

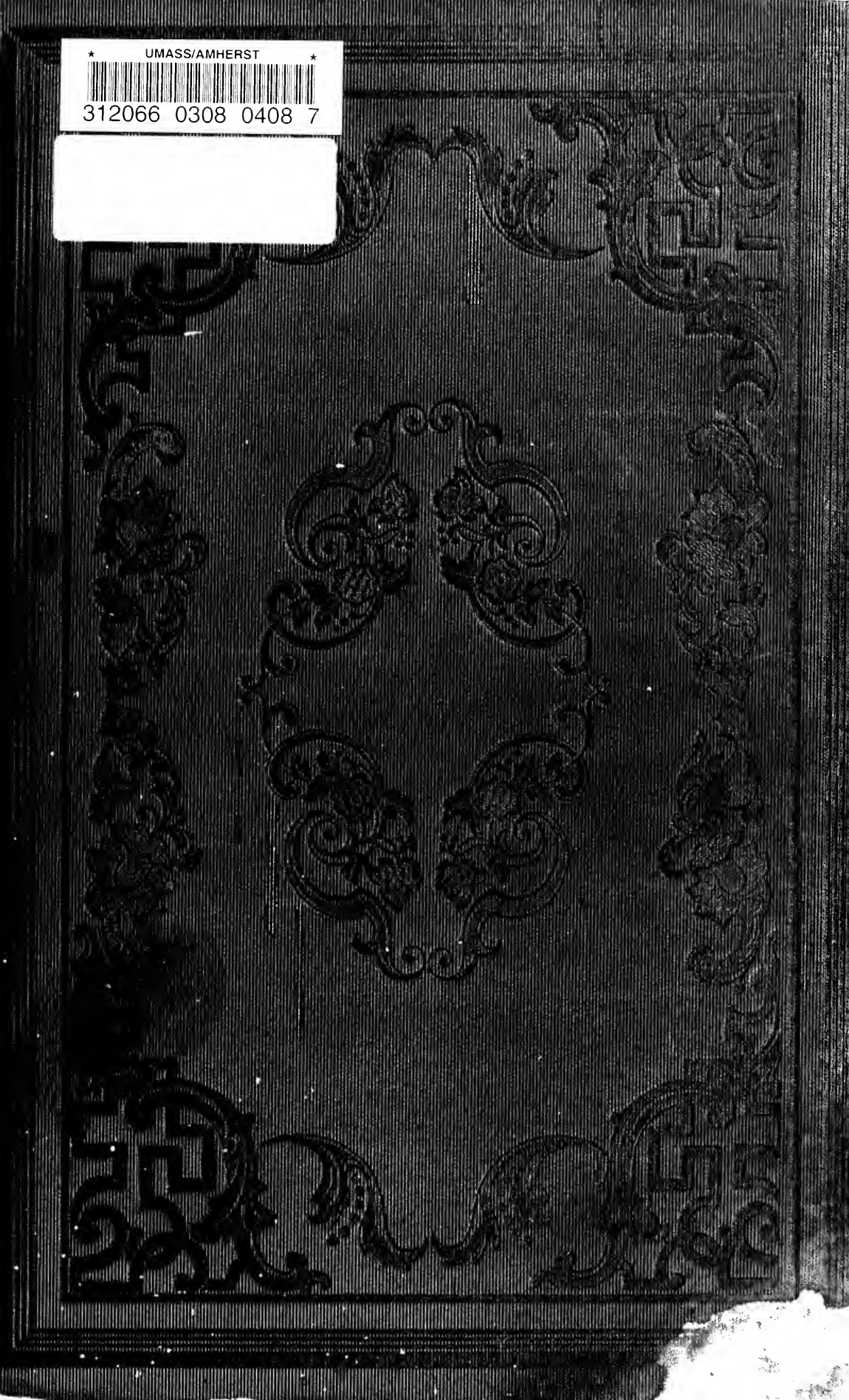
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RIVER COTTAGE.

RESIDENCE OF SIMON BROWN,

EDITOR OF THE NEW ENGLAND FARMER.

Concord, Massachusetts.

THE
NEW ENGLAND FARMER;

A MONTHLY JOURNAL,

DEVOTED TO

AGRICULTURE, HORTICULTURE,

AND THEIR KINDRED

ARTS AND SCIENCES;

AND ILLUSTRATED WITH NUMEROUS BEAUTIFUL ENGRAVINGS.

“What may not enlightened citizens accomplish, who have discarded the false, bustling pleasures of towns, and, carrying into the country the knowledge they may have acquired, apply to Agriculture the rich and varied assistance of the physical sciences?” — FOURCROY.

SIMON BROWN, EDITOR.

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CALENDAR FOR JANUARY.

“THAT our sons may be as plants
Grown up in their youth;
That our daughters may be as corner-stones,
Polished after the similitude of a palace;
That our garner may be full,
Affording all manner of store:
That our sheep may bring forth thousands
And ten thousands in our streets:
That our oxen may be strong to labor;
That there be no breaking in, nor going out;
That there be no complaining in our streets.
Happy is that people that is in such a case.”

Psalms 144, 12, et seq.



JANUARY, it may be thought, has little to do towards producing that happy state of things so forcibly expressed in the inimitable Psalms. But can it be so?

Are not the snows and winds as much the messengers of God's will as fervent suns and refreshing rains?—Cannot June or July be omitted

from the cluster of Months as well as January?

It must be so. Then, welcome to thee, *January*, first-born of the

Months, and though cold and blustering thou may be, warm hearts shall receive and cherish thee, as being as important as though heralded by soft showers, gentle airs, or the singing of birds. That point being settled, let us talk a little about what naturally presses upon the mind at this season of the year.

In wishing “A Happy New Year” to our readers, we know not how better to improve the occasion, than by a few natural reflections.

Time and opportunities passed, cannot be recalled. The only use we can now make of the past year, is to hold it up to the mind's eye, as a beacon, to warn us against its errors and its follies, and encourage us to imitate its bright examples.

Dr. Kane, in the *Journal* of his Arctic Expedition, relates, that, on one occasion, the brig in which he sailed, being carried along irresistibly by the floating ice, was borne near an immense iceberg, which seemed to be stationary, and against which the seamen were afraid of being dashed.

As they approached nearer, it occurred to them, that by making fast the brig to this Leviathan, they might obtain safe anchorage and secure themselves against impending danger. They soon found, however, that they were still moving forward,—that the iceberg itself was carried along by the current.

So it is with the great stream of time. It sweeps everything before it, and is hurrying us all, young and old, rich and poor, learned and unlearned, bond and free, all, onward to the great ocean of eternity. We think to stay ourselves by making fast,—one to his farm, another to his merchandise,—one seeks anchorage in listless ease, another in luxurious dissipation,—a third thinks to rise above the current on the popular breeze, and thus escape,—while a fourth labors to erect a golden tower, to which his barque may be made fast. But all in vain! Editors, subscribers and readers, have all been hurried along, through another revolution of time, and now, willing or unwilling, they are ushered into the vestibule of a *New Year* numbered *Eighteen Hundred and Fifty-Nine*.

We may as well now make a virtue of our necessity, and become reconciled to the idea of being carried irresistibly down the subtle stream of life, by the ceaseless “floe,” and improve the experience of the past, by making the best possible

preparation in our power for the duties and dangers, the joys and sorrows, of the future.

But we need not be despondent. God rules among the nations of the earth. He has not led our forefathers from the despotism of Europe, to this wilderness, sustained them in their trials, in subduing the forests and the savages,—imparted to them wisdom to devise such a system of government as ours and given them ability and valor to defend it,—crowned the labor of their descendants with such success that this little one has become a great nation,—that this backwoods colony of but three million of inhabitants, has, in the short space of eighty-three years, so developed herself in all the elements of national greatness, as to be able now to compete with the proudest and most powerful nations of the old world,—as to do more to promote the arts of civilized life and diffuse the blessings of the gospel of peace than any other nation on the globe,—we do not believe, we say, that the Ruler of the universe would have thus signalized our nation, had He not other purposes to accomplish.

We may be punished and chastened, but the tree of liberty, which our forefathers planted, watered and defended with so much care and at so great sacrifice, will not be stricken down,—but will strike still deeper its roots, and extend still wider its branches, till a whole continent shall take shelter beneath its shade, and its leaves shall be for the healing of the nations.

To this end, the people, the yeomanry, the dwellers in the “rural districts,” the readers of the *New England Farmer*, and their like, must realize that they are the legitimate rulers of the land, and act accordingly—must take the reins into their own hands, and by that conservative wisdom which has always been found in the masses engaged in rural life, guide on the nation to a state of civilization and power that has no parallel among all the republics or empires that have preceded it,—“when nations shall beat their swords into plow-shares, and their spears into pruning-hooks; when nation shall not lift up sword against nation, neither shall they learn war any more.”

If we start upon the New Year with the determination to discharge every duty with fidelity and zeal, we shall soon find that *Home* is the rich treasury of earth, and that

“There is a power to make each hour
As sweet as Heaven designed it;
Nor need we roam to bring it home,
Though few there be that find it!
We seek too high for things close by,
And lose what nature found us;
For life hath here no charm so dear
As home and friends around us.”

WORK FOR JANUARY.

A good farmer's work is never done; that is, he can always find profitable employment, no matter what the season may be, or whether suns shine or storms beat. And in this he ought to find one of his principal sources of comfort and contentment.

This is not always the case with the mechanic; he may possess energy, health and skill, and sometimes be unable to find an opportunity to employ them,—so that although he may command higher wages than the workman on the farm, it is quite often the case that the want of employment and the greater expenses for living to which he is generally subjected by his position, makes the average income of each more nearly equal than it is generally supposed to be. We have never yet known an instance where an active, healthy and skilful young farmer could not find profitable employment; but have often known such instances among mechanics—where they have travelled from place to place, and in the touching language of Burns,—

“Begging leave to toil,”

while the meal and the oil were swiftly wasting away at home, with little prospect that they could be again supplied.

Is it not true, then, that the *certainly of employment* ought to constitute one of the chief sources of contentment to the farmer? And now, in *January*, it may be amidst sharp winds, drifting snows, or freezing nights and softening suns, of deep ruts and miry ways, or of smooth and glassy roads over which man and beast pass with an exhilarated delight,—there are duties to be performed just as important as were those in the flush and beauty of summer.

If the cattle have been well tended, they have again assumed the plumpness and good looks which they had when first taken from the grass. They have become acquainted with their master, and seem to understand what any motion means that he makes in their presence; their *ears*, as well as eyes, are ever watchful, as they move toward the sound of his voice, or the rustling of the hay, the chopping of the roots or the dash of meal into the feed-trough.

Who cannot see expressions of gratitude in the countenance of the patient ox or gentle cow, or hear them in the cheerful “whinner” of the noble horse, as he remembers their kind services and ministers to their daily wants?

“Who abuseth his cattle, and starves them for meat,
By carting or plowing his gain is not great;
When he that with labor can use them aright,
Hath gain to his comfort and cattle in plight.”

The *Barn* should be kept neat in every respect—so that the cattle may lie upon clean litter,

and breathe pure air. See that no cracks let in a stream of cold air directly upon a cow or an ox while it is tied up and cannot get away from it.

The *Cellar* should be so tight as to prevent cold draughts from coming up under the stock as it is lying down at night, and also to prevent manure from freezing, so that it may be overhauled or carted out during the winter.

Give the *Horses* a few carrots at noon, and they will soon show you a sleek coat. Cover them with blankets for an hour or two when they return from work in a sweat.

Let the *Hogs* and store pigs have warm and dry sleeping rooms, if you mean to find a profit in them.

Feed the *Poultry* with a variety of food; boiled potatoes, mashed and mixed with cob meal; corn, oats, barley, scraps or bits of fresh meat, gravel or pounded oyster or clam shells. These, with a warm, sunny shelter, will please them so highly that they will yield you an abundance of excellent eggs.

Feed out roots daily to all the stock; to milch cows immediately after being milked in the morning; to young cattle, dry cows, horses and sheep, whenever it is most convenient. But if you have no roots—ah,—make up your mind that you *will have them* next year.

Those of you who are blest with plenty of wood, and can enjoy the luxury of good, cheerful wood fires, gleaming upon your hearths and throwing its ruddy light into the glad faces of your healthy and happy children, will need no suggestion of ours, perhaps, to prepare it in season, and never to make the wife anxious and unhappy by attempting to burn it in an unseasoned state.

There is one thing more, at least, appropriate to the Month of January, and well worth remembering, that

“Tis not in title nor in rank,
 ’Tis not in wealth, like Lon’on bank,
 To make us truly blest.
 If happiness have not her seat
 And centre in the breast—
 We may be wise, or rich, or great,
 But never can be blest.”

GROSS AND NET WEIGHT OF SHEEP.—A few years ago we ascertained the live and dead weight of a large number of sheep slaughtered for the tallow near this city, and found that the carcass weighed about *three-fifths* of the live weight. These were common sheep, affording only about twelve pounds of tallow. Had they been in better condition, they would have afforded a higher proportionate weight of carcass.

In England, with the coarse-wooled mutton sheep, fatted for the butcher, it is generally estimated that a stone live weight (14 lbs.) will give a stone dead weight (8 lbs.) The live weight (ascertained after the sheep have fasted for twelve

hours) is divided by seven, and this gives the weight of the carcass in quarters. Thus a sheep weighing 140 lbs. alive, is estimated to weigh 20 lbs. per quarter. We have known whole flocks to exceed this estimate. The fatter the sheep, the greater the dead weight in proportion to the live weight.—*Genesee Farmer*.

EXPERIENCE WITH MUCK.

In the summer of 1855 I had an upland lot, preparing for wheat or rye, and having no funds to spare for the purchase of guano, bone dust, &c., I concluded to try what could be done at home. With a team and man we commenced drawing muck from a pond, and in four days had one hundred loads on two acres of ground. The ground was again plowed, thus mixing the muck, and on the 15th of September was sown with wheat. It was harvested the following July, and when threshed and exhibited at the County Agricultural Fair, received the premium for being the best wheat exhibited. The next season the plot was sown with oats, and such a crop was never raised on the *old homestead*, and all without any other manure. This season we have put *eight hundred* loads on five acres, sown to wheat and rye, and expect to be able to give you and the farming community as good a report, if not better, from the crops next summer. In addition to the above, on the first lot, we this summer cut, per acre, three tons of as good timothy hay as was ever housed, and up to this present writing, the feed is good, and cows easily fill themselves from it daily. Let every farmer, who can, try an acre with muck, and he certainly will be repaid four-fold.—*American Agriculturist*.

ANOTHER MOWING MACHINE WANTED.—It may sound a little singular to those who know the number of patents granted to hear us say that another is wanted; and each particular patentee, we suppose, will hoot the idea that we now advance, when we assert that very much the larger portion of the farmers of the Eastern and Northern States are as yet unprovided with a machine suitable to their wants. There are thousands of farmers living in comfortable circumstances, that do not and should not keep but one horse, and yet the tendency of all mowing-machine inventors, with but the trifling exception, has been to cater for men who keep strong teams, such as can operate one of the heavy two-horse machines, only working half a day, and then changing for a fresh pair or else over-work a single pair. Now what we want, and it is what inventors should turn their attention to, is a compact, light one-horse mowing machine, that can be afforded at a price within reach of the large class who keep but one horse, yet who are under just as much necessity of using labor-saving machinery as the largest owners of broad fields. We cannot advise small farmers to buy large machines, because we do not believe it would be profitable for mowing-machine manufacturers to give them one suitable to their circumstances, which they could and would afford to buy.—*New York Tribune*.

THE GREAT FRENCH HENNERY.

With care and good management, no branch of domestic industry is more profitable than rearing poultry. Many persons have supposed that what is profitable on a small scale might be made still more so when carried on to a larger extent, but repeated experiments in this and other countries have proved this to be a mistake. The secret of the matter is, that hens cannot thrive and lay, without a considerable quantity of animal food. Where but a limited number of fowls are kept about the farm-yard, the natural supply of insects is sufficient to meet this demand, and hence, when attempts have been made to extend the business beyond this source of supply, they have not prospered. It will be seen from the following interesting account that Mons. de Sora, of France, has adopted a method that has proved completely successful by affording an artificial supply of this essential portion of food.

