts to the butter. It is better to have moisture go from the butter into the tub than from the wood into the butter. Z E JAMESON, SEC.

Irasburg, Vt., Oct. 18, 1868

For the New England Farmer.

EXPERIMENTS IN PLOUGHING.

Having recently ploughed three different fields with a side-hill plough, I send you a brief report of my experiments.

The first experiment was on a piece of five acres, about equally divided into level and side-hill, or slightly side-hill land The timber from this tract was taken off for wood some twenty years ago, and grass had gradually worked in, forming, with raspberry bushes, &c., a tough sod, which, with old rotten stumps and a few stones, made it necessary to employ a team of one pair of oxen and a span of horses to break it up As it had never been ploughed or even harrowed, the surface was rough with knolls and hollows.

The piece for my second experiment consisted of several acres of pasture land, both level and slightly side hill. The team required was a pair of average sized oxen and a ten-hundred horse. The surface was not as rough as the first lot.

The third experiment was on a field embracing both meadow and stubble ground, ploughed together for convenience sake A part of this field was level and a part moderate side hill. The team was the same as in experiment number 2, although a stout pair of oxen or a span of horses might have done the work

The first field mentioned I regarded as a very difficult one even for a common or right hand plough, and required a larger size than that I happened to have, which is No. 6 of the Gov Holbrook Swivel Plough, which I used on each of the three lots. But no withstanding its small size and the unfavorable state of the land, the sod was well reversed, and the surface pulverized and left in nearly as good condition as stubble land.

The surface of the second field had been packed quite hard by the feet of the stock in grazing, and in places it was mossy and heavy. Here I raised the sword or cutter, as can be done on these ploughs, so as barely to cut through the sod, and again I had good success in turning the sod and pulverizing the ground turned up.

On the last field I was much pleased with the manner in which the convex mould board

of this plough broke up and fined the furrow, not only of the stubble but also of the meadow portion of this lot—the latter appearing to be about as mellow and porous as the former.

The advantages of a swivel plough for side-hill work are well known and fully appreciated by farmers. For level land it may also be recommended for its avoidance of dead furrows, so much dreaded by the man on the mowing machine, and for its allowing the "nigh" and "off" oxen or horses to alternate in furrow-travelling, which affords the team no inconsiderable relief. GEORGE BACHELDER.

Stanstead, P. Q., Oct 8, 1868.

CANADA CATTLE.—We notice by an article in the *Prescott Telegraph* that in consequence of the scarcity of forage in many parts of Canada, farmers are obliged to reduce their stock, and that thousands have already crossed the line. The remark is made that it would be hard to conceive what the farmers would have done with their surplus stocks had it not been for the American buyers. We see by the same paper that J. P. Wiser & Co., of Prescott, who fatted 750 head of cattle last year, a large part of which were marketed at Cambridge this spring, are again purchasing largely of the finest steers and oxen for feeding this season. Mention is made of their purchasing a fine pair of oxen weighing 4000 lbs. for $200, a premium pair for $180, and 67 very good steers at $55 each in specie. It appears that they are breeders as well as feeders, and took most of the premiums for fat cattle, and many in other classes at the late show of the South Grenville Agricultural Society.

HOPS IN WISCONSIN.

The danger of running into specialties in farming is strikingly illustrated by the disastrous experience of hop-growers in Wisconsin the present season. It is said that many farmers went into the business so exclusively that they have not raised grain enough for their own use, and some have been obliged to go into bankruptcy in consequence, and others have mortgaged their farms to meet their obligations. The extent of the infatuation is illustrated by a correspondent of the Wisconsin *Farmer* who says:—

From *one* station alone, (Kilbourn City) were shipped last spring roots enough to plant *twelve thousand acres!* I asked my neighbor, who lives right opposite my house, about two weeks before hop-picking, how he thought his hops would yield, and what he would contract them for. His reply was, that if the most responsible insurance company on earth, were that day to offer to insure him a ton per acre and fifty cents per pound for the whole crop of 5½ acres he wouldn't pay a quarter per cent for the policy. That man picked only about half his yard, and was to-day querying whether he wouldn't have made money to let the whole go unpicked; for he couldn't get a shilling (12½c) a pound for the best of his harvest.

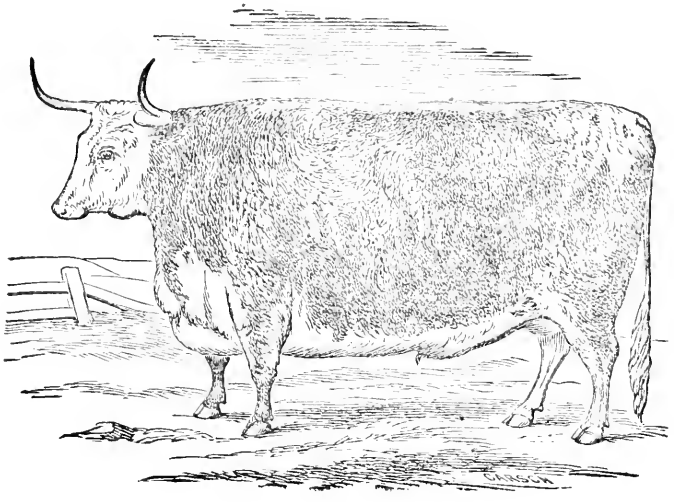
The hop-louse has this year ruined nearly or quite half the hops in the State. I have only seen *two lots* that I would *last year* have graded as "prime." Two buyers and one brewer told me to-day that they had only seen *one* sample of perfect. There are to-day several thousand acres of hops in Sauk county, all testifying in their unpicked, blighted blackness, as they rattle in the autumn wind, that their ruin was wrought even as by a deadly plague, or a simoom all in a few hours. I have wrought in hop fields and seen hops looking fair as I left them at night, ruined next morning, to the extent that I threw away and forbade the picking of scores upon scores of hills. And four to five days was the longest time required for lice to render fair and bright fields black, mouldy, slimy, nasty and stinking. Let no lady object to the unclean language; for twenty thousand or more lady hop-pickers will bear witness that a skunk is as desirable company as a hill of hops with lice a quarter of an inch thick all over it.

I believe some two thousand farmers in Wisconsin will in a year from now be doing just what I saw a very shrewd man and extensive raiser doing to-day—selling hop-poles for firewood.

AN OLD AGRICULTURAL FAIR.—Col. Harris, editor of the *Ohio Farmer*, during a recent visit to the East, was present at the late Fair of the Addison Co., Vt. Agricultural Society. After giving a very favorable account of that exhibition, he indulges in the following reminiscence of a Fair held at the same place in his boyhood:—

Speaking of the Addison County Fair reminds me that well on to five and forty years ago, I attended the first Agricultural Fair ever held in this county, and on this very spot of ground, and my father won a premium on a bull calf—not the undersigned, who has since made some noise in the world, which the aforesaid bull calf never did, except when he was knocked on the head the next year, for an overgrown scallawag. At that fair, as I recall it from my dozenth year or thereabouts, we had gala times. Upon four monster wheels of marble carts from Dr. Judd's marble works, was erected a huge platform upon which were mounted the representatives of the trades and of agriculture; in the centre was a pole with a sheaf of wheat fastened at the top; twenty yokes of oxen dragged this car through the village, while hundreds of people followed it with gaping mouths and admiring eyes, among whom was one "which his name it is" the editor of the *Ohio Farmer;* and here he stands now upon the same spot; but of all the men of that day, how few are here! I cannot name one except Edwin Hammond. Very thoughtfully I turned away and took up my journey.

—The *Germantown Telegraph* says that perennials should be divided and transplanted during the early part of November if not attended to before. This will cause the flowers to be larger in size and of much deeper colors.