The French practical philosophers certainly know how to make the most of things. A Mons. de Sora has recently discovered the secret of making hens lay every day in the year, by feeding them on horse flesh. The fact that hens do not lay eggs in winter as well as in summer, is well known, and the simple reason appears to be that they do not get the supply of meat in winter which they obtain in the warm season for worms and insects.

M. de Sora was aware of all these facts, and living at the time upon an old dilapidated estate, a few miles from Paris, the acres having been bequeathed to him a few years previously—he set himself earnestly at the task of constructing a hennery, which should be productive twelve months in the year. He soon ascertained that a certain quantity of raw mince meat given regularly with the other feed, produced the desired result, and commencing only with some 300 female fowls, he found that they averaged, the first year, some twenty-five dozen eggs, each, in the 365 days. The past season he has wintered thus far, about 100,000 hens, and a fair proportion of male birds, with a close approximation to the same results. During the spring, summer and autumn, they have the range of the estate, but always under surveillance. In the winter, their apartments are kept at an agreeable temperature; and, although they have mince meat rations the year round, yet the quantity is much increased during cold weather. They have free access to pure water, gravel and sand, and their combs are always red. To supply this great consumption of meat, M. de Sora has availed himself of the constant supply of superannuated and damaged horses, which can always be gathered from the stables of Paris and the suburbs. These useless animals are taken to an *abattoir* owned by M. de Sora himself, and there neatly and scientifically slaughtered. The blood is saved, clean and unmixed with offal. It is sold for purposes of the arts at a remunerative price. The skin goes to the tanner—the head, hoofs, shanks, &c., to the glue maker and Prussia blue manufacturer; the larger bones form a cheap substitute for ivory with the button maker, while the remainder of the osseous structure is manufactured into ivory black, or used in the shape of

bone dust for agricultural purposes. Even the marrow is preserved; and much of the fashionable and highly perfumed lip salve and pomade, was once inclosed within the leg bones of old horses. Uses are also found for the entrails—and in fact no portion of the beast is wasted.

The flesh is carefully dissected off the frame of course, and being cut into suitable proportions, it is run through a series of revolving knives, the apparatus being similar to a sausage machine on an immense scale, and is delivered in the shape of a homogeneous mass of mince meat, slightly seasoned, into casks, which are instantly headed up, and conveyed per railroad, to the egg plantation of M. de Sora.

The consumption of horses for this purpose, by M. de Sora, has been at the average rate of twenty-two per day for the last twelve months, and so perfectly economical and extensive are all his arrangements, that he is enabled to make a profit on the cost of the animals by the sale of the extraneous substances enumerated above—thus furnishing to himself the mince meat for less than nothing delivered at his hennery.

It has been ascertained that a slight addition of salt and ground black pepper to the mass, is beneficial to the fowls, yet M. de Sora does not depend upon these condiments alone to prevent fermentation and putrefaction, but has his store rooms so contrived as to be kept at a temperature just removed from the freezing point through all months of the year, so that the mince meat never becomes sour or offensive; the fowls eat it with avidity; they are ever in good condition, and they lay an egg almost daily, in all weathers, and in all seasons.

The sheds, offices, and other buildings, are built around a quadrangle, enclosing about twenty acres, the general feeding ground. This latter is subdivided by fences of open paling, so that only a limited number of fowls are allowed to herd together, and these are arranged in the different compartments according to age, no bird being allowed to exceed the duration of four years of life. At the end of the fourth year, they are placed in the fattening coops for about three weeks, fed entirely on crushed grain, and sent alive to Paris.

As one item alone in this immense business it may be mentioned that in the months of September, October and November last, M. de Sora sent nearly one thousand dozen of capons to the metropolis.

He never allows a hen to set!

The breeding rooms are warmed by steam, and the heat is kept up with remarkable uniformity to that evolved by the female fowl during the process of incubation, which is known to mark higher on the thermometer than at any other periods. A series of shelves, one above the other, form the nests, while blankets are spread over the eggs to exclude any accidental light. The hatched chicks are removed to the nursery each morning, and fresh eggs laid in to supply the place of empty shells. A constant succession of chickens are thus insured, and moreover the feathers are always free from vermin. Indeed a lousy fowl is unknown upon the premises.

M. de Sora permits the males and females to mingle freely at all seasons, and after a fair trial

of all the various breeds, has cleared his establishment of every shanghai, cochinchina, or other outlandish fowl, breeding only from old-fashioned barn-yard chanticleers, and the feminines of the same species. He contends that the extra size of body and eggs pertaining to these foreign breeds can only be produced and sustained by extra food, while for capon raising the flesh is neither so delicate nor juicy as that of the native bird.

The manure produced in this French establishment is no small item, and since it forms the very best fertilizer for many descriptions of plants it is eagerly sought for at high prices by the market gardeners in the vicinity. The proprietor estimates the yield this year at about 100 cords. He employs nearly 100 persons in different departments, three-fourths of whom, however, are females. The sales of eggs during the past winter have averaged about 40,000 dozens per week, at the rate of six dozens for four francs, bringing the actual sales up to \$5,000 in round numbers, for every seven days, or \$260,000 per annum. The expenses of M. de Sora's hennery, including wages, interest, and a fair margin for repairs, &c., are in the neighborhood of \$75,000, leaving a balance in his favor of \$185,000 per year, almost as remunerative as Col. Fremont's Mariposa grant.—*Selected.*

For the New England Farmer.

REPORT OF THE COMMITTEE ON FRUIT

AT THE AGRICULTURAL FAIR, CHARLEMONT, Ms., SEPT. 28.

There was on exhibition one small lot of pears. In traveling the county of Franklin, and all western Massachusetts, I have rarely seen a pear tree among the farmers. Fifty years ago there were large and heavily bearing pear trees in the eastern part of the State. Perchance I see a small tree, now in the hill towns, and in the Connecticut valley, loaded with delicious pears, and I exclaim, why did not the man who planted that tree, plant 20 at the same time! Well enriched, the pear is a sure bearer on the pear stock, preferred to the quince.

The plum and the cherry were not on show. They are even less common in this country than the pear. There are cherries, sweet and healthy, good bearers and growers, and long-lived shade trees that will flourish beautifully on our soil. Should not the cherry be cultivated?

Early in September, I was in the garden of the Rev. B. Foster, of Dummerston, Vt. There I saw plum trees loaded with fruit, perhaps 20 bushels, all of the largest and most delicious varieties. The trees, all small, were bending under their loads. Mr. F. has saved the fruit from the curculio by rapping the trees and killing the grub, beginning when the trees began to blossom. But he is feeling confidence in a compound applied to the tops of the trees with a garden syringe.

I noticed a tree loaded with plums in the garden of Dr. Clark, of Conway. He says, that in the spring he painted the body of the tree and the limbs as high as he could reach with soft soap and a brush.

Somebody, everybody in the hill country of

Mass., has neglected his duty 20 years ago, and every year since—and to-day we are none the better for want of the pear, the plum and the cherry.

But the apple—every owner of land in these parts is bound by his home comforts, and as a good citizen, to cultivate some of the best apples. The climate, the soil, the profit, the comfort and the crop, in the valley of the Deerfield, as sure as in any place in the world, tempt the people to cultivate the apple.

You see these ledgy, hill-side pastures where the maple and chestnut and hickory grow. That is the soil for the apple. Such pastures, well set in good apples, are a better investment for your son, or for the sale of your farm, or for your own comfort, than any other investment you will make with any hundred dollars. In ten years, and for forty years afterwards, the pasture will produce ten times more profit than it can yield in feed for sheep and colts. Keep the bushes down, keep your scythe and stock out of it, consecrate the soil to the apple, and say, since God has made this rocky hill-side very good for the apple, so will I.

When the wife and the children, and the generation after, eat the delicious fruits which you have planted, they will bless the man who planted them—his grave will have a pleasant look to the children, for surely, as to good fruits, the nearest way to the hearts of children, younger or older, is down the throat.

In the east part of Charlemont along the road-side, there has been lately the trimming away of the hedge of 50 years, and the planting of many apple trees. I pass that way every week and repeat the thought:—"Surely, in this, Dr. Taylor has done a thing of true practical wisdom."

You may notice that Josiah Ballard's doorway, east of the Charlemont church, is full of loaded peach trees. These were planted since the memory of any boy of 12 years old. I have lately passed these enchanting trees several times, and always repeat the same words. They are these: "*The bearing year never comes to him who cultivates no trees.*"

Travelling in any direction through western Massachusetts, one may notice the neglected orchards,—old orchards, well planted and well grown, untrimmed, ungrafted, unprofitable,—neglected, friendless. This remark, with some beautiful exceptions, extends into Vermont and New Hampshire. Travelling, this autumn, 100 miles of the valley of the Connecticut, I noticed not many young orchards. The best one which I have seen, and this is a very perfect one, is owned by Mr. Wells, at the point of the hill two miles west of Greenfield.

Last year, in Denmark, Iowa, I was walking with the Rev. Mr. Turner in his orchard. He had planted several hundred trees about 12 years before, on very rich soil, and they had grown rapidly, and were filled to excess with limbs. I said, your trees need much trimming. He replied, "The soil is rich and will sustain a heavy top." I said, the tops are already entirely too thick, and unless half their branches are cut away your fruit must be diminished in quantity and in size, and your trees will be decaying early. I said this with earnestness. With an expression like begging my sympathy, he replied,

"With my parish and my farm to look after, I cannot do everything."

You go through western Massachusetts and you may hear the same excuse 20 years long repeated out of the tops of the abandoned apple trees, "Don't look at us, *our owner cannot do everything.*"

Plant apple trees, plant fruit trees, and do not neglect them as to the spade at the root and the knife at the top, while they are young. Remember, *the bearing year never comes to him who cultivates no trees.* A. FOSTER, *Chairman.*

For the New England Farmer.

LETTER FROM JUDGE FRENCH.

AGRICULTURE IN COOS COUNTY, N. H.

Lancaster, N. H., Nov., 1858.

FRIEND BROWN:—An American who desires to behold nature in some of her most sublime and picturesque aspects, need not incur the perils of a voyage across the sea, but let him first visit the "Crystal Hills" of New Hampshire. There are many things in the Granite State, little dreamed of in the philosophy of Boston people. It is not only a very good State to emigrate from, but it seems by the fashionable world to have been, of late, discovered to be an agreeable place of resort in summer, by way of escape from the heat and sinfulness of city life.

I am told that there were seven hundred strangers quartered at one time last summer in the little village of North Conway, below the Notch of the White Mountains, and a voice is still calling to them to come up higher.

A story is told of two fast young gentlemen from Boston, who wanted to go to the farthest bounds of civilization northward, so they took the railroad to Littleton, and there chartered a horse and wagon, for a drive into the wilderness. They carefully provided a flask of whisky and some crackers, so as not to incur danger of hunger or thirst, and came over to Lancaster, expecting to see the spot where civilization gradually tapered off into the wilds of Indian life, when suddenly they found themselves in front of the magnificent hotel, of which I will say enough to show that they who travel this way need not bring provisions or tents.

THE LANCASTER HOUSE.

This hotel, which is the largest in this State, a part three, and a part four stories high, was opened last summer for guests, by Mr. John Lindsay. The building itself, in this country of cheap lumber, cost about \$18,000—and when fully arranged will accommodate one hundred and fifty guests. The rooms of the lower story are thirteen, those of the second story twelve, and those of third, eleven feet in height. The largest suite of rooms open into one spacious drawing-room of the dimensions of 54 by 24

feet. The house is 190 feet in length, a part being 64 and the rest 40 feet in width. The ample porticos, the lofty ceilings and the broad winding staircases, are arranged with an architectural skill, that gives the structure, both without and within, an effect really imposing. It is designed to accommodate those who in the hot season seek health or pleasure in these grand mountain regions, and it is difficult to say where art and nature have better combined for the enjoyment of leisure, than at this same spot, so far north that one looks back from it towards the south-east at the peak of Mount Washington. The distance from Boston is about two hundred miles, by Concord and Littleton, by railroad, and twenty miles stage, and two hundred and forty, including ten miles by stage, by Portland and the Grand Trunk Railway. For those who desire to pass through the Switzerland of America, the stage and lake steamer routes furnish a charming variety of wild scenery through the Notches of the Mountains.

AGRICULTURAL PRODUCTS.

The price of the best rock maple wood, which is from \$1.25 to \$1.50 per cord, and the price of potatoes at the starch factory, twenty cents a bushel, seem to indicate, that, notwithstanding our spacious hotel, we have advanced somewhat beyond the centre of population. Indeed, Lancaster is nearer to Montreal in Canada, than to Boston, and the Grand Trunk Railway, connecting Portland with the cities of the Canadas, is a great artery which sends out American blood with American principles and sympathies, through all the Provinces.

England cannot desire to hinder the fraternal relations of her provinces with the States, or she never would have assented to either of the two great steps towards fraternization which have recently been taken.

By one of them—the reciprocity treaty—agricultural products are carried free of duty between us and Canada, and so the custom-house mark of boundary is, in part, effaced. By the other, Canada has adopted the decimal currency, and "the almighty dollar" claims dominion there instead of the former *sovereign* of Great Britain.

But to return to the subject of agricultural products. This is part of the valley of the Connecticut, famous for its fertility, but as this portion of it is two hundred miles from Boston, its best market, farmers are obliged to send down their produce in a form not chargeable with too much freight. Butter and cheese, cattle and horses and wool, are the principal articles sold. Wheat is grown to some extent, but a great deal of flour is brought down from Canada to supply the deficiency. A great deal of valuable lumber

now finds its way from the wild regions farther North, down the river and the railways. Farmers are slowly coming into the idea that sheep afford mutton as well as wool, and begin to believe that some of the larger and coarser woolled breeds might be more profitable than the Merinos. Lambs, which a few years ago, sold for \$1.50, readily bring twice that sum, and the greater weight of the fleeces of the coarser sheep almost, if not quite, compensates for the inferior quality of the wool.

I have alluded to the manufacture of starch, a sort of pioneer business, which leads the march of agriculture towards the backwoods. Let me tell the children who read the *Farmer*

HOW POTATO STARCH IS MADE.

The starch used in families for stiffening shirt collars and the like, is not made of potatoes but of wheat, usually. Potato starch is used in cotton factories, chiefly, for what is called sizing. The starch mill here is a low, cheap building, on a stream of water which carries the machinery. Mr. B. H. PLAISTED is the owner. As you enter, he will show you great heaps of potatoes, rough and dirty, as they were dug. His cellar holds six thousand bushels of them now. The California potato is a good deal raised, a very large, coarse potato, which yields a great crop, not very good for human food. As the farmers sell them for only twenty cents a bushel, they must get a good many from an acre, to pay for their labor. One man raised 1280 bushels this year from four acres, of the kind called Peachblows. The potatoes are first put into a long box into which water is constantly pouring, and are there stirred about with long, wooden fingers and thus washed. Then they go into another place where there is a huge grater, like a nutmeg grater, only *greater* by a good deal, and thus they are grated into a pulp. This pulp is carried along over five strainers, upon which streams of water are falling, and thus the starch is washed out and goes through the strainers, while the skins and coarser parts pass along. The starch seems to be all there is in potatoes of any value, for what is left is thrown into the river, and is thought here to be of very little use for cows, to which it is sometimes given. Next the starch and water that went through the strainers, are pumped into large vats or boxes, and there in a short time, the starch falls to the bottom, and the water is taken off the top by a syphon, and the starch, clean and white, is so solid that it can be shoveled up into heaps. Lastly, it is put on to wooden frames, in a hot room, heated with stoves and funnels, and there dried, and then put into bags and sold. About two hundred and forty bushels of potatoes of sixty pounds to the bushel, will make a ton of

starch, which gives about a pound of starch from seven pounds of potatoes. The best and most mealy potatoes make the most starch, but farmers cannot afford to raise them for this purpose, as they yield a smaller crop than coarser varieties.

If any of the boys or girls want to try the experiment of making starch, it can easily be done at home. Take a half dozen potatoes and grate them to a pulp. Lay the pulp on a coarse sieve and pour cold water upon it, and allow that which washes through to stand a few hours, and the starch will be at the bottom, fit for use.

Winter comes early here. Snow fell so as to cover the ground during the first week of November, and sleighing usually lasts four or five months, leaving a season rather short for Indian corn, which, however, is cultivated to some extent.

All mountain regions are said to produce strong, healthy, free and virtuous people, and this region is no exception to the rule. Hard work, pure air and few temptations, perhaps, may explain the fact.

Let not New Hampshire mountains be forgotten when summer again drives people from their city homes. Yours truly, H. F. FRENCH.

For the New England Farmer.

REVIEW OF THE SEASON.

MR. EDITOR:—A review of the season may be interesting to the cultivators of the soil, and journals from different parts of the country kept with considerable care, would be of great value, not only in comparing the fluctuations of the season at a given place, but to compare the climate of different parts of our country with each other, so that we may know what crops have been successfully raised at any given place, and what failures have occurred, which has much to do with the prospect of market prices in the future. The unsteady climate of New England is sometimes more favorable to the husbandman than the more steady climate of the Mississippi valley, yet with all our mountains, rocks and hills, kind nature furnishes us with all the necessaries and many of the luxuries of life. The season has been propitious—our crops have been mostly first rate, and although some failures have taken place, they are more in the form of luxury than any of the necessary elements of life. I will now take a review of the months from the record of 1858, beginning with the growing season.

April has been about half a degree colder than the mean, yet having a temperature more than three degrees warmer than 1857, but colder than 1855 and 1856. Only 2.25 inches of rain fell during the month, consequently the ground was much too dry for vegetation. Cold north-west winds prevailed to a great extent during the month, keeping vegetation in a backward state. April left but a scanty growth of grass in the pastures, while the forests were bare and desolate. The rain was much less in quantity than usual, and we had barely snow enough to whiten

the ground, but the mountains have frequently been covered, probably some inches in depth. The sky has been less cloudy by more than one-tenth than last year.

May was rather dry during the first part of the month, but copious rains about the 20th gave plenty of moisture to the ground, which was wet enough during the remainder of the month. The mean temperature of the month was 51.61 degrees, being 1.31 degrees colder than last year, and 2.91 colder than the mean of the past five years,—being the coldest of the six. 1854 was the warmest, being 57.64 degrees, being more than six degrees warmer than the present. There was a light, easterly wind a considerable part of the last three days of the month, at the time when apple trees were in full bloom. Fruit trees of all kinds had a full medium quantity of blossoms, but not a great extra amount. The rains during the latter part of the month were favorable to grass, which appeared very promising.

June was neither dry nor wet, but had about the usual quantity of rain; its amount was 3.87 inches. The weather was warm and favorable to the growth of corn. The mean temperature of the month was 67.58 degrees, being 7.15 degrees warmer than last year and 3.48 warmer than the mean of the five preceding years. The warmest day was the 25th, when the thermometer stood at 91 degrees at 2, P. M., while the mean temperature of the day was 82 degrees. This was the most favorable month for corn during the season.

The first half of July was rather dry for vegetation, but the latter part was exceedingly wet. Rain fell on 15 days. The temperature of the month was 63.37 degrees, being 6.05 colder than last year, and 1.06 degrees colder than the five preceding years. The amount of rain was 4.80 inches. The month was unfavorable to corn.

August had a temperature of 65.67 degrees, which is about an average. The rain was distributed in showers through the month, giving a bad hay season, but no excess of rain; its whole amount was a little less than three inches. Rain fell on 17 days, and the amount of cloudiness was 45 hundredths. Owing to the cold of July the corn crop remained in a backward state.

September was warmer than the same month in the five preceding years, by 1.19 degrees, and had a temperature of 59.52 degrees, which was warmer than last year by 2.39 degrees. The amount of rain was nearly 3 inches, or about an average. The first frost occurred on the 23d day. It was hard enough to kill most vegetables, and was preceded by a thunder storm two evenings previous. The mean temperature of the last six months was 58.95, and the warmest month was June.

On the condition of these six months were included the hopes and prosperity of the farmer, for a supply of all his wants. Nature has furnished that supply. His corn crop is considerably above an average, with large, well-ripened ears. Potatoes were never better, yet the rot has done some damage. The warm and moist weather of September has increased the malady, but yet the supply is greater than the demand. Of the cereals we have a fair crop. Wheat is much better than last year, yet some pieces are nearly destroyed by the weevil and rust. Late wheat suf-

fered much from rust. Oats are a good crop, seldom better, yet the amount of land in oats is comparatively small. Grass was about an average crop, rather below than above. The season was rather unfavorable for haying, yet no great amount was damaged. The fruit crop is, at least, a partial failure. Apples are very scarce and small. Plums are almost unknown, while grapes have yielded abundantly. Wild fruits and nuts exist in very limited quantities, and the seeds of forest trees in general are scarce. Not only during the season of blossoms, but through the whole summer, we have had an unusual amount of east wind, whose blighting influence is felt in this section on the whole fruit crop.

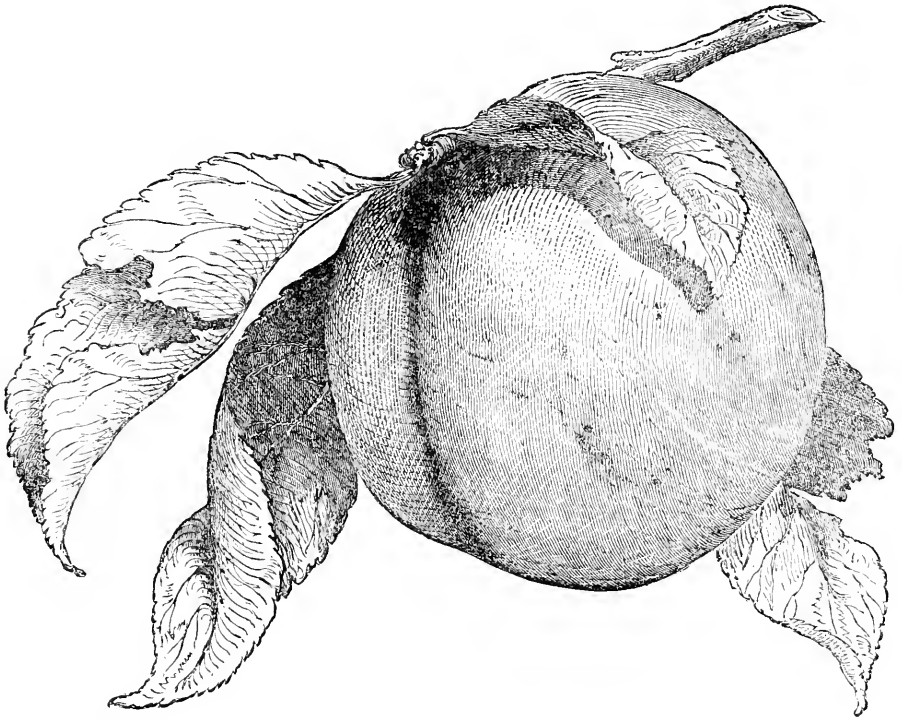
Among the periodical phenomena we notice the appearance of various kinds of migratory birds. Bluebirds appeared March 17th; robins March 19th; barn swallows May 3d; grass, first appearance of growth April 6th; general leafing of forest trees May 15th; barn swallows disappeared August 27th; general fall of forest leaves took place Oct. 21st.

Such are the results of the record of 1858. Shall we hear like results from other parts of the country? D. BUCKLAND.

Brandon, Vt., Nov. 8, 1858.

CARROTS FOR HORSES.

In Great Britain, many of the most successful agriculturists, and cattle breeders, feed their horses liberally, and, indeed, in some instances, quite exclusively on roots. The carrot they hold in high estimation for this purpose, and vast quantities are annually raised and consumed. It has been estimated by some writers on domestic economy, that a bushel of carrots is equal to half a bushel of grain; but although this is doubtless a somewhat extravagant appreciation, we have no doubt that three bushels of carrots will prove, in all cases, fully equivalent to one of oats. It was stated not long since in one of the papers, that the proprietor of one of the most extensive livery stables in Connecticut "considers carrots the most valuable article of *winter feed* he has ever raised." Raped, and mixed with chopped straw, or refuse hay, they answer a double purpose of economy, and render the expense of wintering animals far less than it would be were we to employ only English hay and grain. Hogs winter admirably, and even fatten on these roots. We advise every farmer who can command a piece of old, well worked, rich and *deep* soil, to put in a few square rods, and try them. The seed may be sown in this climate as late as the twentieth of June. The ground should be finely pulverized by harrowing or some other equally efficient disintegrating process, and thoroughly rolled after sowing the seed. Guano and bone dust are efficacious and salutary stimuli for the crop. Ashes, also, and gypsum, have a decidedly favorable and energizing effect. But plenty of good barn manure is best.



THE PEACH.

Among all the fruits natural to the growth of our soil, there is not one that will compare favorably with a well ripened peach of one of the finest varieties. The grape and the pear must yield the palm to the peach, and so must the plum, even if we should select for a comparison the Green Gage, the Washington, Jefferson or Columbia.

The pear, the plum and the grape are excellent dessert fruits, and are grateful to every taste; but the peach, while it claims just as high rank as a dessert fruit as any of those, may be made to serve as a nourishing, substantial food in situations where they can be raised cheaply in large quantities. We have never known a person who did not like the peach. It is palatable and wholesome when ripe, and uncooked, and when cut and served up with sugar, one of the most delicious sauces that ever came upon the table. In their ripe state they also make the finest puddings and pies, always being in demand at the table, even though epicures surround the board. When quartered and properly dried in a kiln, prepared for that purpose, they are just as suitable for a sauce, and in the estimation of many,

quite as good as when fresh from the tree, for pies or puddings.

We believe the peach and grape to be the most easily digested and the most wholesome fruits we have, and that if we used them as articles of food to a much greater extent than we do—not as articles to please the appetite merely—there would be much less sickness among us than usually prevails in the autumnal months.

If this be so, is it not worth while for every person cultivating a piece of land, to introduce a few peach trees, sufficient, at least, to supply his own table, provided his location is suited to their growth?

It is not our purpose now to speak of the varieties of this fruit, or of the mode of culture, or the soils most suitable for them. That has often been done in these columns, and probably will be again.

The beautiful figure above, which we now present the reader, is an illustration of *Van Zandt's Superb*, a very light colored and handsome peach, originated some years ago by Mr. Van Zandt, of Flushing, Long Island. It is one of the most beautiful dessert peaches, though only of medi-

um size, and possesses a very agreeable flavor. The flesh is whitish, but tinted with red at the stone, melting, juicy, sweet, and of good flavor. Ripens first of September.

For the New England Farmer.

NEGLIGENT HABITS--BORROWING, &c.

MESSRS. EDITORS:—Heedlessness costs us more than we are aware of; did we but consider the value of the time spent in consequence of our negligence, at a price we should charge our neighbor for work, we could readily account for the deficiency which often happens at the end of the year in balancing our books. The habit of borrowing tools or farm implements of a neighbor is not only a heavy tax upon the time of the borrower, but an annoyance in addition to the loss of time in the lender. The borrower not only sustains the loss of his own time, but frequently one or more men are idle for the want of tools to commence work, and in a few years the habitual borrower loses enough in his borrowing visitations to stock his farm with tools, beside disgusting his neighbors to ill will, and wishing the borrower well supplied with implements of his own.

Borrowing is excusable in beginners, especially in young men who are not wealthy; but for farmers or mechanics to depend upon their neighbors to furnish them with tools, does not look like regarding the Christian precept of doing as we would have others do to us. In what I have stated above I do not wish to comprise those who lend for pay.

Negligence in paying small debts is one of the worst of non-State-prison offenses; the debtor injures his own credit as untrustworthy, and his character as an honest man; he injures his creditor by withholding his honest dues, and he stands a poor chance to make a profitable speculation, if he wishes to borrow money to accomplish it; nobody has money to let to a negligent borrower, and to cap the climax, he is liable to have the sheriff's fee added occasionally to some of his small debts. Pay up small debts and interest on large ones punctually, and my word for it, your credit will command respect, and your neighbor's spare money will be at your service, whenever you see an opportunity to make a profitable use of it.

The most cruel negligence is disregarding the wants of the poor laborer; reason, common sense, common honesty and Scripture, all tell us that the laborer "is worthy of his hire." Men and women who have families of needy children, which are dependent upon the income of the daily labor done by their parents, to supply them with food, clothing and shelter, stand in need of prompt payment, and whoever declines prompt payment for such services, and will put these worthy people to the dreaded task of dunning the delinquent to the hundredth time, is not worthy to claim a right to the Christian name, let his professions be what they may.

Many persons suffer more for the want of promptness than they do by drought, curculio and the whole tribe of insects. I have observed in different towns where I have lived, the different habits of my neighbors; some of them who

possessed valuable farms, in the spring of the year would want a few shad or other fish for family use, and with a provident care for the future, would wend away to the river, where they would find plenty of company and scarcity of fish, sometimes toiling all night and "catching nothing;" but fishing, like gambling, let the luck be good or bad, tempts him who is successful to prolong his stay, that he may add more to that already gained; if unsuccessful, to hold on with a persistency which would do honor to any good cause, in hopes that luck would be more propitious and fish more plenty. At length, after sleepless nights, disappointed hopes, waste of time and heavy potations to "restore wasted energies," Jo Trout & Co. would think it about time to look at their farms. After arriving home, and the fog had dispersed from the mental atmosphere of Jo and Co., and vision restored, they could see their neighbors finishing their spring work of manuring and seeding their ground; then commenced the bustle and hurry among fishing farmers; everything was to be done; plowing, manuring and planting must be done in a hurry, which is no way to do a thing well, and so instead of driving business, business took the reins and drove Jo and Co. fretting through the rest of the season. When harvest time arrived, my fishing neighbors complained of bad seasons, poor crops, blighted grain and frost-bitten corn; and a plenty of weeds might be seen over their whole premises. This is the way some folks make both ends meet, and consider farming as really an unprofitable business!

Without promptness and systematic order among farmers and mechanics, confusion, delays and loss of time take place, to the detriment of the owners or interested party, which diminishes the profit of their labors and often prevents success. The successes of Washington, Jackson and Bonaparte were more owing to their promptness than to any other circumstance; by their quick decision and rapid movements they surprised the enemy, unprepared to engage with them. Had Gen. Washington been as much at ease, and tardy, as some of the British generals were, his negligence would have given Cornwallis an opportunity to have escaped his clutches at Yorktown, to continue his depredations and prolong the war, and perhaps to end in the subjugation of the colonies. SILAS BROWN.

North Wilmington, Nov., 1858.

REMARKS.—The above abounds with valuable suggestions, which ought to prompt us all to strict discharge of our duty.

THE MANAGEMENT OF PERMANENT GRASS LAND ought to be much studied by our farmers. *We plow too much!* By fall manuring we may keep up the productiveness of a meadow for many years, and the hay will continue to improve in quality. So, also, of pastures. Plaster should be used more freely. It is not right, either in morals or agriculture, to always take and never give—we must carry out "the doctrine of compensation."

For the New England Farmer.

DRAINING IN NEW ENGLAND.

Our solitary but good-natured friend, "S. F.," in a recent article upon thorough draining, offers some statements and logic that are rather flattering to the ability or good sense of our New England farmers. He says, in italics, just as though he meant it, "That the thorough draining of our old farms in New England, is simply an impossibility." All are ready to admit that there are many farms, which, at the present value of land, I mean good land in the immediate vicinity, would not "pay" for draining: but it is no less a fact that all wet and low lands *can be* drained, and nine-tenths of them at a moderate price, say from thirty to fifty dollars per acre.