THE HEREFORD CATTLE.

The inquiry of our Maine correspondents, on another page, for information as to this breed of cattle, induces us to give at this time the above beautiful illustration of a fatted Hereford ox, with a somewhat extended notice of this ancient race of English cattle. No one can compare the artistic execution of the above picture with those which were used only a few years ago to illustrate farm stock without being struck with the great improvement which has recently been made in the art of engraving. Our readers will perhaps be less interested than ourselves by the statement that the expense of these illustrations keeps pace with their perfection.

The Herefords take their name from that of one of the richest agricultural counties in the western part of England. They are supposed to have originated in a breed of white cattle with red ears, which were great favorites as long ago as A. D. 900. Somewhat later a law was passed which recognized the value of 100 of these cattle as equal to that of 150 dark or black ones. One hundred years ago, says Mr. Allen in his work on American Cattle, from which we copy our illustration, the Herefords were of a deep red color, with mottled faces, &c. They are now, he says, usually red, with shades sometimes running into light, or yellowish red, with white faces, throats, bellies, and sometimes backs, and occasionally a roan of red and white mixed, and more rarely an almost clear white, with red ears, is found among them.

After remarking that he finds less said in English books in relation to the Hereford than of almost any other well known breed, Mr. Allen says:—

Fortunately for the present purpose, we have had several years' close and almost daily observation, in a herd of imported Herefords and their descendents, which were kept near us, as well as of occasional observation of other importations, which have given us a more intimate knowledge of them than volumes of books, without such personal observation, could have done.

Perhaps we cannot convey a better description of the Hereford, after giving accurate portraits of the sexes, than to say: give a Devon a quarter more size, somewhat more proportionate bone and horn, a trifle shorter leg, and longer body, a little coarser in every part, and you have a good Hereford, in all excepting color.

As useful cattle, the Herefords are a good breed. We are aware that their introduction into the United States has not been, in comparison with some other breeds, successful in popularity or extended distribution; but that fact decides nothing as to the positive merits of the stock itself. Partiality, prejudice on the part of our cattle breeders, or pre-occupation of the ground by other breeds which meet the general approbation, may keep them

for a time in the background; but their actual merits once known, they may have a fair trial, and achieve a substantial success.

As a Dairy Cow,

The Hereford has little reputation, either in England or America. We have found no English authority, except a rare instance or two, which gives her much credit as a milker. Possibly this may have arisen from the fact that the Hereford districts are grazing, and not dairy. The milk is rich, but too little of it—not much more than to rear her calf in good condition. She dries early.

If she ever was a milker before her modern improvement began, the milking faculty has been sacrificed for a ready tendency to flesh, which has been obtained in a high degree in her race. We have seen a dozen of them milked through three or four successive seasons, and the yields were such as would be unsatisfactory to a modern dairyman. Now and then a fair milker turned up, but they were in a minority of numbers; taken together they were less than ordinary, for the season. We will not therefore discuss this question further, but pass to another quality as yielding greater pleasure in the relation.

As a Working Ox,

The Hereford is the peer of any other, and superior to most. Large, strong, muscular, well-developed in form, noble, and stately in carriage, he suggests all that need be found in an honest, true worker. At full maturity—say six years old—he girts 7 to 7½ feet behind the shoulders, in ordinary condition, to the Devon's 6 to 6½ feet, and is every way the more powerful, if not quite so quick, or active. A team of two, three, or four yokes of Herefords, under the control of a good driver, for "a long pull, a strong pull, and a pull altogether," is the perfection of bovine strength and majesty. The joints of the ox are well knit, his sinews strong, his shoulders slant well to the yoke, and he carries his load well, be it at the plow, the cart, or the wagon. He is kindly, intelligent, honest in his labor. We have seen them from half, to three-quarters blood, crossed from the common cow, and up to thorough bred, all of great excellence as draught beasts, well matched, and admirable in all their points. The Hereford blood is strong in marking its descent. From the bulls which were kept in our neighborhood eighteen years ago, crossed upon cows which run on the adjacent commons, in their summer pasturage, we now, in their progeny, to later generations, frequently see cows and oxen but a quarter, an eighth, or sixteenth in blood—got by scrub bulls—that show strong Hereford marks in form and color.

We once reared an ox got by a Hereford bull, on a wretched little black cow, which proved to be a fine, stately ox, of a brindle (black and red mixed) color, and a better worker we never knew. At eight years old we fed him off on grass, and a little corn meal only, and he gave us 1200 pounds of beef, hide and tallow. Where hay and pasturage are cheap, and the farmer has a taste for the business, it must be a profitable investment to obtain a thoroughbred Hereford bull, cross him on well selected native *red* cows, and rear and break steers for the markets where good working oxen are in demand. The strong blood of the bull will give uniformity in shape, and color, so that the steers may be easily matched, and if not wanted for the yoke, they are equally valuable, as other cattle, for feeding, and the shambles.

As a beef animal, the Hereford is superior. They feed kindly, are thrifty in growth, mature early—at three and four years old—and prove well on the butchers' block. We are aware that they have not now a general popularity in the great cattle breeding regions of our Western States. Few of them have been introduced there, and those, perhaps, not in the right hands to push them to the best advantage. We could wish for them a fairer trial; but the prejudice against the cows as milkers, and the lack in their *taking* appearance as a highly distinctive race, in comparison with the more popular Short-horns, have kept them back in public demand. Their time has not yet come; and it may be, that in the right hands, and with a more critical observation among our cattle breeders and graziers, they may achieve a reputation as a grazing beast, equal to some now considered their superiors.

In their native counties in England, they still hold a high rank, and at the prize shows in the London markets compete successfully with other improved breeds. With all the deficiencies which the advocates of other breeds allege against them, the Herefords still retain their reputation among their English breeders, who hold on to them with a pertinacity which shows an unabated confidence in their merits and profits as a true grazier's beast. We might show recorded tables of their trials, in England, with Short-horns, and the relative profits of their feeding for market, in which the Herefords gained an advantage on the score of economy; but as the trials were not from birth to slaughter, and the comparative early advantages of each breed were omitted in the account, a repetition of the tables here would not be conclusive.

The Herefords in America.

At what date they were first imported into this country, we have no accurate account; but that some Herefords came out among the early importations, is evident, from the occasional marks of the breed among our native cattle where late importations have not been known. * * * * * *

The largest known importation of Herefords into the United States, was made about the year 1840, upwards of twenty in number, by an Englishman, into the city of New York,

and taken into Jefferson county, of that State. A year or two afterwards the bulk of the herd was removed to the farm of Mr. Erastus Corning, near Albany, N. Y., and some of them went into Vermont, where they were for some years bred, sold, and scattered. * * *

About the year 1852-3, Messrs. Thomas Aston, and John Humphries, two English farmers in Elyria, Ohio, near Lake Erie, imported several fine Herefords. They bred them well, and successfully, as seen in the specimens we have several times met, but with what success in their sales we have no intimate knowledge.

In the years 1860 and '61, Mr. Frederick Wm. Stone, of Guelph, Canada West, made two importations of superior Herefords from the herds of Lord Bateman, in Herefordshire, and the late Lord Berwick, in the adjoining county of Shropshire, England, numbering, together, two bulls, and eleven cows and heifers. These were remarkable for their high breeding, and generally, good points. From them, down to January, 1867, there were bred about sixty, and about half the number have been sold at satisfactory prices, and distributed, mostly into the United States. Some of the cows have proved excellent milkers, and all, together with the crosses of the bulls on common cows, have proved profitable grazing animals. * * * * * *

On the whole, the Herefords have not had a fair trial in the United States, in the hands of veteran cattle breeders, who had the means and opportunity to properly test them by a thorough and persistent course of breeding.