Let us look a moment at his mode of reasoning. He says that the average value of our farm land is twenty dollars and twenty-seven cents per acre; draining costs twice that amount, hence it is impossible! To illustrate this mode of reasoning: suppose that S. F.'s watch has been neglected for a long time, needs repairs, and stops. S. F. takes it out, looks at it, finds "no tick here," says to himself, "This don't go, no use, think I will throw it away and get another." But a bright idea strikes him; "the watch as it is, is worth a dollar and a half, if the watch-maker will repair it for a dollar, I shall make fifty cents by saving it." F. starts for the watchmaker, finds him; but the extravagant mechanic wants two dollars for adjusting the watch. S. F. indignantly informs him that the watch is only worth one and a half, and it is absurd to think that he will pay two dollars for having it repaired. Watchmaker says, your watch will be worth twenty dollars when I have done with it. S. F. goes off disgusted with the stupidity of watchmakers, throws his watch into the dock, and finally believes that he has saved a half-dollar by his sagacity. The whole point of his argument is this—that a farmer must not spend more in the improvement of a piece of land than the land is worth before he begins to improve it. Every practical man knows better than this, for he may have a piece of meadow land so wet as to be entirely worthless, and by laying out ten dollars in ditching, he can make it worth a hundred to him. But to be still more practical, I will give a fact which will prove the fallacy of all such reasoning. Two years ago there was a piece of land near Boston which was worth nothing at all; in fact, was a nuisance; the owner spent about five hundred dollars per acre in improving it, and his land is now valued at one thousand dollars per acre; was it possible or impossible, to lay out more on the land than its value, and still make it pay?

Your correspondent seems to be in a severe fright about ditch-digging—he fears that when our young farmers learn what an unlimited amount of ditching is in store for them, they will "start in their boots," and scamper for the west without as much as looking behind them; he seems to have forgotten that the West is pre-eminently a muddy place, and that they have already called one of our best engineers to lay out drains, and extricate them from the mud. If all accounts are true, "top boots four feet high," would afford no protection for travellers on the *soft* lands of the West.

Since F. thinks it so horrible for our farmers to be obliged to dig ditches, I would like to ask him which he thinks the most pleasant and satisfactory for a farmer, to spend two or three weeks in the dry part of the fall, ditching and laying tile, or to have for life to pole his hay from spungy wet meadows, with boots full of filthy water, green snakes, lizards, frogs, and other such pleasant denizens of his good old-fashioned farm, and dig his half-crop of potatoes out of black mud, while his boots are loaded with the same rich alluvial, and his hands feel "kinder dry like."

I am truly sorry that the sight of tile gives our friend the horrors, for I see no chance of relief for him, indeed, my imagination is so very different from his, that I see the spirit of the age still remaining with us. Her crown is still the wheaten wreath; with one hand she swings the spade, with the other firmly grasps the drain tile, through which she lustily shouts, "home, boys, home, there is no place like home."

Boston, Nov., 1858.

PENSA.

WINTERING CATTLE.

In New England, the winter feed of cattle consists principally of dry, unsucculent fodder—hay and straw. Occasionally roots are given either daily or at intervals, in order to give variety to their diet and create a keener relish,—but as a general thing the main reliance is upon the articles first named. Of straw, the most nutrimental, probably, is that of wheat, especially when the crop is harvested when in the "milk," or at the period of its growth when the grain is changing from its milky condition to a doughy or pulpy consistence. The straw of oats and barley rank next in value, and that of rye, as fodder, the last. On farms of large size, much more account is made of the straw of these grains, than in smaller ones. It is then prepared by cutting, and is generally fed out in conjunction with corn and cob meal, or with roots, rasped, cut or cooked. It has not yet been fairly ascertained by accurate comparative experiment to what degree the various roots used in feeding cattle are improved by cooking. That their nutritive powers are considerably augmented by the process, seems now to be generally admitted; but whether, when we consider the advantages of rasping—which is performed by a machine capable of dispatching the business with great facility, the increase of alimentary power secured by boiling is adequate fully to indemnify the operator for the trouble and expense involved, is somewhat doubtful.

Where rough fodder is to be used, either boiling, cutting fine or rasping, will be found highly economical, as without some such aid, a very large portion of the haulm and straw produced on the farm would possess but a mere nominal value in an alimentary estimate of the products, and would scarcely be worth the storage for any purpose to

which it could possibly be applied. Boiled potatoes are preferable to raw ones in fattening swine or beef cattle, as the boiling diminishes their laxative properties, which are often detrimental to health, especially when fed in large quantities, and thus tend to counteract the very results they are intended by the feeder to produce.

The English agriculturists recommend boiled potatoes in stall feeding, and raw ones for feeding cows in milk.

Machines have been invented, and for a long time in use, in various parts of Europe, which reduce the roots to a semi-fluid or semi-liquid state; but towards these, the more intelligent portion of the agricultural community are not, apparently, very favorably disposed. But the cutting machine, or root-cutter, now so generally in use in New England—and which reduces the root to fine pieces, is perhaps one of the most valuable implements that can be used in the preparation of food for domestic animals. The use, therefore, of one of these, where roots and straw constitute the principal articles of food, is recommended both on theoretical and practical considerations, and will be found highly economical, saving both time and fodder, and securing, at the same time, all the important results produced by a more costly food.

For the New England Farmer.

ECONOMY IN TOOLS AND STOCK.

MR. EDITOR:—In agriculture, as well as every other branch of business, an eye must be kept out for the expenses. A reduction in these, as far as is practical, is commendable in the farmer. When he wishes to buy an article for farming purposes, he should know just what he wants, and in order to ascertain this fact, he should look at and test the new, as well as the old articles that are in the market. He does not want to purchase an article because it can be bought low, unless it is what is wanted. He wants the *very best* kind, and in purchasing such he saves time and labor, and labor is equivalent to cash. After an article is bought it should be taken care of, and after it has been used, it should be carefully laid away until it is again wanted for use.

In speaking of economy in farming, I do not wish to be understood that it is good policy to keep short, or starve animals that are kept for work, or otherwise. If farming will not admit of keeping a horse, oxen, cows or any other animals, well, which the farmer may think proper to keep, some of them should be disposed of. Above all things, do not starve a horse, one of the noblest animals we have. In speaking of horses, the farmer does not need what is termed a "three-minute horse," but a good family horse; one with which he can take his family to church; one that can be hitched to the cart, or drag; one that, if his wife wishes to go to a friend's to spend an afternoon, can be driven by her in safety.

If four cows cannot be kept well, keep less. By the way, it is a good calculation to give cows a little meal once a day; the milk is of better quality, and flows much longer, and there is much more refuse milk to give the hogs, which thrive much better on milk and meal, than they do on water and meal. The breed is quite an item in the rearing of hogs, but I have only time now to speak of it, as a hint.

HENRY CROWELL.

Londonderry, N. H., 1858.

For the New England Farmer.

ROOT CROPS.

I notice the article in this week's *Farmer*, under the caption "Root Crops," which evidently emanates from a gentleman, "E. E.," who does not think very highly of them, and has, I presume, had indifferent success in their culture.

He inquires, in the outset, if a man can pull, top and house, a hundred bushels of English turnips for three dollars? I am not informed precisely of the *size* of the aforesaid esculent, but will say in reply, that this Monday, Nov. 8, 1858, three of us have "pulled, topped and housed," 325 bushels Swedish turnips, at an expense of less than three dollars for the lot, and also, if Mr. "E. E." will bring on *his* turnips we will take the job off his hands at the same ratio. This much for that lion.

He then goes on to note his ill success in growing them with his corn, and finds fault because he did not get two good crops from the same soil. Too bad, *intirely*.

Again, he acknowledges, that in feeding out, they increased the quantity of the milk, but not of the butter. Some hocus-pocus here, surely!

And, finally, he says he would not have them in his cellar because they scented up his house. The probabilities are that this took place merely for want of sufficient ventilation.

The writer has practiced the raising of root crops for a series of years, having the present season harvested some 2500 bushels, and will follow it no longer than he is satisfied it will pay in every sense of the word. His present opinion, founded on years of experience, is, that there is no better means of renovating the soil, than by growing roots and feeding them out on the farm; carefully saving, housing and applying the manure derived from feeding them out, and that a perseverance of this course for a term of years will most assuredly tell upon the fertility of his land.

What comparison, indeed, is there between a ton and a half of grass to the acre, and fifteen tons of roots, both as to feeding and manurial purposes? To be sure, the roots cost more culture and higher manuring,—but, after all, there is no comparison as to their value.

Thus have I attempted to reply to some of "E. E.'s" objections to this branch of farming, feeling that he must have obtained a wrong idea of its practicability.

W. J. P.

Salisbury, Conn., Nov. 8, 1858.

REMARKS.—The writer of the above is one of our best New England farmers,—working with

his own hands, and constantly exercising a sound judgment in his operations. He took the first premium on farms at the Connecticut State Fair, in 1856. Our opinions are more in accordance with his than with those expressed by Mr. Emerson; but we like the objections of Mr. E. because their tendency is to call out facts like the above.

For the New England Farmer.

THE FARMER'S POSITION.

"Pride still is aiming at the blest abodes."

MR. EDITOR:—This subject is rather hackneyed, I grant; but the fact shows that the rural population take an interest in it, as they write so frequently about it. With many of the sentiments of the various articles in the agricultural journals relative to this Protean matter I heartily coincide. That the position of the farmer, who owns his farm, and is obliged to work it for his maintenance, is a position of average respectability, profit, happiness, and rather superior as to health, I am fully persuaded. But more than this I am not prepared to admit. This paper is devoted to the great agricultural interest of the country; but I suppose you, as agricultural editor, are not prepared to claim that it is the only important interest, or that it can be made remunerative without supporting, in return, those other and varied interests. All men should not be farmers, nor are all men fitted to be—in a high state of civilization—whatever we may say of the natural blessedness of farming. It seems to be a law of progress, that the more advanced civilization is, the more must labor be subdivided. And in this state all vocations are reciprocally dependant. Allow a correspondent who has annually written more or less for your neat, interesting and valuable periodical, ever since its origin, the freedom of saying, that he thinks many of the articles which appear in the agricultural journals—on the particular vocation to which they are devoted—to be over-wrought; and, if written by farmers, a little *too self-laudatory*. If not written by practical farmers, they can have but little or no claim to belief. I grant the fault is common in other vocations; but it may be no less a fault in all. The profession of the law demands the most learned men, though there is a very strong suspicion that it can tolerate those that are not the most honest! And it claims to be the royal road for those "seeking the bauble reputation." Medicine also requires the greatest amount of intelligence, and claims unsurpassed honor, though it admits it is a little plethoric in the varied *opathies*, and requires a gentle, if not a brisk, purging. The profession of theology claims to be *divine*, and admits no superlative, or even equal, in any vocation; though its divinity must be weak in proportion to its compass, if it embrace all the *pseudo* religions of the present *business* age.

But I return to agricultural laudation, or exaggeration—which is evidently injurious to the cause it would foster, furnishes vulnerable points for attack, and leads young men of the country to turn their backs on what they know to be false, and also upon the farm itself—at least till they try their capacities somewhere else.

In the monthly *Farmer* for October, I notice a well written article on "Farmers' Sons as Scholars," by Mr. Euler Norcross, of South Hadley—though the hope expressed in his last paragraph I think can never be realized—believing that the profession of the farmer can never become one of the "*learned professions*." That farmers' sons frequently make better scholars than some others, cannot be gainsaid; but perhaps no better than those of the mechanic, or laborer, or of any other vocation, where the son has been drilled to severe industry and economy. The poor and sedulous student believes with Franklin (who snatched his education from the universe, and not a farmer's son either,) that "A vocation to be profitable must be worked." What Mr. N. says of this class is very well; though he ought not to imply that they are all farmers' sons, or that there can be no poverty, industry and scholarship anywhere else!

But passing to a more important point, I wish I had faith to hope with him for the sublime realization of the thoughts expressed in his last paragraph; but it—(my faith)—has shown me so many "jadish tricks," and so seldom given me anything but old and stern realities, that I am reluctant to give it credit. Mr. N. says:

"I hope the day may come when our farmers and laborers shall rank first in point of education among the people of the land; when every farmer shall not be afraid to compare his education with any college graduate. Then will labor really be honored, and our laborers be truly our nation's strength, the safeguard of our liberties and our country's pride."

The writer of the above, in his golden anticipations, does not say that he hopes farmers will rank *equal* to the "first in point of education," but rank *first*! How he is going to bring this about, or how it is to come, he does not hint. I am bound to suppose, however, that he expects that the day is not far distant, when every man intended to labor on and carry on a farm for a livelihood, must first be fitted for college, (occupying two years,) then go to college and spend four years, and then to fit him for his special business, spend three years in a professional "School of Agriculture"—like the lawyers, doctors and ministers—before he can be in good working order for the farm, or able "to compare his education with any college graduate!" This plan would be expensive, but we think all our Universities would favor it, if no one else! But I am disposed to make the following query: Which would be the wiser of two young men having \$1500 apiece, and intending to become farmers, he who procured his collegiate education first and then run the hazard of getting a farm afterwards, or he who purchased his farm first, and then afterwards educated himself in the best manner his means would allow? Mr. Norcross, however, may not intend that farmers shall be college-educated, but only as well educated. Perhaps he means they shall be self-educated. This would render the desirable state he hopes for still more hopeless; for instances of good self-education are comparatively rare. Men do not easily become a Franklin. We can more readily carry his bundle of stockings and eat his rolls, than acquire his philosophy.

Although I cannot sympathize with Mr. N. in

his bright anticipations, there are some others who may. I notice a writer in the May number of that very able and heavy-laden periodical, the *Genesee Farmer*, entertains similar views. He observes: "It will be a better day for all, when it is discovered that the highest honors of the college do not unfit a man for the practical duties of agriculture—that it is not burying one's knowledge to graduate from the college to the farm."

Why should not all mechanics, merchants, editors, artists and laborers, be liberally educated, to give dignity to their varied callings? I wish they might, but know that a tithe of them cannot be. These writers seem to be insensible of the immense labor requisite to properly educate youth. Although there is a vast amount of knowledge extant, and decreases none the less as it is acquired, yet the work of education is a Herculean and perpetual labor. Ignorance is the rock of Sisyphus, forever recoiling upon society. A man can easily drop a fortune into his son's lap, yet though learned as Newton or Bacon, he cannot give him an idea without effort—as education or learning is in its nature intransmissible. Hence it is an obvious fact that society will always embrace a large number of ignorant beings. They must be supported, and they must labor. What shall they do? If we raise agriculture, mechanics and trading above their capacities, they must enter the pulpit, the bar and medicine! Such an idea is, of course, preposterous.

In our large cities and towns are great numbers of able-bodied men, some from foreign countries and others native born, out of employment, and in danger of being led into crime. They are told to go into the country and go to work. But if a college education is to be required ere they can properly wield the spade and the hoe, an extensive means of employment will be cut off. Trying to be serious about the subject, I think they should be employed, even if the University farmers are obliged to hoe their row with such profound ignorance and brute force—of which the latter, I have always thought, never came amiss on a farm. These unlettered men should be directed and controlled, but employed they must be.

I beg pardon of all farmers when I repeat the opinion, (meaning no disrespect,) that to successfully carry on a farm does not demand the highest order of intellect, or the highest cultivation of an ordinary intellect. If it did, we could not expect many good farmers, neither could we hope to see agriculture popular, or farm products cheap and abundant, as they ought to be. It must be evident to every reflecting man, that the culture of God's earth should never become so elevated and exclusive that the humblest man may not freely engage in it, if he choose, and not feel mortified and ill at ease from the vast array of learning and agrarian aristocracy around him. Farmers need not be scholastically learned, but they should be sensible, and understand *their* business better than any one's else. Perhaps "the highest honors of a college" may not "unfit a man for the practical duties of agriculture," but if they beget in him—as they always do—a belief that he can get an easier livelihood in some other vocation, the result to the farm is the same as if they did. Men do not labor here or there,

from sheer moral obligation, but from necessity or interest. Give a hundred of our best farmers a college education, and then look and see if you can find them laboring three consecutive days in their former employment—except as a mere healthy pastime!

If carpenters, masons and painters should meet in convention, and resolve that they and their business could never be properly respected until their education was as good as that of any college graduate, I will venture to say that farmers would smile; for their labor is more of the hand than the head. Yet it requires no more liberal education to raise corn and potatoes than to build a house.

The respect which a discerning public yield to the cultivators of the soil is permanent and healthy, and should be appreciated. It is true, they cannot expect, as such, to be recorded in history, or to live in the future in brass or stone—as we hope good farming is too common a thing. This esteem is not that which is periodically lavished upon them by the politicians for their endowment of suffrage, but that which a State or federal election cannot effect. If their respect were to rise and fall only with the political barometer, they might well complain. As it is, we think it argues ill for them to demur, as he who habitually laments his position, instead of boldly pushing on and forgetting it, rarely is successful.

Hon. Horace Greeley, of New York, lately delivered an able agricultural address in Indiana, from which I quote the following sentence: "It is the most melancholy feature of our present social condition, that very few of our bright, active, inquiring, intelligent youth are satisfied to grow up and settle down farmers." With all deference to Mr. Greeley's opinion, and unflinching respect for the farmer's position, I cannot think so. If the children of the hardy yeomanry make some of the most enterprising men in the country, I can see no good reason why other interests and vocations should not share in the benefit of them. If the country sends men to the city, the city returns men to the country, and they are more likely to become contented, and hence better farmers than those youth who have had an opportunity to see but little of the world ere they "settle down farmers;" for the latter can rarely be made to believe that they could not have bettered their condition. Let these intellectual youth go. If they succeed, no one can complain; if they return to become farmers, they will be the more happy. I question whether Mr. Greeley would ever have delivered his elaborate address on Agriculture, if he himself had not wandered to the city, where he assumed a vocation whose successful flow led to the establishment of the *New York Tribune*, and sent its proprietor to Congress. Will farmers lament and exclaim, "O, how much has agriculture lost in Horace Greeley's early becoming a printer?" But he now owns a farm and takes a great interest in rural pursuits. Very well. Will he give his whole attention to that vocation which seems to inspire him with so much respect? If so, and he bring ample means with him back into the country, has agriculture or the community suffered? Others may do the same.

Those who do the least on the farm, I sometimes suspect, are the loudest in its praise. The

"intellectual youth" see this, and as example is stronger than precept with them, they take the liberty of bustling in the flood of society, till they can well judge for themselves what vocation they shall choose. I think, on the whole, this is well. Agriculture has many resources, and will take care of itself. It stands on too important and permanent a basis to be shaken by smart boys. But while on this subject, let me observe, that if farmers really wish their sons to remain at home or on a farm, they should be careful that they do not compel them to labor and associate with every ignorant and vicious workman that may come along, because their necessities make them cheap; for youth, with proper self-respect, will resent it as an indignity. It is true, as I am bound to believe, that the time will never come when college graduates will let themselves out on a farm by the month, or that such men as Daniel Webster, Edward Everett, Ralph W. Emerson, &c., will be seeking employment in the rural districts; yet farmers will do well to discriminate a little in favor of the most available virtue, good manners and intelligence, that may pass along—besides giving an air of cultivation and content around their homes.

But I will close this extended communication by the relation of a simple anecdote. Some few years ago I heard a gentleman deliver a lecture upon "Character." It was a dull, prosy thing, and those who knew the value of "balmy sleep," were inclined to nod. Yet at its close he apologized for any thing that might have been too pointed! Not wishing to appear as that gentleman did, I drop my pen without pleading favor.

W. Medford, Oct., 1858

D. W. L.

For the New England Farmer.

USE OF FRESH MANURE.

MR. EDITOR:—I saw an article in a recent *Farmer*, from MR. WARD, "about manures." I am glad he had the courage to write his experience, which differs so much from the practice of some, and the theory of many more. The reason so many barn cellars are built, is not because the many know their benefits, but because it is said to be the best way to manufacture food for plants. From results in my own experience, I find that the manure composted under cover, is a dangerous article as food for plants. I have used manure that has lain a considerable time in a barn, (merely on the top of ground in that section usually styled a bay,) for the corn crop, and not more than five per cent. of the corn planted ever came up. I have observed, in different fields, that where manure from barn cellars is used, that the corn plants were sadly deficient in number at harvest time. After forty years' labor among corn crops, I find more changes, among cultivators, for the worse, than for the better. Mr. Ward, it seems, has a question in his own mind, whether to remove his manure from his cellar, in accordance with his better judgment, or to let it remain as do his neighbors, and have a scanty crop. My advice is to give his manure the benefit of both sun and rain.

There is no place more suitable for manure in the winter than under the eaves of the south side of the barn. All the water that falls from the barn, and the snow that accumulates upon it, is

no more than is needful for the preparation of the manure to fit it as food for plants. Whatever loss there is by evaporation from the manure heap in a dry day, is more than balanced by receipts from the atmosphere in the night-time and in cloudy days.

I believe it is good policy to have our yards for manure outside the barn; let swine have free access to them during the day time, and fifty per cent. more manure in value may be made, than in the more modern way, of keeping both manure and swine in a cellar. At the same time swine will be more healthy, and consequently more profitable.

If space was not so limited, I should be glad to say a few words touching the corn crop. It is in fact *the* crop of New England, so far as profit in dollars and cents is considered. With due care in preparing the manure, in selecting and cultivating the soil, selecting the variety of corn for seed, and choosing from that variety, with a dozen other etceteras, the corn crop will assuredly pay from twenty-five to forty per cent., year after year.

R. MANSFIELD.

West Needham, Nov., 1858.

THE LABORER AND THE WARRIOR.

BY EPES SARGENT.

The camp has had its day of song;
The sword, the bayonet, the plume,
Have crowded out of rhyme too long
The plow, the anvil and the loom!
O! not upon our tented fields
Are freedom's heroes bred alone;
The training of the workshop yields
More heroes true than war has known.

Who drives the bolt, who shapes the steel,
May with a heart as valiant smite
As he who sees a foeman reel
In blood before his blow of might;
The skill that conquers space and time,
That graces life, that lightens toil,
May spring from courage more sublime
Than that which makes a realm a spoil.

Let labor, then, look up and see
His craft no path of honor lacks;
The soldier's title yet shall be
Less honored than the woodman's axe;
Let art his own appointment prize,
Nor deem that gold or outward light
Can compensate the worth that lies
In tastes that breed their own delight.

And may the time draw nearer still,
When man this sacred truth shall heed,
That from the thought and from the will
Must all that raises man proceed;
Though pride may hold our calling low,
For us shall duty make it good;
And we from truth to truth shall go,
Till life and death are understood.

EMERY'S JOURNAL OF AGRICULTURE AND PRAIRIE FARMER, published at Chicago, at \$2 a year. This journal has earned for itself a good name by its neat appearance and its practical good sense. The prairie farmers can increase their profits by reading it carefully, to say nothing of what it may do for the women and children. We wish it great success.

For the New England Farmer.

**UNITED STATES AGRICULTURAL FAIR
AT RICHMOND.**

MESSRS. EDITORS:—Having in a former communication given some account of the stock at the Fair, it remains for me to notice, briefly, the other departments.

The vegetable, fruit and horticultural departments were not largely represented, but each contained some very fine specimens. There were very nice potatoes, sweet and Irish, some very large cabbages, one that weighed sixteen pounds, some excellent beets, both table and sugar beets. The fruit show consisted chiefly of preserved fruits, such as the strawberry, plum, peach, cherry, raspberry, &c. There was a good exhibition of preserved fruits and other vegetables. The show of plants and flowers was quite small. It contained, however, some of the finest and most elegant roses that I have ever seen. The "Old Dominion" is famous for fine roses, as I ascertained by observation and from conversation.

The domestic department contained a very creditable exhibition of the handiwork of the ladies. The Southern mothers and daughters gave demonstrative evidence of possessing much skill in needlework and embroidery. This department is becoming a prominent feature in all our agricultural exhibitions, County, State and National. Let it be encouraged, for it is a hopeful omen. Not only needle-work, shell-work, embroidery, &c., but bread, cake, butter, cheese, and other edible things, are also exhibited, showing a great diversity of skill in these several arts, so essential to domestic comfort and enjoyment. It is true that bad bread and butter and poor cheese will prevent starvation, but let it be remembered that good bread, sweet butter and delicious cheese are a continual feast in the few households where they not only abound, but superabound, as in some that we wot of. Wines and grapes were on exhibition, which I omitted to mention in connection with the fruits.

One of the most prominent, interesting, noteworthy and important departments of the Show, yet remains to be mentioned with some minuteness, and that is, the one including farm implements and machinery, designed to promote and aid farm labor in its various departments, such as relate to the tilling of the soil, sowing or planting the seed, cultivating the crops, harvesting them, husking and shelling the corn, threshing and winnowing the smaller grains, potato-diggers, &c. There was a very creditable exhibition in this department.

What surprised me more than any thing else that I noticed in connection with the Show and Fair, was, that so many of these were made south of Mason and Dixon's line. I regarded this as a favorable omen, but was told by Southerners, that they regarded or looked upon it otherwise, for, said they, "Our agricultural resources are what we are to study to develop and make productive, leaving other portions of our country to do the manufacturing." This is undoubtedly good doctrine and true. New England has a hard, unproductive soil, naturally, but capital facilities for manufacturing, as is demonstrated by her wares, which find their way into all markets.

Among the reapers and mowers, are Morrison's,

manufactured in Richmond, Atkins's Reaper and Mower, made in Illinois, the Buckeye, Allen's, the Eagle Mower and Reaper, and others. The last mentioned was exhibited by A. G. Mott, of Baltimore, agent of the House of Nourse, Mason & Co., Boston. I heard a good account of this machine. The same Eastern House had several other articles on exhibition. I wish they had sent on samples of all their plows; for the show of plows was not very good, at least, I so judged, after careful observation.

Watt, of Richmond, was a large contributor to the implement department, and especially to that of plows. Mr. W. is a very intelligent and enterprising mechanic, as I had ample opportunity to learn. Iron plows were exhibited by R. B. Winston, of Richmond. There was a machine called the corn and potato-furrower, from Orange county, Va. Cultivators of various patterns, shovel-plows, surface-draining-plow, (price \$25,) which will enable a man to drain sixty acres a day, with three mules to draw it. I shall refer to this again.

There were various planters, seed-sowers, drills, &c., some of which excited much attention,—and none more so, nor more deservedly, than Wiggin's Corn-planter, from Boston. This was made to be drawn by two horses, and to fertilize and plant four rows at "a bout." It is so made that a plowshare like implement opens a small furrow, the corn and fertilizers are dropped, covered by a contrivance that turns the furrow back, as it were, and then rolled by wide-rimmed wheels, which follow and finishes the work. This machine made a decided and favorable impression upon those farmers who have much planting to do on smooth land. It may be so constructed as to be used with one horse or two, and to plant the rows three, three and a half or four feet apart. To Mr. Wiggin was awarded the medal for his invention. It is just the thing for planting corn in the Western States, where the steam-plow, it would seem, is destined to turn up the soil ere long. Farmers of the West, just think of it! A steam-plow to till the soil and fit it for planting, Wiggin's planter to put in the seed, horse-hoes and cultivators to do the weeding and cultivating with, a harvester to gather it, worked by horses, Nourse, Mason & Co.'s huskers and shellers, and Sanford's mill for grinding it for stock or the table, leaves but little for hand labor, all, nearly, being done with machinery, propelled by steam or horse power.

There were subsoil plows and a great variety of other implements, that excited much attention, among which were barrows, carts, wagons, hay, straw, corn-stalk and husk cutters, platform-scales, horse-powers, steam-engines, grist-mills, saw-mills, threshing-machines, a superb tobacco-press, a machine for making syrup of the Chinese sugar cane, &c., &c.

The Platform Scales, for weighing hay, live stock and other ponderous products, patented by Strong & Ross, and manufactured by J. Howe, Jr., Brandon, Vt., and Frank E. Howe, New York city, proprietors, attracted much notice. They were used for weighing the live stock on the Fair ground.

These scales are the best adapted to the wants of the farmers, not less than to others, of any that I have yet seen. They do not require a pit

to be dug to the depth of three or four feet, but may be placed upon the surface of the ground, and used as was illustrated on the Fair grounds. The knife-edges upon which the scales turn are protected from dulling by the use of balls; but two simple levers are used, thus avoiding complications; remarkable for their self-adjusting power and accuracy, absence of check-rods, and may be used for weighing upon an inclined plane, a peculiar and convenient quality for some localities. They were tested by placing a heavy substance upon the centre of the platform, weighing it, and then moving it to the several corners of the platform and weighing it, without showing the slightest variation. The judges awarded the silver medal and the bronze medal on large and small scales as first premiums, as stated by the Secretary of the National Agricultural Society. More anon about implements.

ECONOMY IN FUEL.

Very much of the fuel consumed in our stoves is lost. If it is not dry, all the water it contains must be converted to steam, and this requires a large amount of heat. Could this steam be conducted to some reservoir, where the heat was wanted, and there condensed, the heat would be saved, but in ordinary cases, it passes with all its heat to the chimney. The only exception is when the stove-pipe is very long or passes through a cold room, and then, "O, what dirty work the dripping makes." Drying wood in the stove by fire, when sun and wind are afforded free, is like using sunlight to sleep by, and gas and oil to work by.

Another error consists in admitting more air within the stove than is necessary to promote a combustion of the fuel, and also admitting it where it does not aid the combustion. The object of air is to afford oxygen to unite with the carbon of the wood. In this chemical union, forming carbonic acid, heat is produced or given out. Now all the air admitted to the stove which does not so pass through the fire as to be decomposed and yield a portion, at least, of its oxygen, becomes only an absorber of heat already made, and a carrier of that heat off into the chimney to warm, not the room or its occupant, but "all outdoors." A very great error is often made by those who study economy. They split their wood fine, put but a little in the stove at a time, and give it a full draft in order to make it burn rapidly, so that a little wood shall make a large fire. But this little is repeated so often that the aggregate is large.

Would you study economy, convenience and comfort, then you will find them all in the same management. Leave most of your wood large. Have a little quite fine for starting your fire, use sun and wind to dry it. After your fire is started, keep a full supply of wood in the stove, never letting it get down to one stick, and give it so much—just so much, and only so much air as will keep the fire sufficiently alive to give the desired temperature to the room. Any person who will follow these directions with one stove, will save enough each winter month to pay for the *Culturist* one year, besides securing a large amount of ease and comfort.—*Berkshire Culturist*.

For the New England Farmer.

ENGLISH TURNIP CROP.

MR. BROWN:—Having tried an experiment (new to me) in the culture of the common flat turnip, which has proved successful, I am induced to furnish a detailed statement of the same, for the use of the thousands of farmers who read your paper.

The ground selected for my turnip crop was part of a field intended for corn culture next year—so that the plowing is so much work done in advance; extent half an acre. The soil is a light sandy loam. This was plowed July 22d; depth seven inches. After harrowing thoroughly, three ox-loads of composted manure and one barrel of wood ashes were spread on one-half of it, viz., one-fourth of an acre, carefully harrowed in, the turnip seed sowed and bushed in. The seed came up readily and grew finely, for a time; but produced an indifferent crop of small roots. The remaining quarter of an acre was allowed to lie till August 5th, when it was carefully harrowed, and on one-half of it I spread seven bushels of a compost (which I prepare every year for raising fodder corn,) consisting of four parts of wood ashes, (taken damp from the cellar,) one part of hen manure and one part of plaster, (thoroughly mixed and suffered to stand ten days before using.) This was harrowed in, the seed sown and bushed in. On the remaining one-eighth of an acre, I spread six bushels of hen manure, well pulverized; and treated as above. This sowing came up readily and the plants grew rapidly, overtaking in size those sown fourteen days previously, in about four weeks, and then fairly "distancing" them. No culture was bestowed on the crop. It was harvested November 10th. On the part where the hen manure was spread the yield was at the rate of 550 bushels per acre; the roots of large, uniform size, and of very fine fibre. Where the compost of hen manure, ashes and plaster was spread, the yield was somewhat lighter, the roots being smaller in size, though finer grained, and better for table use.

I am induced to publish this statement, not because the yield was extraordinary, but to show our farmers, who keep two or three dozens of fowls, how they may make the droppings of the hen roost (commonly wasted) pay a large profit; and with little labor, secure a crop which helps make up the variety of an old fashioned "boiled dish," and helps to graduate for their stock the change from grass to dry winter fodder.

JOSIAH H. TEMPLE.

Framingham, Nov. 12, 1858.