We trust that the herd of Mr. Stone, in its various distributions, may have a fair and thorough trial, satisfied as we are, that the Herefords, as a breed, have positive, and well established merits, in their great thrift, and good flesh producing qualities.—*Allen's American Cattle.*

Garget or Caked Bag.—A Waterville correspondent of the *Maine Farmer* says, bunches on a cow's bag, or caking of the bag, may sometimes be reduced by the following treatment, if taken in the early stage of the disease. Bathe the part affected twice a day with the following, viz.: iodide of potassium, 1½ ounce; glycerine, ½ oz.; soft water, 2 ozs., mixed together. Give a tablespoonful of saltpetre every second day, and one-quarter pound of epsom salts every second day, for a few days—say a week—and continue the salts another week, or longer, if the difficulty does not subside. The saltpetre and salt may be given in a mash of wheat bran.

Another correspondent of the same paper puts two or three spoonsfuls of saltpetre with each quart of salt fed to cows troubled with garget, and regards it as the most convenient method of doctoring, and as effectual as more complicated medicines.

THE REIGN OF AUTUMN.

BY ALICE CARY.

The rust is over the red of the clover,
The green is under the gray,
And down the hollow the steel-winged swallow
Is flying away and away.

Fled are the roses, dead are the roses,
The glow and the glory done,
And down the hollow the steel-winged swallow
Is flying the way o' the sun.

In place of summer a dread new comer
His solemn state renews:
A crimson splendor instead of the tender
Daisy, and the darling dews.

But oh the sweetness, the full completeness,
That under his reign are born!
Russet and yellow in apples mellow,
And wheat and millet and corn.

His frosts so hoary touch with glory
Maple and oak and thorn;
And rising and falling his winds are calling,
Like a hunter through his horn.

No thrifty sower, but just a mower
That comes when the day is done,
With warmth a-beaming and gold a-gleaming,
Like sunset after the sun.

And while fair weather and frosts together
Color the woods so gay,
We must remember that chill December
Has turned his steps this way.

And say, as we gather in the house together,
And pile the logs on the hearth,
Help us to follow the light little swallow,
E'en to the ends of the earth.

GOV. CHAMBERLAIN'S ADDRESS,

At the late Fair of the Maine State Agricultural Society, pleases us so well that we reprint a large portion of it, believing it will be acceptable to our readers generally. We copy from the Portland *Advertiser*:—

Apology for Addressing Farmers.

Cicero tells us of a certain Greek orator who was invited to speak before Hannibal, and thought it befitting the occasion to deliver a lengthy discourse upon military art and the office of a general. At the conclusion the great soldier was asked what he thought of the orator. He replied with more force than eloquence that he had heard many silly old men in his day, but this orator was ahead of them all. What flippancy and presumption, before Hannibal who for so many years had contended for the empire with the Romans—the conquerers of the world,—for this Greek man who had never seen the enemy, never seen the field, never exercised the smallest particle of any public office, to undertake to give precepts on military art!

So it may seem to you, veterans of a hundred fields, presumptuous in me to discourse in your presence of the farmer's calling or the Art of Agriculture; for if I assume to instruct or criticise, you will deny my competency as an expert, and if I seek to encourage you and praise your vocation, you will want to ask,

why, if I think farming such a super-eminent delight, I don't try my hand at it myself.

I have serious thoughts of it, my friends, but the fact is you don't seem to favor it yourselves. A very respectable portion of you, it is true, seem kindly enough disposed towards my devoting the rest of my days to farming; but the majority are still so stubborn, or so jealous lest I should beat them at it, that they won't give me the chance.

The Governor once Worked on a Farm.

But yet do not shut me wholly out from your fellowship; for during just one half the years it has taken to bring me to the age of wisdom, I suppose there was hardly any duty or function of a farmer's boy that I did not have a hand in

And I mind me of a certain twenty-acre lot, where my father gave scope to my boyish ambition and I went at it single-handed, from what time the axe was laid at the root of those mighty trees, till it smiled in graceful harvest. Yes, I have cleared a field! and there is still something within me that wants to do it again.

Since that, my main work in life has been different, and such little harvests as have been vouchsafed to me, have been reaped from other fields. But it is the truth to say that in no work or achievement, have I felt a purer or a prouder joy than when, in the calm summer twilight I never forgot, I smoothed the brooding earth over that last breadth of grain, and knew how Paul felt when he saw in this the emblem of the great resurrection.

Do you wonder that the last time I went home I walked out there with my little daughter, and sat down and sighed for something I had not?—something that you, kind friends, with all your honors could not give me—the sweet rest, the calm mind, the sound body, the heaven-lifted soul of those dear days of old? These are pleasing memories; nor are there brighter dreams of the future—if it is permitted still to dream—than the peace, the freedom, the breadth of view, all the lulling sounds of field and forest, the breath of the home-returning kine, the smell of the upturned earth, the sight of waving harvests in green and gold. Can you deem me over weak if I long for these again to dispel the lingering visions of the earth upturned by fiercer implements, and the thick-strewn harvests where pitiless Death mowed down your strong and brave!

Thus it is that when I yielded to the wishes of your Executive Committee, the diffidence I felt at speaking on these things before you was overcome by the pride I felt in your honorable record, and my interest in your calling.

Farmers give Character to the State.

Distinguished as the State is for some specialties of business, it cannot be denied that by far the greatest part of our productive industry is within the vocation of Agriculture, and it is a fact of which you may well be proud that our public character as a State in social, moral and political, and even military affairs, takes its type and tone from our agricultural population. It becomes, therefore, a high official duty as well as a personal pleasure, to appreciate the services, encourage the labors and promote the prosperity of those who contribute so largely to the public sustenance and to the public character. It would also be ungenerous and untrue to say there is a lack of interest here in Agriculture; for all this bountiful and magnificent array before us, these fruits and fabrics, these finished implements and curious inventions, these animals so perfect of their kind,—nay, this noble and beautiful assembly of men and women—for these, be it not forgotten, are representatives of the farm; all this I say, will put any doubter to the blush. This interest is also attested by the fact itself that you are holding this fair,—upon the unparalleled success of which I must congratulate your Society—to be followed by others in every county; by all the Boards, Associations, reports, published communications, as well as legislative acts, which show that men feel that there is something in the matter worth attending to.

Effects of Grumbling.

For all this, I think it fair to say that the farmer in this State is not over enthusiastic. All the public performances are jubilant, but the individual farmer is apt to be grumbling. Our season is short; the soil not so rich as elsewhere; the rocks plague him; the midge is after his wheat; the rust his potatoes; the coons his corn; the dogs his sheep; the boys his fruit;—that is, if the drought hasn't got everything before hand. He groans, being burdened. Under such a rallying cry it is no wonder that he doesn't go at his work with much heart. His boys are not likely either to be captivated by that strain. They hear of broad prairies needing neither axe nor grubber, stone-drag nor manure cart to force a living from the soil, of magical cities where a fortune is made in a night, or of distant territories where everything even to the mountains is on "a gold basis," and they strike out for themselves. Those who succeed, come back with smooth hands and fine airs, and with money enough perhaps to buy out their father and all his neighbors. This of course works powerfully on the imagination, and the neighboring young people anxious and ambitious, bid the old homestead adieu, which unfortunately does't mean *a Dieu*—commending them to God—but quite the reverse.

And he who is best disposed—most earnest and patient—finds that he can't succeed without hard work, and that at the best, farming requires a vast deal of prudence and care, and even then its returns are somewhat precarious and comparatively small. He is more dependent on chances of the weather than the sailor, and can't get his crop insured for the season as the other can his ship for the voyage. The worst is that his boys too, energetic

and capable as they are, will be likely to take one of those farewells which don't leave much *welfare* behind them.

Home Market.

After giving some very favorable statistics of the agricultural productions of the State, and of what legislation can and cannot do, Mr. Chamberlin proceeds:—

What we want then is a home market—close home. That more than anything else will render the pursuit of agriculture profitable and popular. Then will follow—reacting and interacting—improvements in culture; higher intelligence; better manners; better arts; and when the true ends are realized, a happier condition for society, and for the good and glory of the State.

Now there are some little matters of political economy that we do not always think of as we should. We talk about richness of soil, and proclaim Thanksgivings for abundant harvests. But it requires something more than both of these to make prosperity. Were it not so you would not have seen the cotton States on the verge of ruin from the superabundant crop of 1861, nor the luxuriant West looking with sorrow at her teeming fields and reduced to the dire extremity of burning her corn for fuel, because if sent to its distant and surfeited market the toll would take it all. Abundant crops tend to lower prices, and in a region purely agricultural the market is always distant and sometimes overstocked, either of which diminishes the profits, and both will sometimes produce financial distress in the midst of agricultural plenty. No such thing could happen where there are varieties of industry. Good seasons will not glut the markets, nor will bad ones cause distress—for prices will rise by a limited supply, and so the farmer will be partly compensated for waste of labor on spoiled fields. If half a crop pays as much as a full one, there is no great loss. Now take Massachusetts; why with her poorer soil and her half million less acres in cultivation than ours, does she so surpass us by millions of dollars in the value of her agricultural products? Because three quarters of her working population are engaged in manufacture of some kind, leaving the farmers who make up the other quarter to feed all the rest, if they will. The great diversity of industries in that State requires a larger consumption than the local production. The home market is greater than the home supply. This makes the home producer master of the situation. It stimulates the farmer to devote himself to those specialties which are the most profitable. He is near and can take his choice of the market. He finds what he can raise best and then makes the most of his ground.

Variety of Industries.

It is this variety of industries which gives the farmer precisely what he requires—a near, sure and diversified market. The certainty, quickness and variety of his sales more than make up for deficiencies of soil and season. Ordinary sagacity and moderate skill will be able to seize upon the advantage, and turn to account all the peculiar circumstances of the situation.

We see the advantage too, of keeping our raw material as near home as possible, to be wrought into fabrics here; to give employment to all industries, to encourage native talent and skill, and to attract a population of diversified employment which is the very best encouragement of Agriculture. It is better to bring the market to your goods than carry your goods to the market.

It comes to this, then, that the farmer who will benefit himself, must take an interest in others. His prosperity lies in a broad and generous recognition of the whole industrial system of society. This is one of the few examples of that paradoxical maxim, "The longest way round is the shortest way home."

Practice and Science.

Along with all this, if not before it, must go Intelligence. I should scarcely be pardoned for intimating in such a presence that we need to grow in knowledge. But I venture to say it. Whether it comes from books, from tradition, or from experience, isn't of so much account. If a man only knows, for example, that to raise grain successfully, he must also raise clover and peas and crops of that kind and keep them on his farm and give them back with their rich freight of nitrogen to feed his grain field, it is no matter whether he learned it from his grandfather or the school mistress, or hit upon it himself. But that is one of the things he ought to know—the very philosopher's stone of Agriculture—the alchemy which turns all base things to gold. So if he understands that by a judicious tillage and skilful application of dressings, he may loosen from the very granite rich elements of food, and draw from the air, and sun, and rain, and snow the choicest fertilizers, I can have patience with him, if he can't express the whole process in the barbarous hieroglyphics of chemistry. But he had better study a Chinese chemistry than not to know these things at all.

It won't do always to pride ourselves too much on experience. This is what sometimes makes a man set in his way, when owing to changed circumstances it is no longer the best way. Unless it is intelligent—that is, unless it is based on the thorough cognizance of the immediate matter in hand and surrounding circumstances which effect it,—a too stiff reliance on experience may possibly mislead. All that experience tells us surely is what has been—we argue from it less surely as to what shall be. And then we want to be certain that we know all the necessary conditions; otherwise our conclusions may be false.

Changes are taking place on our farms which we are not apt to discover, or take into

account. As a general habit I think we are farming on the system of our ancestors and taking the tradition of their experience as our guide. But what was true for them is not true for us. When the lands were new, and rich with all the nutriment that Nature had been providing for ages, it was well and wise to take advantage of it. A change, however, has taken place since, which we ought to understand. But now when the land will no longer do of itself what it used to, instead of understanding it and helping it, we spread our labor over twice the surface and then find fault with the whole and say farming will not pay for the labor.

The Agricultural College,

He thinks, may do something for farmers, but as few can be educated there, he calls attention to the importance of improving the Common Schools. He then alludes to

Societies, Clubs and Papers.

Association too is a great help to farmers—the mutual aid they may render by debates, consultations, and comparisons of experience. The newspaper is a great teacher nowadays—perhaps the great teacher. To be sure the terrible "we" will now and then sit like the Grand invisible Lama, and dogmatize and give his own private whim where you had a right to look for impartial, catholic criticism, or a fair statement of enlightened public sentiment. But we must bear the lesser evil for the sake of the greater good; for the great "we" is a good fellow after all, and knows a vast deal, and will often tell us some wholesome truths though they cut close home. Moreover he gives his best corner to the farmers of late, and where he gives you all the corners, as your *Maine Farmer* does, nothing could be better. From all these means which are now in active and increasing exercise, intelligence must be largely deepened and diffused, and we shall soon have a tolerable science of farming, enough acquaintance with the nature and needs of soils to keep us from wasting our materials and our labor, and practical science enough at any rate to keep us from blasting through granite to find coal, or marrying a widow with a hill full of iron pyrites thinking it is gold. "A little learning" certainly isn't "a dangerous thing," in such cases. By these means too, the farmer will hit upon some system of his own by which he will make his vocation profitable and pleasant. It will depend on circumstances whether you can best cultivate a large farm or a small one; on the locality, the age, the kind of soil, the nature and nearness of the market, or perhaps on some physical disability; whether for instance, you have a bullet through your breast, or a wooden leg, or are an old bachelor. If your land will not pay for keeping up, let a good part of it go to grass, or even to trees again. It isn't the worst thing to have a lot of oak, or beech, or sapling pine, or even white birch and poplar growing. These last will do for spools and bobbins at any rate, and we are going to have a demand for these things pretty soon. I noticed on our marches through the magnificent oaks and chestnuts of Virginia, that in the midst of those immense forests wherever a tree had been cut out, the stump was fenced around with tender care to protect the little shoot springing up to replace the old. I don't call that bad Agriculture.

Sheep Raising and Dogs.

If you can't do one thing you can do another. If your land is impracticable in other respects, try sheep raising. In travelling in our south-east counties a few weeks since, the aspect of the country being rather suggestive of this branch of industry, I asked my friends why they didn't raise more sheep? "We are afraid of the dogs," was the answer. And I have since learned that in the eight counties along our coast, more than two thousand sheep a year are actually killed by dogs, to say nothing of the number injured. There is a dead loss of ten or twelve thousand dollars a year in those counties alone. We can find a way to clear that track. If common sense don't help us out, a little applied chemistry might do. But seriously, the low price of wool just now ought not to discourage sheep raising. If we attend to the mutton qualities as well as to the fleece, the farmer would find this a highly profitable business, and the farm would constantly improve under it. The readiness of the market would enable the farmer to make more money from his mutton and his wool together, than those do who are compelled to sacrifice everything to the fineness of fleece.

Stock Raising.