BIG CHIMNEYS.—The chimney at Bolton, England, mentioned the other day, is not the highest in the world, although a hundred feet taller than the Charlestown structure. There is one near Manchester, England, that is 430 feet high, while the chimney shaft of the St. Rollox chemical works, at Glasgow, is twenty feet higher still, being 450 feet high; and a yet larger one is in course of construction at Glasgow, for a chemical manufactory. It is to be 460 feet high, or nearly twice as tall as the Charlestown chimney, which is 230 feet high. In order to secure

its solidity and strength, the constructor is building into the centre of the brick work at every stage of twenty-five feet a malleable iron ring $3\frac{1}{2}$ inches broad, and 7-8 of an inch in thickness. The mortar used is of a peculiar character. The foundation was built with a mixture of Irish lime, ironstone, Arden lime, and sand, forming a cement impervious to damp. The rest of the shaft is to be built with mortar of a similar description, with the exception of the Arden lime.

For the New England Farmer.

CORN AGAIN--ITS SUPERIORITY TO ANIMAL FOOD.

MR. EDITOR:—Your Kennebec correspondent, K., in your number for October 23, takes occasion to differ, "respectfully," from some of the views I have, from time to time, presented in your valuable columns; especially those which are found in an article entitled "Corn versus Beef." With your permission I wish to review, as "respectfully" as I can, his apparently honest objections; and remove, if possible, his difficulties. This I do the more freely, as, in his objection and animadversions, he represents a considerable proportion of your less scientific but inquiring readers.

He says, "Domestic animals form the basis of all farm improvement." Do they so? and do they form the basis of all garden improvement too? How was it with the first two gardeners? How has it been with the Chinese and with the Japanese of several centuries past—concerning the latter of whom the best authorities tell us that while they are, compared with the other Asiatics, a highly cultivated and progressive people, they subsist almost wholly by means of spade husbandry; not having in the whole empire, with its twenty to thirty millions of people, as many domestic animals as there are in a single township of modern Sweden?

Perhaps he will say, "I do not see the necessity of going back to the days of Adam, nor to the opposite side of the globe; let us have facts nearer our own times, and at our own firesides." Very well; they are at hand.

Rev. Samuel Nott, of Wareham, who owns about an acre of land, and who has had it under high cultivation for (I think) about a quarter of a century, assures me that spading it up well, every year, instead of plowing it at all, with but a very little manure, is found to be the most economical course; and Mrs. N., who is no careless observer, concurs in his opinion. Are domestic animals so very indispensable here?

Mr. Abijah Johnson, of Anburndale, finds subsoiling his old, worn-out lands, the basis of farm improvement. He does not wholly exclude manuring, but he relies chiefly, so far as he relies on them at all, on such manures as are made without domestic animals; as soapsuds, the contents of the chamber, &c. &c.

I have myself cultivated one acre or so of land these twenty years, and with as much success, to say the least, as the average of my neighbors. My grounds have been constantly improving. Yet I never kept a domestic animal in my life, save, occasionally, a cat and a very few hens; nor have I bought much manure. Indeed, what I

have bought has been pond-mud, night-soil, lime and leached ashes. I have never bought a pound of any other, except once, a little guano.

Sometimes, indeed, I have found that certain ingredients of the soil which seemed needful to certain crops, were wanting; but by little attention to the discoveries of chemistry, I have supplied them without the aid of domestic animals. And so far am I from believing domestic animal manures form the basis of *all* farm improvement, that I do not believe they ever form its *basis*. At most, they are to the soil, what condiments are to our food; or rather to the stomach and to digestion. Though I might not wholly exclude them, I never would place much permanent reliance upon them. How very evanescent, for example, guano!

And if further proof were needful to show your correspondent his mistake, I have but to refer him to frequent articles in your columns—and that, not from visionary, but highly practical men: such, for example, as that from Mr. French, on the first page of your number, October 30.

Your correspondent next tells us "cattle that are stall-fed are only finished off on corn after they have attained their full size on grass and hay." Grant it; but whence comes the grass and hay; except from land that *might*, at least, to a very large extent, produce corn, or rye, or potatoes, or fruit, just as well as "grass and hay?"

"The same is true," he adds, "with regard to pork, it being raised, chiefly, on the products of the dairy, and refuse articles of the orchard and farm, until fattening time." Now, I have seen a hog, within a few days, that, on being killed, weighed 400 pounds, whose owner never had any dairy to furnish his food. It is, however, true, that he was the scavenger of the family; and that they have a *diseased daintiness* as their reward—unless, indeed, they should conclude to sell him to the city people, or exchange him for other and better articles of human sustenance.

If the various considerations which your correspondent has presented *were* sufficient to induce me to change my "figures," the change would by no means be favorable to the views of my opponents in opinion. The owner of the hog weighing 400 pounds, says he cost him over \$30. Now, \$30 laid out in farinaceous substances, which are much richer in that which nourishes the body, and quite rich enough in carbon for combustion in the lungs, would give us some 1800 pounds of the one, to 400 of the other. This is not, indeed, quite ten to one in figures; but at least ten to one in reality; since pork, in respect of bodily nutrition, is apt to remind one of the Irishman who said his fiddle had music enough in it, but he could not get it out. My brother, who raises some five or six hundred pounds of pork, yearly, for family use, told me, the other day, that his hogs cost him enough to support (so far as mere food was concerned,) his whole family of six or seven persons.

No living man, in the temperate regions, can get much nutriment out of fat pork; and they who, by aid of powdered fern roots or bark intermingled therewith, joined to the force of long habit, get a little nutriment out of fat, in high latitudes, gain but a meagre and miserable support. It is the testimony of Sir John Richardson and other British polar navigators, that Indi-

an corn, when obtainable in the Arctic regions, is better than fat.

Your correspondent says something about the teeth—that those of man indicate a mixed diet. This argument, if it proves any thing, proves that we should eat half grass or hay, and half flesh. Will he, then, adhere to it? Or if man, because he has four sharp-pointed teeth, ought to eat a part animal food, surely the sheep and the camel, that have four sharper teeth than man, ought to eat *quite as much* flesh, fowl or fish, as the latter.

That pork and beef eaters are better fighters than vegetarians, I will not now stop to deny, except to say that the Makrattas, the greatest fighters in India, were the most rigid vegetarians; nor that children of one year old sometimes "choose meat;" nor yet to prove that all the hogs we eat are *diseased* hogs, and all the men, women and children who eat them are diseased, as the consequence. W. A. A.

Auburndale, Nov. 1, 1858.

For the New England Farmer.

ECONOMY IN FARMING.

MR. EDITOR:—I was pleased with the recent remarks of your correspondent "Roger," on "neatness in farming." In juxtaposition with neatness is economy in farming. These remarks on neatness led me to reflect on the amount of waste in our farming community.

In the first place, I would notice the waste of time—how many hours are passed to no profit, either to body, mind, or estate. When farm-work is not pressing, time is passed idly away instead of devoting these leisure hours in clearing waste land, collecting and placing under cover wood which has been broken from trees, and thus liable to become rotten. From an ordinary farm, sufficient summer fuel could thus be collected, which would otherwise be lost.

Waste land; how much land is suffered to run to waste on almost every farm. On how many farms do you see bushes and rank weeds by the road fences, perhaps from six to eighteen feet, and thus the stone wall and fences along the farm are hid from view. Bushes are suffered to grow, when a few hours, which are often spent in idleness, would remove, and leave the land free for culture. Stony ground, which is unfitted for cultivation could be made to produce a fine growth of wood, and one inch of land on a good farm would not be left to waste.

In fact, economy and neatness are inseparable, one and the same. Wherever you see a neat farm, be assured the manager of that farm is an economical man; and, whenever you see a slovenly farm, you may rest assured that the manager of that farm is no economist.

These remarks will apply to every department of farming. How many there are who so manage in the feeding of cattle, swine or poultry, as to waste half their food, and consequently their neat stock are never thrifty, their fowls, many of them, at least, are unprofitable, they have eggs only half the season, and not abundant even then. Porkers that might be made to weigh 450 to 500 lbs., weigh little more than half as much as their neighbor's.

Again, look at the buildings of the slovenly

and wasteful farmer, if such a man can be called a farmer. A shingle off here, and there a board hanging by one nail—a door with one hinge broken off. I need not quote what the wise man has said in regard to a certain character in his day, "I went by the field of the slothful," &c. It would seem that words need not be multiplied to induce economy and neatness in farming. A word to the wise is sufficient. ECONOMY.

North Lcominster, 1858.

REMARKS.—These are more than hints—perhaps they may benefit some of us.

MANURING GRASS LANDS IN AUTUMN.

Many of our readers do not seem to be aware that mowing lands, in order to be kept up in fertility and productiveness for a series of years, require some sort of dressing every year or two. They will work hard, and be to great expense to put the land in good order, and to seed it well. They then begin to mow it, and follow it up year after year, taking a heavy crop of hay at first in the summer, and feeding it late in the fall by their cattle. In a few years they find the land "run out" as it is called, and they find it necessary to manure and plow and seed it as before.

Now it is abundantly evident, that much of the running out may be prevented by a little reasonable application of fertilizers, without the labor and cost of plowing and reseeded so often. Your land is a workshop or laboratory, in which certain kinds of raw material, such as manure from the barnyard—or muck or ashes, &c., is manufactured into grass, but it must have the raw material to work up, or your mill will stop.

We have found by our own experience, and by observing the experiments of others, that the best time to put many fertilizers, such as decomposed barnyard manure, or composts of different kinds, and even bone dust and plaster of Paris, is in the fall, before the fall rains commence. By applying them at this season, the coarser particles become disintegrated and mingled with the surface of the soil, and the whole become more intimately incorporated with the earth about the grass roots, not only stimulating them by their nutritive elements, but also affording protection more or less during the winter.

Every one who has a mowing field that is beginning to deteriorate in consequence of the annual cropping, and we nearly all of us have, would do well to put on the dressing as soon as may be now, so that they may be benefited by it, not only during the coming winter, but early in the spring. If you cannot do any better, try a few rods and wait the results.—*Maine Farmer.*

LEAVES ARE CHEMISTS.—Have you ever considered the amount of surface a single tree presents to the atmosphere? the extent of surface of leaves in a field of corn? Measure a leaf—take the area of one side, multiply it by two, (the number of sides,) and that product by the number of leaves on a single tree! This surface is all necessary to the growth of the tree. If you take off a part of the leaves, those which remain grow broader. They separate from the atmosphere and

swallow the food adapted to the wants of the tree. Think of this, reader; here is a suggestion for some interesting pencil-work. You have a pencil and a power to use it. Burn a plant, and how small a portion remains as ashes. Where is the balance? In the atmosphere. Where then does the plant obtain this organic matter for its construction? Not altogether from the atmosphere direct, but when we consider that each square inch of the surface of the leaves of some plants contains from 150,000 to 175,000 mouths, which absorb and assist in preparing the food for the plant, we may form some idea of their importance.

POWERS OF VEGETATION TO RESIST EXTREMES OF TEMPERATURE.

It is most essential to the success of the operations, both of the agriculturist and the horticulturist, that as comprehensive a view as possible should be obtained of the organization of the vegetable kingdom, and of the powers of resistance that it possesses of the extremes of temperature. For although practically he may pass through life without ever even seeing the moss which in Lapland not only lives, but grows beneath the snow, and furnishes the frugal meal of the docile reindeer, and without boiling eggs for his breakfast reposed upon the herbage which we shall presently advert to as growing in the hot springs of the Himalaya mountains, yet the knowledge of such powers of endurance in different families of plants, when combined with other knowledge of various descriptions, connected with the organs of plants, tends immensely (if it does nothing else) to make the inquiring agriculturist cautious and careful in his experiments, and in the deductions which he draws from them.

Hastily-formed conclusions are seldom very accurate, in whatever branch of scientific inquiry they arrived at, and applied to. But in no department of practical knowledge is it more needful to guard against them, than in the prosecution of agricultural pursuits. Slight differences of temperature, of moisture, or of atmospheric change, have frequently been sufficient to confound and to obscure the most carefully conducted experiments. And in the much canvassed, but yet unsolved, problem of the potato disease, we have at this moment unfortunately patent evidence that our present acquirements in agriculture have by no means attained a degree of efficiency, with which we can rest satisfied.

Nothing is more surprising in the study of vegetable physiology than the variation of the powers of endurance of the extremes of heat and cold in different families. And this is the more remarkable, because those powers appear to have little or nothing in connection with the texture of their organization. In reference to the powers of endurance of moisture and drought, it is otherwise, at least to a considerable extent. For we find the *Cacti* family, and many others that are indigenous to climates that have long seasons of drought, are provided with organs that are calculated to retain, as it were, reservoirs of moisture, whilst the organization of their cuticle is such as to lessen evaporation and exhalation from their surface. But in regard to the powers of resisting extremes of heat and cold, many

families of plants with organizations of the most fragile texture, are found to have these powers equally; some as to heat, others as to cold.

This is a subject that deserves consideration in connection with the study of climate, and the following description of the hot springs of the Himalaya from Dr. Hooker's Journal, are well deserving attention:

"The hot-springs (called Soorujkoond) near Belcuppe (altitude 1219 feet) in the Behar mountains, north-west of Calcutta, (lat. 24 N., long. 86 E.), are four in number, and rise in as many ruined brick tanks about two yards across. Another tank fed by a cold spring about twice that size flows between two of the hot, only two or three paces distant from one of the latter on either hand. All burst through the Gueiss rocks, meet in one stream after a few yards, and are conducted by brick canals to a pool of cold water about 80 yards off.

"The temperatures of the hot springs were respectively 169°, 170°, 173°, and 190° of the cold, 84° at 4 P. M., and 75° at 7 A. M. the following morning. The hottest is the middle of the five. The water of the cold spring is sweet but not good, and emits gaseous bubbles; it was covered with a green floating *conferva*. Of the four hot springs the most copious is about three feet deep, bubbles constantly, boils eggs, and though brilliantly clear, has an exceedingly nauseous taste. These and the other warm ones cover the bricks and surrounding rocks with a thick incrustation of salts.

"*Conferva* abounds in the warm stream from the springs, and two species, one ochreous brown and the other green, occur on the margin of the tanks themselves, and in the hottest water; the brown is the best salamander, and forms a belt in deeper water than the green; both appear in broad luxuriant strata, whenever the temperature is cooled down to 168° and as low as 90°. Of flowering plants, three showed in an eminent degree a constitution capable of resisting the heat, if not a predilection for it; these were all *cyperacea*, a *cyperus*, and an *descharis*, having their roots in water of 100°, and where they are probably exposed to greater heat; and a *timbristylis* at 98°; all were very luxuriant. From the edges of the four hot springs I gathered sixteen species of flowering plants, and from the cold tank five, which did not grow in the hot. A water-beetle, colymbetes, and notonecta, abounded in water at 112° with quantities of dead shells; frogs were very lively, with live shells at 90°; and with various other water-beetles."

From the foregoing quotation it will be perceived that the temperature of the hottest spring was 100° Farenheit, which is but little below that of boiling water. And although not so luxuriant as in the cooler springs, yet vegetable life was found to exist and grow in that high temperature. Had a cabbage or a potato been placed by the side of the *conferva* in that spring, it would have been soon cooked ready for the dinner table; and the powers of endurance of the action of heat possessed by a living plant, therefore, can be easily conceived.

With such well attested facts before us, we may well hesitate before we form a decided opinion upon the adaptability of any plant of a new character, that it may appear desirable to intro-

duce as an agricultural crop. It is not possible to judge of many, from the result of two or three trials only. Because, although oftentimes we may be quite right in the view we take of our first experiments, yet it will frequently occur that until by repeated trials we become by experience well acquainted with the constitution of a new plant, we may attribute our success or our failure to causes which, in fact, had nothing to do with either. And therefore we may so be led into error which further experiment would dispel.

That this is so, will be evident to any one who is familiar with the vast changes that have taken place within the last few years in the cultivation of fruits and vegetables. Many crops that some years back were considered to require years (especially in fruits,) of previous care of the plants to produce them, are now produced in less than one. And this with things that have been familiar to the gardener for above an hundred years.

In fact, the agriculturist no less than the horticulturist, who would prosecute his calling with due reference to the guidance of scientific principles, will never assume that he has arrived at a knowledge of the best mode of cultivating any crop. Whilst he will be cautious not to experimentalize without due regard to prudence and to principles, he will nevertheless be ever earnest in the "forward" effort, and will take care that his labors are as steadily directed by his judgment, as his plow is by his hand.—*American Farmer's Magazine.*

THE IMPORTANCE OF ROOT CROPS.