As to stock raising generally, we seem to be on the right road, excepting that it appears to me unfortunate to be obliged to send so many cattle to foreign markets. We ought to have use for them here—every part of them—setting in motion a score of handicrafts, and feeding at the same time both the factories and the workmen. Horses are our pride. But I suppose you will blame me if I intimate that we should not sacrifice everything to speed. Velocity is gained at the expense of power, and I question whether swiftness is the most urgent need nowadays. It might be the main point with "Young Lochinvar," or stray Congressmen at Bull Run. But strength, hardihood, action, these it seems to me should be counted among the prize qualities that go to make up blood. But I deem it a most fortunate thing that we are taking so great an interest in raising animals of choice blood.

Farmers' Sons and Daughters.

And think it not foreign to my subject, but rather the summary and climax of it all, to say we must aim in everything to keep our

farmers' sons and daughters with us. Nobody that we can bring in, will make good the loss of these. Thank Heaven for the children—that the selfishness and sin of the cities has not yet struck its poison into the country—that Moloch is not God here. Thank Heaven that here there are yet fathers and mothers. The State owes them gratitude and honor. I would rather see a list of the women who had reared ten likely children than of the men who had paid $100 a year taxes; they are greater benefactors. They deserve a pension; but the beauty of it is such persons are never in need of it. If they have borne a cross it is the cross of the Legion of Honor! There are two kinds of laboring—for our own profit, which is selfishness, and for the profit of others, which is happiness. Getting money isn't the chief good; those who think it is, sacrifice comfort or virtue to it, and find out their mistake. Think it no waste of your profits to improve and beautify your farms—to make your homes attractive to sense and heart. We have not enough of the *hereditary* about our home notions. We don't build for the future,—you hear men saying, "It will last as long as I do," and you can't help thinking it wouldn't be a great loss then if it didn't last very long. I suppose they think it is unconstitutional to have a family homestead—since "no hereditary distinction, privilege, honor, or emolument, shall be granted or confirmed" by the State. That is because the State doesn't want to usurp the rights of individuals. *You* can grant hereditary honors and privileges if you will, and bless your memory for it to coming generations.

It is of no use to talk of the dignity of labor. Labor will take care of its own dignity. What we want is the dignity of life, and the graces of the heart; more that is genial and social; a kindlier, brighter, daily living.

And if our farmers' sons forsake us what is left for the daughters? The beneficent laws of nature are interrupted—the beautiful machinery of human society is thrown out of gear and goes jarringly and wrong. She whose aptitudes fit her for the thousand sweet and needful ministries of life—whose nature demands something stouter, and bolder, than she to lean on—finds no field for her chief virtues as a helper, and is thrown back upon herself. If this does not wholly break her spirit, she scorns to be dependent, and enters the lists of labor, to keep herself from being a burden, and to maintain her self-respect.

It is no derogatory thing for those whose circumstances make it necessary to go into factories as operatives. But it does seem to me a pity for a farmer's daughter to go there. I know that good character will tell there too, and the excellent gentlemen who have charge of those institutions recognize the superiority of such service, and do everything to make the place worthy of it. But I do not know why it is not quite as well for a conscientious, earnest girl, if she finds herself not useful at home, to go to a good motherly neighbor, and work with her, learning the duties which pertain to her future station and keeping in that honest, economical and womanly sphere and habit till she becomes a householder herself. Supposing she can earn more otherwise? It does not follow that this is worth most. If this good old practice could be re-established domestic life itself would be happier, and a girl would not think it degrading to serve an honorable apprenticeship because she might be called a servant. With the name changed, we are all servants, and the higher we rise in station, if we rise in character too, the more we are servants. It is vexatious sometimes to be at every body's call, but there is a view of life and duty which makes true service to a fellow-being a thing honorable and great enough to satisfy any right ambition. * * *

The enterprise and power which now goes forth to work such wonders elsewhere may, if applied at home, make this a great and beautiful and happy State. The treasuries of nature opened—the forces careering about as applied to useful ends—all high industries set in motion, and Agriculture, Manufactories and Commerce advancing together in the union; that is strength and the diversity that is prosperity!

Let us stand then in our lot where Providence has cast it, anxious for nothing but to be worthy of our opportunities, and diligent to do our duty, content with a goodly heritage while we seek another and better country—that is, a heavenly.

AGRICULTURAL ITEMS.

—It is remarked that the crop of dead leaves from the trees was never known to be so large as it is this year.

—Apple trees in Florida have the advantage of holding their leaves all winter like an evergreen, but it is a drawback that they bear no fruit.

—A young Ladies' Seminary in Rochester, N. Y., has arranged to have the elements of gardening taught as one of the branches of female education.

—The Iowa Agricultural College opens this month; receives pupils without distinction of sex. While the young men learn farming, the young women learn to cook and keep house.

—When a cow or ox gets choked it is said that immediate relief may be obtained by strapping up a fore leg, and compelling the animal to jump. This will cause the obstruction to fly out.

—Our correspondent at Livermore, Me., says the snow was about two inches deep on a level, Oct. 17th, and that last year there was a snow storm there Sept. 30.

—The Essex *Banner* asserts that small quantities of sunflower seed mixed with the food of a horse will impart a fine gloss to his hair, while it

is also a certain cure for founder, if given immediately after the ailment is discovered. In the latter case, about a pint of seed should be mingled with the oats or chopped feed, when a cure will be effected.

—On account of the cattle disease recently prevalent in this country, a government order has been promulgated in England, prohibiting the landing of hay from the United States.

—During the last few months two dogs in Danby, Vt., have killed seventy or eighty sheep belonging to four different parties. The dog men are being called on for damages.

—The Maine *Farmer* says that the first class at the Industrial College at Orono numbers thirteen, and of this number ten have expressed a determination to become farmers.

—For the purpose of "breaking up" a sitting hen, a boy in Lisbon, Me., set fire to the hen's nest which destroyed not only the nest, but barn, house, out building, farm utensils and all the summer's crop.

—Buckwheat has been found useful in dyeing wool. The dried flowers yield different shades of green, and the succulent stems and blossoms, with the addition of bismuth of tin, produce a beautiful brown.

—The Messrs. Hammond, of Middlebury obtained a verdict of $5000 in the Circuit Court at Rutland, the other day, against the Hartford Live Stock Insurance Company, for insurance on their blooded buck, which died not long since.

—In selecting sheep for fattening, the *Western Rural* says, take those in good condition. They should be over two years, and not to exceed six years old. Have a good shelter well littered, and not more than fifty sheep in a lot.

—The Ohio *Farmer* recommends that the mangers for feeding cattle be divided by board partitions, to prevent the strong and greedy from obtaining more than their share, and to enable farmers to give to those animals that need it an occasional extra feed.

—A process has recently been patented in England by which the bran of flour, after being separated, is ground into an impalpable powder, and then again mixed with the flour. In this way all the nutritious ingredients are preserved, while the fineness of the flour is not affected.

—The Maine *Farmer* is informed by one of its worthy subscribers that, being an early riser himself, he invariably carries a lantern into his hen house in the early morning to allow his hens light in leaving the roost and seeking their nests. A merciful man.

—A sad disaster occurred on the Jackson Fair Grounds, at Maquoketa, Iowa, by two buggies on the race track coming in collision. A young lady named Hattie Barns was badly bruised by being thrown to the ground. The team then ran furiously into a crowd of women and children, killing a young girl named Raymond, and injuring several others.

AUTUMN.

Thou comest, Autumn, heralded by the rain,
With banners, by great gales incessantly fanned,
Brighter than brightest silks of Samarcand,
And stately oxen harnessed to thy wain!
Thou standest, like imperial Charlemagne,
Upon thy bridge of gold; thy royal hand
Outstretched with benedictions o'er the land,
Blessing the farms through all thy vast domain!
Thy shield is the red harvest moon, suspended
So long beneath the heaven's o'erhanging eaves;
Thy steps are by the farmer's prayers attended;
Like flames upon an altar shine the sheaves;
And, following thee, in thy ovation splendid,
Thine almoner, the wind, scatters the golden leaves.

LONGFELLOW.

—Grapes are bought by the California wine-maker and delivered at his press, clean, for seventy cents per one hundred pounds, and it is stated that in one thousand pounds scarcely one pound of unripe or rotted berries has to be cut out from the bunches.

—In Chatsworth, Livingston Co., Illinois, is a beet sugar factory in full operation working up about forty tons of beets daily. They expect soon to work up fifty tons. The percentage of sugar is quite satisfactory and the sugar of good quality. The *Reporter* says the beets are daily growing better? Beets continue to improve by ripening till they have been kept about four months.

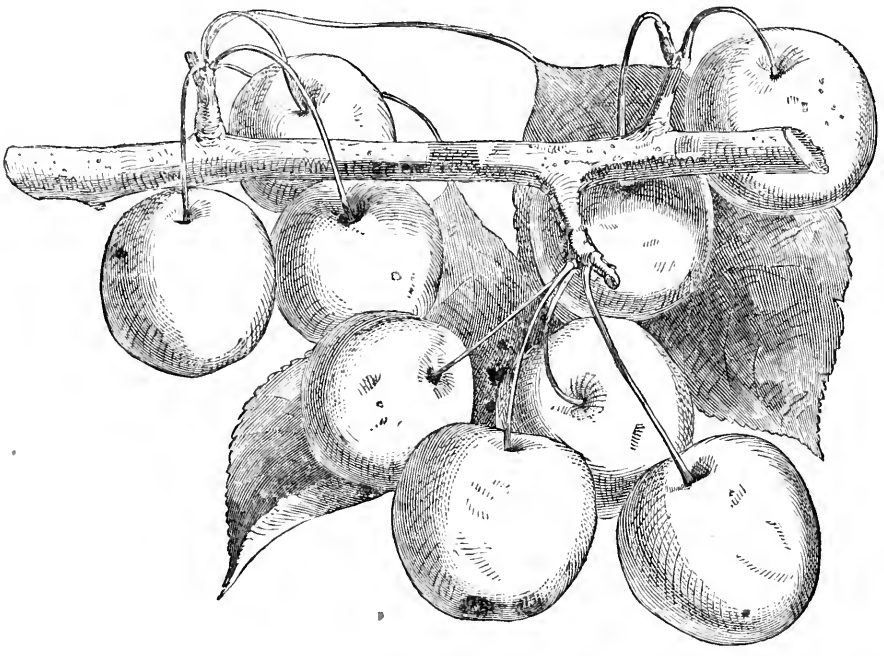
—The annual meeting of the Worcester County, Mass., Agricultural Society was held October 21. The treasurer's report showed that the receipts the past year amounted to $23,941, and the expenses to $21,338, leaving $2603 in the treasury. S. H. Howe, of Bolton, was chosen President and Chas E. Miles, of Worcester, Secretary and Treasurer.

—Geraniums may be kept until spring by being buried in dry land much as potatoes are buried. They should be laid in by the heel in a row, then covered with straw, over which boards should be placed so as to form a ridge, and the whole covered with earth to a depth, according to the climate, sufficient to keep out frost.

FEEDING POULTRY.—Most people who feed poultry at all, in seasons other than winter, feed too liberally in the morning. It is the nature of fowls to roam and gather their food in small bits here and there, and if their crops are stuffed in the morning they droop around and become unhealthy.

Feed sparingly, if at all, in the morning, and let them hunt as it is their nature to do during the day, and if they are unable to gather a sufficient amount of food, furnish them a supply just before they take to the roost.

Variety of food is as essential to the health of chickens as to anything else, and if left to supply themselves they will obtain it. In the winter when they are dependent upon man for subsistence, the demands of their nature should be as fully complied with as possible.—*Ohio Farmer.*



CRAB APPLES.

We have received from B. Bryant of Derby Centre, Vt., specimens of two varieties of Crab Apples—half a dozen each of the Gold Drop, and Queen's Choice. The Queen's Choice is oblong, with a fine red cheek, and a native of Canada, extremely hardy and remarkably prolific, and bears young. The specimens were about 5½ inches in circumference. The other is also hardy, prolific, and a winter fruit, and measures full six inches round. Both of these apples, Mr. B. informs us, are unequalled for wine making. The fine appearance of these specimens, and of the 105 varieties of Crab Apple exhibited by the Miss Shipmans at the Vermont State Fair at Burlington, suggest the question whether this fruit is not too much neglected. Mr. Cole says that all our apples are from Europe, and that they originated from the wild Crab of that country.

Dr. Warder, in his American Pomologist, says:—

The native country of the apple, though not definitely settled, is generally conceded to be Europe, particularly in southern portions, and perhaps Western Asia: that is, the plant known and designated by botanists as *Pyrus Malus*, for there are other and distinct species in America and Asia which have no claims to having been the source of our favorite orchard fruits. Our own native crab is the *Pyrus coronaria*, which, though showing some slight tendency to variation, has never departed from the strongly marked normal type. The *P. baccata*, or Siberian crab, is so distinctly marked as to be admitted as a species. It has wonderfully improved under culture, and has produced some quite distinct varieties; it has even been hybridized by Mr. Knight, with the cultivated sorts of the common Wilding or Crab of Europe, the *P. Malus*. Pallus, who found it wild near Lake Baikal and in Daouria, says it grows only three or four feet high, with a trunk of as many inches diameter, and yields pear-shaped berries as large as peas.

Our cut was made from a specimen of the Siberian Crab Apple, presented to us by S. P. Fowler, of Danversport, Mass. The tree is vigorous and strong and of rather small size, but very ornamental when in blossom from the profusion of its white flowers. The fruit grows in rich clusters, resembling, in the red variety at a little distance, large and handsome cherries.

—The foliage of trees in England is usually larger and much deeper and darker in color, than in this country.

IN THE GARDEN.

Summer is dying, slowly dying;
She fades with every passing day;
In the garden-alleys she wanders sighing,
And pauses to grieve at the sad decay.

The flowers that came with the spring's first swallow,
When March crept timidly over the hill,
And slept at noon in the sunny hollow,—
The snowdrop, the crocus, the daffodil,

The lily white for an angel to carry,
The violet faint with its spirit-breath,
The passion-flower, and the fleeting, airy
Anemone,—all have been struck by death.

Autumn the leaves is staining and strewing,
And spreading a vail o'er the landscape rare;
The glory and gladness of summer are going,
And a feeling of sadness is in the air.

The purple hibiscus is shrivelled and withered,
And liquid lolls its furry tongue;
The burning pomegranates are ripe to be gathered;
The grilli their last farewell have sung;

The fading oleander is showing
Its last rose-clusters over the wall,
And the tubes of the trumpet-flower are strewing
The gravel-walks as they loosen and fall;

The crocketed spire of the hollyhock towers
For the sighing breeze to rock and swing;
On its top is the last of its bell-like flowers,
For the wondering bee its knell to ring.

In their earthen vases the lemons yellow,
The sun-drunk grapes grow lucent and thin,
The pears on the sunny espalier mellow,
And the last fat figs swell in their purple skin;

The petals have dropped from the spicy carnation;
But the heartless dahlia, formal and proud,
Like a worldly lady of lofty station,
Loveless stares at the humble crowd.