Several of our intelligent correspondents are amusing themselves, in giving expression to their views in relation to *the value and importance of root crops*, in our farm economy. Their opinions—as the careful reader has undoubtedly observed—are widely different. That they are sincere opinions, we can have no doubt—and we have as little doubt that there existed widely different circumstances between the parties, which led to the different conclusions to which they severally arrived.

For many years, our own opinions were unfavorable to the culture of roots as feed for stock; but they were founded more upon the general expression of those around us, than upon investigation and actual production and use of them under our own labor and supervision. When we had gone through with these, we became convinced that we were in error, and that the "general expression of opinion around us," to which we have alluded, had no better basis than the views we had entertained.

The successful culture of roots requires more plowing and harrowing, and preparation generally, than our corn or grain crops, and more care in tending them after the seed is committed to the ground. It is more delicate work—requiring more thought and skill and more exactness of arrangement, and all this is what farmers generally have disliked,—and hence the opin-

ion naturally enough grew up, that the culture of beets, turnips, mangolds, &c. was unprofitable as food for stock.

The discussion of our correspondents has prompted us to look again at some of the statements made in regard to these crops, and we find the highest testimony in their favor in abundance, both at home and abroad.

In the *London Quarterly Review* for April last, is a long article reviewing five or six works upon agricultural subjects, in which we find statements having a direct bearing upon our subject. In speaking of the condition of English agriculture at the close of the eighteenth century, the writer says:—

"The greater number of breeds were large-boned and ill-shaped, greedy eaters, and slow in arriving at maturity; while as *very little winter food, except hay, was raised*, the meat laid on by grass in the summer was lost, or barely maintained, in winter. Fresh meat for six months of the year was a luxury only enjoyed by the wealthiest personages. Within the recollection of many now living, first-class farmers in Herefordshire salted down an old cow in the autumn, which, with fitches of fat bacon, supplied their families with meat until the spring. Esquire Bedel Gunning, in his 'Memorials of Cambridge,' relates that when Dr. Makepeace Thackeray settled in Chester, about the beginning of the present century, he presented one of his tenants with a bull-calf of a superior breed. On his inquiring after it in the following spring, the farmer gratefully replied, 'Sir, he was a noble animal; we killed him at Christmas, and have lived upon him ever since.'"

We have underscored the words "*very little winter food, except hay, was raised*," to show, as one reason, why the cattle were worthy of the description given them.

After speaking at considerable length of the changes effected in the breeds of cattle and sheep, and the light thrown upon these subjects by the investigations of ARTHUR YOUNG, COBBETT, ROBERT BAKEWELL, and others, the writer says:

"But the fattening qualities and early maturity of the improved stock would have been of little value beyond the few rich grazing districts of the Midland counties, without an addition to the supply of food. The best arable land of the kingdom had been exhausted by long years of cultivation, and the barren fallow, which annually absorbed one-third of the soil, failed to restore its fertility. A new source of agricultural wealth was discovered in turnips, which, as their important qualities became known excited in many of their early cultivators much the same sort of enthusiasm as they did in Lord Monboddo, who on returning home from a circuit, went to look at a field of them by candle-light. Turnips answered the purpose of a fallow crop which cleaned and rested old arable land; turnips were food for fattening cattle in winter; turnips, grown on light land, and afterwards eaten down by sheep which consolidated it by their feet, prepared the

way for corn-crops on wastes that had previously been given up to the rabbits."

Under this system, a Mr. RODWELL made the produce of 820 acres of land worth *one hundred and fifty thousand dollars more* in twenty-eight years, than his predecessor did in the same time, under the old system, without roots. This great advance in arable farming took its rise in the county of Norfolk. Again—

"Turnips, which are said by Young to have been brought into farm cultivation by the celebrated Jethro Tull, found such a zealous advocate in Lord Townshend, that he got the name of 'Turnip Townshend.' Pope speaks of 'all Townshend's turnips,' in one of his imitations of Horace, published in 1737. This crop he had the sagacity to see was the parent of all the future crops. Without winter food little stock could be kept, without stock there could be little manure, and with little manure there could not be much of anything else. The turnips were, therefore, employed to secure a large dung-heap, and the dung-heap in turn was mainly appropriated to securing the largest possible store of turnips. This tillage in a circle was as productive as it was simple. The ground, cleaned and enriched by the root-crops, afterwards yielded abundant harvests of corn; and as we have already stated, the treading of the sheep upon the loose soil, while they fed off a portion of the turnips, gave it the necessary firmness. Thus through the agency of turnips a full fold and a full bullock-yard made a full granary. Essex and Suffolk soon copied the method, but they did not carry it so far as in Norfolk; and in many places the turnips were never thinned or hoed, upon which their size and consequently nearly all their value depended."

With a single extract more we will leave this highly interesting and instructive article, hoping at a future time to show equally as decided testimony in favor of root culture, in the practice of our own people.

"In the old days distance operated as a barrier to imitation, and three-fourths of England only heard of what was done in the well-cultivated fourth to ridicule and despise it. When the father of Mr. George Turner, of Barton, Devon, the well-known breeder of Devon cattle and of Leicester sheep, who had learned something in his visits with stock to Holkham, began to drill turnips, a well-to-do neighbor looked down from the dividing bank and said to his son, 'I suppose your father will be sowing pepper out of a cruet next.' Indeed, the whole history of the turnip cultivation affords a characteristic contrast between the spirit of the past and the present. It took upwards of a century to establish the proper growth of this crop, notwithstanding that the wealth of meat and corn which proceeded from it was as plain to those who would open their eyes as that a guinea was worth one-and-twenty-shillings. The first difficulty was to persuade farmers to try it at all; and not one turnip was ever seen on a field in Northumberland till between 1760 and 1770. The second difficulty was to get them to be at the expense of hoeing, insomuch that

Young said that he should be heard with incredulity in most counties when he bore testimony to the vast benefits which were derived in Norfolk from this indispensable portion of the process. The third difficulty was to induce them to replace broadcast sowing by drilling, which appeared, as we see, to novices no less ridiculous than peppering the land from a cruet. The bigotry of the farmer cramped the energies of the mechanics whom he now welcomes as among his best friends. The implements, even by the first manufacturers, from the absence of criticism and competition, from the limited extent of custom, and from the want of artisans skilled in working in iron, were, however excellent in idea, both clumsy and costly. The choicest specimens which existed in 1840 have been so altered in execution by cheaper materials and improved workmanship that they can scarcely be recognized."

With the aid of root crops, and that of machinery in our labor, it is not difficult to anticipate the time when our farmers shall labor less, but yet prosper more. The success of the steam-plow on the beautiful and fertile prairies of the West, almost makes real the expression in the fine lines of Mr. Thackeray on the Great Exhibition in England in 1851.

Look yonder where the engines toil,
The Nation's arms of conquest are,
The trophies of her bloodless war;
Brave weapons these,
Victorious over wave and soil,
With these she sails, she weaves, she tills,
Pierces the everlasting hills
And spans the seas.

For the New England Farmer.

IOWA---ITS CLIMATE AND CROPS.

We must be somewhere about mid-way between the extremes of dryness and wetness mentioned by Prof. Brocklesby, in his work on meteorology. So rare is the occurrence of a real shower at Lima, in Peru, that it is a source of terror; and when such an event happens, religious processions parade the streets, imploring the protection of heaven for their endangered city. In the interior of Guiana, on the other hand, the sun and stars are seldom visible, and the rains not unfrequently continue for five or six months, with scarcely any intermission.

For the last four weeks, we have had very nearly the same kind of weather as prevails on the Isle of Chiloe, (43° S. lat.,) where "it rains six days of the week, and is cloudy on the seventh."

Early in October we had a sharp frost for two or three nights. For more than a month we have had none; but almost incessant rainy and cloudy weather, with some snow. I picked tomatoes from my vines yesterday, (Nov. 11th,) as fresh as in September. Many seeds germinated, and currant bushes and apple trees started anew in October. To-day, (12th,) it has snowed steadily without any prospect of fair weather for some time to come.

Farmers are about discouraged. In addition to the failure of the wheat, oats and potatoes, we

now have to include the buckwheat, which is nearly or quite ruined by the long continued wet weather. Corn is very good, but most of it is still in the field. Broom corn is also good, and well secured; but there is very little of it raised in this region. The Chinese sugar cane has surpassed all expectation. It was only planted by a few, as an experiment; but proves so satisfactory that thousands of acres will be put in another year. We are daily using the sirup, which is sufficiently good, considering the imperfect means of manufacture, to warrant the confident expectation of its taking the place speedily of our best sirups, at a much lower figure than they can be obtained.

One good result of the extensive failure of the wheat, will no doubt be, to lead the people to try other crops as a staple. And there can be little doubt that some other articles can be made much more productive than wheat has been for a number of years past.

Notwithstanding the hard times, of which we have had rather more than an even share, we have had *great health*, as a State; and have abundant cause for Thanksgiving, which we propose to celebrate on the same day as in Massachusetts. Among other things to be grateful for, our worthy Governor Lowe mentions the remarkable outpouring of the Spirit, "by which the faces of multitudes have been turned Heavenward."

Tipton, Iowa, Nov. 12.

M. K. C.

For the New England Farmer.

UNITED STATES AGRICULTURAL FAIR AT RICHMOND.

One of the most attractive implements on the fair ground, to the farmer, was A. P. ROTT'S patent Drain Plow. This implement makes a furrow a foot deep, two feet and a half wide at the top and four inches wide at the bottom, the sides sloping at such an angle as to insure the drain from falling in by the frost, the whole being perfectly completed at one operation by this plow, or tool. Those who have tried it say it is the very thing for surface draining, which, on wet lands, is certainly very beneficial where underdraining has not been done. The manufacturer resides in Somerset, Orange County, Va. The plow is so made that it opens a deep furrow, turning both to the right and left, and is followed by a heavy iron roller that hardens the earth both on the sides and the bottom of the surface drain, thus doing very handsome work. The price, as heretofore stated, is \$25, and with it, a man can, with a good pair of team horses, surface-drain 60 acres of land a day.

A patent subsoil turn plow, combining four distinct features, is a consideration for farmers. First, the combination of the subsoil and turn plow; second, the movableness of the mould-boards, which can be adapted to deep or shallow plowing, as desirable; third, a second bar to which the regulator is attached, which steadies the plow; fourth, a regulator for the depth of the furrow. It may be used to break up the clay without turning it up. It is highly recommended by those who have tried it. The proprietors, MESSRS. UTLEY, SMITH and MACFEE, reside in Richmond, Va.

The "Triumph Corn Sheller," patented last April, by A. B. DAVIS, of Philadelphia, and operating on an entirely novel principle, being so constructed and arranged that the power required in driving, is expended in separating the corn from the cob, without any grinding or tearing of the latter. The machine may be fed with a shovel, the cobs passing out at the rear, while the corn falls into a receptacle prepared for it, thus avoiding the work of sifting in order to separate the corn from cobs, &c.

PENNOCK'S patent Seed and Grain Planter is a machine that is highly approved. It is a Delaware product. It has received about 40 silver medals, and took the highest award at the World's Fair, at the New York Crystal Palace. It is a capital thing for planting or drilling wheat, rye, or other grain, which is undoubtedly the true method of grain planting. It is made so as to distribute fertilizers at the time of sowing, if desired. He also exhibited Pennock's Iron Harvester, or new combined Reaper and Mower,—a corn-sheller that will shell 300 bushels a day,—plantation mill, and threshing machine.

The Eagle Mower and Reaper, that took the \$1000 premium of the Massachusetts Society, in 1856, the first prize awarded by the Indiana State Agricultural Society, the same year; also the first awarded by the Royal Society of England, Ireland and Scotland, in 1857, was exhibited by A. G. MOTT, agent.

R. C. MAUCK'S Corn Harvester will enable three men and a boy, with one or two horses, to cut and stook 10 acres of corn a day. By this machine the hardest part of the labor is performed by horses. It is a desideratum to growers of Indian corn. Mr. Mauck is a Virginian, residing at Conrad's Store, Rockingham Co.

Another "Old Dominion" invention on exhibition was a Tobacco Press by MUSSER & COLMAN. This machine is of great importance to tobacco manufacturers.

SANFORD'S Reciprocating Portable and Plantation Mill, patented the present year, price \$15, for grinding feed for stock and grain for family use; also, plaster, bones, cement, drugs, paints, printer's ink, emery, &c., seemed like a valuable discovery.

DOUGLAS & BROTHERS exhibited a Sugar Cane Mill for making sugar of the Chinese sugar cane.

Thus have I noticed some of the important machines shown at the fair, serving to confirm the intimation before given, that the South is progressing in inventing and manufacturing agricultural machines. I might add other things, but let these suffice. Farm implements and machines are greatly multiplying on every hand. Some of these are very useful, others moderately so, and others still, of little or no economical value to farmers. Such results are incident to the lives and fortunes of inventors and manufacturers. They serve to show, on the whole, that great progress and improvement are making in the furnishing of farm tools and machinery.

The subject for discussion, one evening during the fair, at the "African Church," was, "Farm Implements." LEANDER WETHERELL, of Boston, was invited to open the discussion, which he did, and was followed by MESSRS. WATY, of Richmond, SPANGLEY, of Philadelphia, ROGERS, of

Maryland, and others. It was one of the most profitable discussions on the subject I have ever heard.

It was maintained by some of the speakers that utility, strength and durability are too often sacrificed to fancy, and lightness. One speaker scouted the idea of making a good economical mower and reaper to be worked with one horse, stating that no such machine could be expected to do the work so well as a good two-horse machine. He maintained that implements should be well made, and of good stock, which, he added, is not the case now. Poor stock and fancy work supply the market with frail and almost worthless wares.

The demand for low priced tools has done much to bring about this state of things. Demand good implements, made of good stock, and pay the price, and you will get them. If you have any doubts, try it. VIATOR.

For the New England Farmer.

MEASUREMENT OF CORN CROPS.

MR. EDITOR:—The luxuriant growth of Indian corn the present season, brought to mind a communication from the veteran farmer of Plymouth county, on the measurement of this crop; and the best mode of determining the quantity grown to the acre. There is no man whose judgment and experience is more to be relied on than Mr. Allen's. There is no crop grown upon our farms of more importance than Indian corn. I enclose his letter, to be used at your discretion, omitting such paragraphs as do not relate to this subject.

Very truly yours,
J. W. PROCTOR.

Pembroke, Feb. 19, 1858.

DEAR SIR:—In reply to your candid inquiries, I will state the rules which have governed the P. Co. Society in its decisions on the measurement of Indian corn from the commencement of its operations. At first the requisition was that the whole crop should be measured in a basket, one basketfull shelled, and the product of the acre estimated by that. This rule soon proved unsatisfactory, and it was then determined that the whole crop should be weighed, calling seventy-five pounds a bushel, and that the weight should be certified by the owner and one laborer. This was the practice for many years, but at length it was thought the measurement should be by a disinterested person, and a supervisor was chosen, who was directed to select and weigh an average rod and estimate the crop accordingly. It is very manifest that in every case there would be some danger of error in judgment, but an agent could not devote so much time as would be necessary to weigh the whole crop. The last change, from 75 lbs. to 85 lbs. as a bushel, was made, since I ceased to participate in the doings of the society, excepting occupying the place of supervisor a short time after the death of Mr. Howard. Had I been at the meeting I should have felt bound to oppose the change, because I firmly believe that 75 lbs. in the ear at harvest will make a bushel of shelled corn when ripe for the market, and for this belief have some better evidence than conjecture. At harvest, one year, I put

75 lbs. in the ear into a barrel, covered securely, and let it remain till January, when I shelled and measured and there was a bushel and between one and two quarts. Judge Buel, who was a pretty accurate experimenter, said that the shrinkage of corn from harvest to merchantable condition was 20 per cent. I have no doubt, we may safely buy or sell at harvest, calling 75 lbs. a bushel. There may be, as you suggest, some difference in the ripeness of the several sorts of corn at the usual time of harvest, but if frosts have occurred, which usually is the case, there is no danger of excessive weight in the greenest fields, for the weight will be much lighter there than in the well-ripened field.