And the sunflower, too, looks boldly around her;
While the belladonna, so wickedly fair,
Shorn of the purple flowers that crowned her,
Is telling her Borgian beads in despair.

See! by the fountain that softly bubbles,
Spilling its rain in the lichened vase,
Summer pauses!—her tender troubles
Shadowing over her pensive face.

The lizard stops on its brim to listen,
The butterfly wavers dreamily near,
And the dragon-flies in their green mail glisten
And watch her, as passing she drops a tear,—

Not as she stood in her August perfection!
Not as she looked in the freshness of June!
But gazing around with a tender dejection,
And a weary face like the morning moon.

The breeze through the leafy garden quivers,
Dying away with a sigh and a moan:
A shade o'er the darkening fountain shivers,
And summer, ghost-like, hath vanished and gone.

"THE HARVEST OF THE SEA."

It is surprising, with all the attention that has been given to the cultivation of grain crops, fruit crops and root crops, and other products of agriculture and horticulture, and with the vast amount of interest that has always been shown in the improvement of breeds of cattle and promoting their increase and productiveness, that so little general attention has been given to the cultivation of that great source of food which more than a hundred years ago was aptly called "The Harvest of the Sea." There is no more delicious article of food placed on our tables than that formerly furnished in such abundance by the great rivers and swift running interior streams with which this country fortunately abounds. Why, then, fish should not be cultivated, and their productiveness be increased, instead of allowing them to decrease, and many fine varieties of them get into danger of dying out altogether, is a matter of surprise. It may be that they have been regarded as in the nature of other wild animals, which could not be subjected to the care and control of man; but this is a short-sighted view of the subject, as it has been demonstrated for many years that such advantage can be taken of the instincts and habits of migratory fishes as to keep streams and ponds well stocked with them, and to furnish abundant supplies for all neighboring markets. Within a few years past this idea has been extensively acted upon in Europe, and to some extent in the Eastern States of this country. Fish culture has taken its place among the most useful and valuable pursuits, and fish spawn has become an important article of commerce. In France, Scotland, Ireland and other European countries, rivers and streams that furnished an abundant supply of the finest fish in former generations, and that had become nearly if not quite barren, have been restocked, and now furnish as ample a yield as in their best days. The same process is going on in the New England States with the trout and salmon fisheries, and spawn of the shad have even been transported across the country to a tributary of the Alabama, and that noble river and some of its branches have thus been stocked with that favorite fish. One fish culturist in this country is sending fresh eggs by the million throughout the Northern and Middle States. This grower hatched out last summer the enormous number of forty millions of young shad, and turned them into the Connecticut river.

It appears from the experience of those engaged in the work that it is among the easiest and most certain things to keep any stream well supplied with the variety of fish to which it is adapted. It is among the most prolific of animals. A ten pound salmon yields ten thousand eggs, a good sized herring will spawn forty or fifty thousand, a shad yields a hundred thousand, while a good sized codfish spawns a million. If this prolific yield of spawn all reached mature age the rivers and seas even would be alive with fish. But the eggs are subject to dangers and risks of destruction almost as numerous as the proportions of their increase in numbers. Those deposited in fresh water rivers are gobbled up by mature fish, by fresh water fowls and other depredating animals; they are washed ashore, high and dry, by floods, and they are covered up by the refuse from saw-mills, tanneries, &c. When that part of the spawn that escapes all such dangers is hatched, the young fish, in

turn become the prey of other fish, and millions on millions are destroyed in that way. Scarcely more than one in a hundred fish eggs escape all these perils long enough to reach maturity. With the stock that is taken care of by the fish culturist it is different. When, at the proper season, he has procured his spawn, he has his troughs, his ponds, and his sheltered streams, which guard his young crop from nearly all their perils. When he puts a thousand eggs of the salmon or the trout into his hatching troughs, he is pretty sure to get eight hundred young fish from them. This gives the artificial culture a great advantage over the natural supply. As there is scarcely a month in the year in which the fish of some genus is not spawning, there is a constant opportunity for engaging in the work. The French Government is making every effort to extend the culture as a branch of national industry. In that country, the artificial fish ponds of Doombes extend over thirty acres. All kinds of streams and waters are stocked from them with fish suitable to their peculiarities; and this is done under supervision of experts appointed by the Government. Spawn and young fish, of carp, perch, eels and pike, are sent to lakes, ponds and sluggish streams, trout to the cool and bounding brooks, and salmon to the clear, swift-running rivers. There it is a great and wonderfully successful enterprise, and it seems destined to become so here. There is no difficulty in securing spawn, and none in getting the proper instruction for treating it, or for any branch of the culture. Mr. Thaddeus Norris, one of the most successful fish culturists in this country, has just issued a complete treatise on the subject, in which he imparts the teachings of his experience.—*Philadelphia Ledger.*

FEEDING SHEEP FOR MANURE.—One of our nurserymen sent a man to Michigan to buy sheep to fatten this winter. He bought 400 good wethers, three and four year-olds, that average about 95 lbs. each, at a cost here of $3.10. His object is, to make manure. He gets about a load of manure to a sheep, worth $4.00 or $5.00. He has adopted this plan three or four years, and his land already shows the effect. He thinks it far better manure than that which he draws from the city. I told him if he would use oil-cake instead of corn the manure would be richer still. There will be a great many damaged beans this year, which, if not mouldy, can be fed to sheep with advantage. And the manure from beans or peas is nearly as rich as that from oil-cake. —*J. Harris, in Agriculturist.*

—The Longworth Cincinnati prize for the best wine grapes, for the whole country, was given to Ives's Seedling and the Concord; for the best table grape to the Concord.

Ladies' Department.

From the New York Ledger.

TO THE AUTUMN FLOWERS.

BY ALICE CARY.

Tread lightly, little bird, tread lightlier yet—
Mist-like across the grass ye ivies creep,
And in your time, O violets, softly set
Your blossoms on their stems, and softly weep
The rainy tears ye cannot all repress—
She walks among ye yet, though shadowless.

And by her death, and lovely living days,
And by her slumber in among ye now,
I charge ye that ye imitate her ways;
Unto the will of heaven submissive bow,
And give your charities of sweetness forth,
To bless some little sunless place of earth.

She loved ye well, and all her morns and eves
For your sweet company her house forsook;
The lowest whisper of the trembling leaves,
The wildest prattle of the woodland brook
She could interpret by that sense divine,
That understands whatever things are fine.

Often the rose would keep her summer state
Despite the frost that did her cruel wrong,
And like a sister at the valley gate
Wait to salute her as she passed along:
Often the meadow clover lightly bent
Her slender neck to see the way she went.

But she has left ye now, ye wildlings sweet,
For sweeter company than ye could be:
The quiet music of her quiet feet
Has dropt to silence, and her family
Of flowery folk must gather round her place
Of sleep, and turn their faces to her face.

HOUSEHOLD ECONOMY.

CONTRIBUTED FOR THE NEW ENGLAND FARMER.

Rye Breakfast Cakes.

Two cups of buttermilk; a teaspoonful of soda; a little salt, and one well beaten egg. Mix to a thick batter with rye flour and corn meal, in the proportion of one part corn meal and three parts rye flour. Beat well and bake in cups or roll pans. The corn meal makes them tender.

Milk Toast.

Toast stale bread to a nice brown, and spread with butter; lay it in a deep dish and pour over it enough boiling milk to cover it. If necessary put a little salt in the milk. Milk is boiled or scalded best by placing it in a tin vessel over boiling water.

Fish Hash.

Soak nice white cod-fish in luke-warm water about half an hour; pick it free from bones and add boiled potatoes in the proportion of a quart of potatoes to a pound of fish; chop it fine and put the mixture in a pan over the fire, with a cup of milk and a small piece of butter. Beat it, while heating, five minutes.

Softening Cotton Cloth.

We have a way of shrinking and softening cotton and linen cloths to prepare them for sewing, which I find is not generally known. As it is much less trouble than the method in ordinary use, it will, undoubtedly, be welcome to such of your lady readers as are in favor of labor-saving. Lay the cloth in smooth folds—as it comes from the shops—in a tub, and cover it entirely with boiling water. (The suds in which washed clothes have been boiled are nice for this purpose.) Cover the tub closely and let it stand till cold. Then drain off the water sufficiently to allow the cloth to be hung up to dry without wringing. Pin the first end to the clothes line firmly, by the selvedge, carry it along the line, pinning it securely at short intervals till it is all hung up smoothly. When dry, fold it carefully as you take it off and it will be smooth enough to cut without ironing.

Book Shelves.

Very pretty book shelves to hang upon a wall may be made of any light soft wood by covering strips of graduated lengths with bright fine flannel to match in color the carpet or furniture. Thin boards seven inches wide, cut in lengths of twenty-seven inches for the lowest shelf, twenty two inches for the second and seventeen inches for the top shelf, with two holes in each end large enough to receive a picture cord will be sufficient. Nail the flannel on the side and ends with brass headed nails. Have cords of the same color, long enough to hang the shelves from the top of the wall at a convenient distance for use. Tie knots in the cords for each shelf to rest upon. The four cords may be joined above the top shelf and only two be carried up to the ceiling. MARY.

Parsonsfield, Me., Oct. 8, 1868.

MR. EDITOR:—Having never seen a receipt in the FARMER for making sweet pickle, I thought I would send the one I have, as I think it an excellent one.

Sweet Picklo.

Three quarts of cider vinegar; three lbs. of brown sugar; three ounces of cinnamon; three ounces of whole cloves, to seven lbs. of fruit. The fruit should be boiled until tender. Seed cucumbers are used by some, while others use the rind of watermelons or other melons. Apples, peaches and pears are used also.

Cooking Salt Pork.

Perhaps some of your lady readers would like my way of cooking salt pork. Our family are all very fond of it.

Cut the slices small and thin; fry them brown; then have ready a batter made of two eggs, milk and flour, the quantity you desire; cover the pork with this batter, and fry brown again, turning the pieces to brown each side. This is an easy dinner to prepare, when the meat man disappoints you by not making his appearance, and you are making calculations for him to bring the dinner.

Bleeding at the Nose.

I have also, an excellent remedy for bleeding at the nose, which I have never known to fail in our family. I have never seen it in the FARMER, and think every one ought to know so simple a remedy. Take a piece of brown paper, fold it several times until it is the size of a small penny, then wet it in cold water and apply it to the little string under the *upper* lip, holding it there until the blood ceases to flow, which will be almost immediately.

I have a little girl who is frightened almost to death when she has the nose bleed, which is quite frequently, and she always says, "Oh, mother, do put some paper on my mouth quick," for she well knows the result.

I fear I have written too much for this time, but it is two years, I think, since I have taken my pen to address you. Respectfully yours,

Millville, Oct. 12, 1868. JENNIE.

Julia's Apple Pudding.

Pare and slice six good sized apples; add two spoonfuls of Indian meal; three spoonfuls of sugar; one tea spoonful of cinnamon; the same of salt; then add some crumbs of nice wheat bread or crackers; stir these all together, and pour on one quart of boiling milk. Now add one quart of cold milk and two spoonfuls of flour. Bake one hour in a quick oven. E. C. M.

Corinth, Vt., Sept. 28, 1868.

REMARKS.—Our contributors to this department are always welcome, and frequently give us some very valuable hints and receipts. We hope "Jennie" will not allow so long a time to elapse before writing again. "A young housekeeper" desires us to say to some of the ladies who have received first premiums for

their bread, that their receipts for making it would be very acceptable to many of the readers of the FARMER. Also, receipts for nice tea biscuit, and particularly a nice "short cake." We anticipate some satisfactory replies, and will publish them as soon as received. ED.

BONNETS---LATEST PARIS FASHIONS.

It is very difficult to give any idea of the new bonnets by mere description; they require to be seen for any one to understand what they resemble. Imagine a *toque* of the time of Marie Antoinette. In one her portraits (I allude to that which Mme. Lebrun painted of her,) the Queen of France wears a cerise velvet toque ornamented at the side with a white aigrette. Well, the new bonnets are more like that head-dress than anything I can recall; they are a trifle lower, and they have narrow strings, either of velvet or thick ribbed silk. They form charming head-dresses; it is impossible to imagine anything more coquettish or more graceful, or more in harmony with the actual fashion—a fashion of paniers and other furbelows which prevailed during Louis XVI.'s reign. Mme. Didsbury and about half a dozen leading milliners of Paris have decreed that toques are to be worn this winter; so they are making them in all colors, and selling them as fast as they are brought into their show rooms. For dressy occasions they match in color the dress with which they are worn, but for ordinary walking wear they are black.

At the present moment the "Marly" is the fashionable head-covering of these fair Parisians who have returned to their dearly loved city. I will describe it: A toque, composed of black velvet and black lace; at the back two lace lappets form a hood, and in the centre of the front there are curled feathers, one placed almost upright and straight in a nest of black feathers; a humming bird with a green throat at the side of the nest. Black velvet strings, cut from the piece and edged with lace. The "Dorine" is likewise worn. It is made of lapislazuli blue velvet, the darkest shade you can find, *bouillonne* round the edges, and *ruche* with lace; an aigrette of bird of paradise feathers at the side. Narrow blue velvet strings lined with shot yellow silk. The "Dauphine" is another head covering, for the present moment, and is neither bonnet nor hat. It is made of Celadon green terry, and the velvet is arranged to form a double bow at the top of the head. A ruche of white blonde round the edge, and at the side a bow of blonde, from whence escapes a large light green ribbed ribbon. Toques are not worn lowered over the forehead, like hats; they are placed quite straight, like bonnets.

TROUBLESOME CHILDREN.

When you get tired of their noise, just think what the change would be should it come to a total silence. Nature makes a provision for strengthening the children's lungs by exercise. Babies cannot laugh so as to get much exercise in this way, but we never heard of one that could not cry. Crying, shouting, screaming are nature's exercise, and if you do not wish for it in the parlor, pray have a place devoted to it, and do not debar the girls from it, with the notion that it is improper for *them* to laugh, jump, cry, scream and run races in the open air. After a while one gets used to this juvenile music, and can even write and think more consecutively with it than without it, provided it does not run into objuratory forms. We remember a boy that used to go to school past our study window, and he generally made a continuous stream of roar off to the schoolhouse and back again. We supposed at first he had been nearly murdered by some one, and had wasted considerable compassion on the wrongs of infant innocence; but, on inquiring into the case, found him in perfectly good condition. The truth was that the poor little fellow had no mirthfulness in his composition, therefore couldn't laugh and shout, and so nature, in her wise compensations, had given him more largely the faculty of roaring. He seemed to thrive upon it, and we believe is still doing well. Laughing and hallooing, however, are to be preferred, unless a child shows a decided incapacity for those exercises.

Our eye alights, just now, upon the following touching little scrap, written by an English laborer, whose child had been killed by falling of a beam:

"Sweet laughing child! the cottage door
Stands free and open now;
But, oh! its sunshine gilds no more
The gladness of thy brow!
The merry step hath passed away,
Thy laughing sport is hushed for aye.

Thy mother by the fireside sits
And listens for thy call;
And slowly—slowly as she knits,
Her quiet tears down fall;
Her *little hindering thing* is gone,
And undisturbed she may work on."