It seems to me if all societies would observe one rule in the measurement of corn at harvest, we should soon become less suspicious of the honesty of applicants for premiums, and of the fidelity of agents. Your secretary, Mr. Dodge, wrote to me concerning my premium crop of corn, which has occasioned so many remarks, inquiring how it was managed, expressing his surprise at the amount, and saying he thought a large crop had been reported in that county, but it was much less than mine. You, or some other friend, soon after sent me your Transactions. I looked at the gentleman's statement, and found his corn was planted so much wider apart than mine, that nothing was wanting to make his crop equal or superior to mine but the supply of his deficient number of plants. In my experience, many applicants have failed of obtaining premiums merely from the lack of a sufficient number of corn plants. I would not be understood to say that thick planting secures a great crop, but that thin planting occasions a smaller crop in many instances than we might be justified in hoping for, from the preparations of the field. Corn plants will prosper and mature wherever they can find sufficient food and stand accessible to the influences of the air and the sun. Both the Secretary of the Board of Agriculture and yourself seem to think corn should be dry enough for market before it is measured; can you describe any way in which this can be done, and not leave open a wide door for suspicion or fraud? You probably can, yet it would require more labor and expense than you would think a society should submit to. I think if the Board of Agriculture would recommend to county societies the measurement of corn crops at harvest by some reasonable and uniform rule, the progress of improvement in the culture of this important article would be better understood, and the motives to emulation in cultivation more effectually encouraged.

Respectfully yours,
MORRILL ALLEN.
HON. JOHN W. PROCTOR.

BUIST'S ALMANAC AND GARDEN MANUAL, *beside telling you when it rains and when it shines*, and what he has to sell in the way of seeds and implements for the garden, has a great many convenient things to know about making and managing a garden.

☞ The duty on flour imported into Brazil, has been reduced thirty per cent., which is expected to diminish the drain of specie from this country

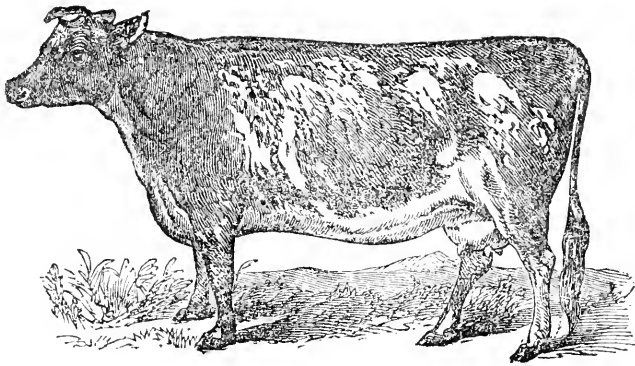


FIGURE OF AN AYRSHIRE COW.

The Ayrshire breed of cows is at present gaining favor among the milk producers of New England—we mean those who produce milk for market. How they stand with dairymen who convert the milk into butter and cheese, we do not know; nor do we know whether fair trials have yet been made with them among the dairymen of Western Massachusetts, or in New Hampshire or Vermont. It is generally conceded that they are a gentle race, easily kept, and produce well for the cost of keeping.

In looking over Mr. Secretary FLINT'S new work on "*Milk Cows and Dairy Farming*," we find a portrait of a fine cow of this breed, and with his consent give the engraving and his description of it to our readers. He says:

"The Ayrshires are justly celebrated throughout Great Britain and this country for their excellent dairy qualities. Though the most recent in their origin, they are pretty distinct from the other Scotch and English races. In color, the pure Ayrshires are generally red and white, spotted or mottled, not roan, like many of the short-horns, but often presenting a bright contrast of colors. They are sometimes, though rarely, nearly or quite all red, and sometimes black and white; but the favorite color is red and white brightly contrasted, and by some, strawberry color is preferred. The head is small, fine, and clean; the face long, and narrow at the muzzle, with a sprightly yet generally mild expression; eye small, smart, and lively; the horns short, fine and slightly twisted upwards, set wide apart at the roots; the neck thin; body enlarging from fore to hind quarters; the back straight and narrow, but broad across the loins; joints rather loose and open; ribs rather flat; hind quarters rather thin; bone fine; tail long, fine and bushy at the end; hair generally thin and soft; udder light color and capacious, extending well forward under the belly; teats of the cow of medium size, generally set regularly and wide apart; milk-veins prominent and well developed. The

carcass of the pure-bred Ayrshire is light, particularly the fore quarters, which is considered by good judges as an index of great milking qualities; but the pelvis is capacious and wide over the hips.

A cow-feeder in Glasgow, selling fresh milk, is said to have realized two hundred and fifty dollars in seven months from one good cow; and it is stated, on high authority, that a dollar a day for six months of the year is no uncommon income from good cows under similar circumstances, and that seventy-five cents a day is below the average. But this implies high and judicious feeding, of course; the average yield, on ordinary feed, would be considerably less.

Youatt estimates the daily yield of an Ayrshire cow, for the first two or three months after calving, at five gallons a day, on an average; and for the next three months, at three gallons; and for the next four months, at one gallon and a half. This would be 850 gallons as the annual average of a cow; but, allowing for some unproductive cows, he estimates the average of a dairy at 600 gallons per annum for each cow. Three gallons and a half of the Ayrshire cow's milk will yield one and a half pounds of butter. He therefore reckons 257 pounds of butter, or 514 pounds of cheese, at the rate of 24 pounds to 28 gallons of milk, as the yield of every cow, as a fair and perhaps rather low average, in an Ayrshire dairy, during the year. Aiton sets the yield much higher, saying that "thousands of the best Ayrshire dairy-cows, when in prime condition and well fed, produce 1000 gallons of milk per annum; that in general three and three-quarters to four gallons of their milk will yield a pound and a half of butter; and that 27½ gallons of their milk will make 21 pounds of full-milk cheese." Mr. Rankin puts it lower—at about 650 to 700 gallons to each cow; on his own farm of inferior soil, his dairy produced an average of 550 gallons only.

One of the four cows originally imported into this country by John P. Cushing, Esq., of Massachusetts, gave in one year 3864 quarts, beer measure, or about 461 gallons, at ten pounds to the gallon, being an average of over ten and a

half beer quarts a day for the whole year. It is asserted, on good authority, that the first Ayrshire cow imported by the Massachusetts Society for the promotion of Agriculture, in 1837, yielded sixteen pounds of butter a week, for several weeks in succession, on grass feed only. These yields are not so large as those stated by Aiton; but it should, perhaps, be recollected that our climate is less favorable to the production of milk than that of England and Scotland, and that no cow imported after arriving at maturity could be expected to yield as much, under the same circumstances, as one bred on the spot where the trial is made, and perfectly acclimated.

THE MILK BUSINESS.

The *Springfield* (Mass.) *Republican* furnishes the following facts in relation to the supply of milk for that city:

We have made an effort to learn some of the aggregates of this industry—to compare the average quantity of milk per cow in each herd; and to learn the different methods of feeding; all points of curious interest and suggestive value. For this purpose circulars have been addressed to most of the milkmen of this city, of course, with varying success. All have not answered, but enough have done so to give a nearer estimate than otherwise would be possible. There are from twelve to fourteen regular dealers of milk in this city. Not far from 2,000 quarts, or \$100 worth, are sold daily through the year. The highest quantity, sold by any one milkman, in the best of the season, so far as known, is 400 quarts daily, and this man, in the average for the year, is put down at 250 quarts. Taking all the milkmen, the average is 166½ quarts each daily. To raise this milk requires a herd of about 300 cows, which give, on an average, about seven quarts. The force requisite to carry on this business equals one man for every six cows, or an aggregate of fifty men, summer and winter. The best milkers, generally, are crosses of Short-Horn with Ayrshire and Natives, but good milkers can be found of almost every breed.

The feed that produces the most milk is yet a vexed question. In the opinions received, cotton seed meal, corn, rye and buckwheat ground together, and roots, with rowen hay, have equal prominence. The order of feeding cows varies with different individuals. Some feed roots the first thing in the morning, and others late at night. Some give hay the first thing, and others reserve it till noon. Each feeder gives his practice and reasons with equal freedom—which is a very hopeful system in any debate. Our conclusion is, that the best order is as follows: Wet cut feed mixed with meal after each milking, with hay and roots between. Neither roots nor grain should be fed upon an empty stomach. In the first case, the milk is more likely to receive the odor of the roots. In the latter the appetite is greatly impaired for other food. No fact is more clearly established than that the flavor and quality of the milk and flesh depend in part upon the quality of the food. Various expedients have been resorted to counteract bad flavors. The English heat their milk, and then add saltpetre to it to prevent the taste of cabbages. The Virginians slice and salt rutabagas, twelve

hours before feeding, in order to escape that odor. In this region, regularity in feeding, as to quantity and time, by some is considered sufficient remedy for common turnips. Experience proves that corn and carrots make first quality pork. Cows that give milk require more food in proportion to their bulk than either oxen or horses; twenty-five to thirty pounds of dry hay daily is the usual consumption of farm animals. Of course, if roots or meal are added the consumption will be less.

SWINGING IN THE BARN.

Swing away,
From the great cross-beam—
Through the scented clover-hay,
Sweet as any dream!

Higher yet!
Up, between the eaves,
Where the grey doves cooing flit
’Twixt the sun-gilt leaves.

Here we go!
Whistle, merry wind!
’Tis a long day you must blow.
Lighter hearts to find.

Swing away!
Sweep the rough barn floor!
While we gaze on Arcady
Framed in by the door.

One, two, three!
Quick, the round red sun,
Hid behind yon twisted tree,
Means to end the fun!

Swing away!
Over husks and grain!
Shall we ever be as gay
If we swing again?

For the New England Farmer.

THE ROBIN'S TITLE TO IMMUNITY QUESTIONED.

MR. EDITOR:—In the *Farmer* of Nov. 6th, some one sailing without colors is doubting my sincerity, in respect to my communication regarding the robin. Perhaps the injury sustained by me, caused by the depredation of the robin, may be of more immediate effect than that sustained by my neighbors in their pastures, yet in my pasture land I perceive an injury more lasting, for I find it a slow operation to eradicate the wild herbage, of which the seeds were distributed by the troublesome birds. Did not man have dominion given him over the birds of the air, as well as all things else? Our nameless friend asks the question, “Did not the Power that created the robin endow him with an instinct to sustain life?” I answer, “Yes.” Did he not give the same power and instinct to the rattlesnake? then why slay him? Would not that be selfish? Does not the house-fly, that scavenger demanded by the presence of fetid and corrupting matter, have instinct to sustain his life? Did our unknown friend ever destroy them by the use of German fly-paper? Did he ever devise or recommend any plan for the destruction of the onion worm? I have no doubt his life is as dear to him as the robin’s, for he received it from the same great source. Do not the insects that prey upon fruits

and other vegetation have as good a right to a livelihood as their destroyer, (as he would have us believe the robin to be,) "notwithstanding the title deeds of the most grasping miser?" Why save the robin, if he is such a wholesale slaughterer of insects that God created and endowed with instinct to sustain life?

The aim of man is or ought to be, progress. Are we not having wiser and better laws in every succeeding generation? Are they now perfect? By no means, and never can be while man is finite. Is it not known that committees draft all our laws? Even they do not at all times see the effects of them in all their bearings; they pass through their usual stages without much debating as to their merits, and frequently with no apparent interest felt in regard to them; then they become the laws of the land. If our laws are perfect, what need of further legislation? for this day our statute-books are voluminous, (he would have us believe,) containing just laws, burdensome to no virtuous and honorable calling. "Those living in glass houses should not throw stones."

I was much interested in the perusal of Mr. Flagg's communication; may not the bird that survived in his imprisonment have had an acquired appetite, a vitiated appetite, not dissimilar to the user of opium, arsenic and tobacco? or may he not require to sustain his nature, some inorganic material, such as phosphate of lime, or some other inorganic matter found on the surface of the ground? Did not that bird find in the wings of those bugs some silica, or a substance akin to it? I have never discovered the robin take any insect from the ground except the angle-worm. He says the extermination of the robin is out of the question, as it would hardly be desirable to sacrifice the interest of all the staple products of agriculture, to preserve a few bushels of cherries.

Is the robin man's guardian angel? Must he starve without him, and the earth become a barren waste?

J. S. NEEDHAM.

West Danvers, Nov. 20, 1858.

For the New England Farmer.

ROOT CROPS.

The above is the heading of an article which appeared in the *New England Farmer* of Nov. 6, signed E. E., in reply to an article of D. Needham, on English turnips, rutabaga, &c.

Having raised some 300 bushels of rutabaga turnips this season, and not having had much experience in feeding turnips, I was about to inquire, through the columns of the *Farmer*, as to what stock, and in what manner, I could feed them to the best advantage, when I saw the article from E. E.

I raised the above number of bushels upon 48 rods (or 3-10 of an acre,) of sandy land, and not very highly manured at that, no pains taken to transplant and thin out; hoed them but twice, sowed them the 17th of June. The expense of pulling, cutting off the tops, &c., putting them into the cellar, as follows:—First half-day, with the assistance of a man over 70 years of age, I pulled, cut the tops, and put in the cellar, 100 bushels; the next day, with the assistance of

two boys under 16 years of age, I put in 200 bushels in four hours' time. The turnips were large and very smooth, being free from fibers.

I have commenced feeding them to cows, and think they not only increase the quantity, but also the quality of the milk. I also boil them and mix corn and rye meal and feed my fattening hogs, and if the turnips are no other benefit, they certainly improve the food so that the hogs eat it more readily and fat faster than they will upon the meal without the turnips. I hope to hear from others, more experienced in raising and feeding turnips than I am. A. J. DODGE.

Lowell, 17., Nov. 11, 1858.

EXTRACTS AND REPLIES.

THE BALDWIN APPLE.

I wish you to inform me through the *Farmer* the age of the Baldwin apple. I have of late trimmed a very large tree of the above-named apple, the owner of which says it must have been grafted over forty years ago. It is a Baldwin, as he produced one of the very apples that grew upon it. I had my fears as to the truth of the statement; I think that the apple was known by some other name a long time ago. J. A. F.

REMARKS.—The Baldwin apple has probably been known for about one hundred years—but originally under the name of "Woodpecker," which was abbreviated to the "Pecker" apple. The apple was brought into notice by Col. Baldwin, and received his name.

EQUESTRIANISM BY LADIES.

"Where so many people may receive so much pleasure at so little personal sacrifice, pray allow them."

This is the comment of an eminent member of the Massachusetts Board of Agriculture, upon the equestrian exhibition by ladies at one of the county shows, in this commonwealth in 1857. What did he mean by this? Certainly not to approve of such exhibitions. He simply meant to speak of it as a harmless foible. Is this the purpose for which \$1200 a year is drawn from the treasury of the commonwealth? If one species of vain amusements can be countenanced, why not others? Who will say that billiard saloons are not places of healthy exercise? Grave and reverend seniors should be careful what they write.

Nov. 22.

REMARKS.—We are not at all surprised at such strictures as the above. Our people, especially our farmers, are slow to find fault with what seems to afford pleasure to others. But they have learned that some practices prevail at our county shows which are subverting the principles upon which they were founded, while the number which they please is far from being a majority.

SWAMP MUCK.

I have a large quantity of swamp muck which can be carted to any part of my farm, a part of which is sandy, and the rest a sandy loam. What

fertilizers will be best to mix with it to form a compost for my sandy lands?

North Lisbon, N. H., 1858. A SUBSCRIBER.

REMARKS.—Barn-yard manure, if you have it. If not, use wood ashes, from five to twenty bushels to the cord. If a clay-bed is convenient, mix a portion of that with the muck in addition to the manure or ashes.

THE POTATO DISEASE.

MR. EDITOR:—Your kindness in admitting to your columns my queries as to your endorsement of the theories of Mr. Reed and others, as to the cause of the decay of the potato, (commonly called the potato rot,) has imposed on me the necessity of further explanation. In making this, I wish to say distinctly, that I have not had the opportunity to make the microscopic observations spoken of, and therefore have not been able to see, what is not to be seen without the aid of such glasses.

That Mr. Reed and others have found many extremely minute insects, in and about the potato, I cannot doubt, with such evidence as is accumulated on the subject. I have read this testimony with care; but whether the insects are the cause or the consequence of the rot, there is nothing in the evidence to determine.

As our Board of Agriculture have undertaken the investigation, I hope they will not abandon it, until something is made certain.

Truly yours, J. W. PROCTOR.

Nov. 5, 1858.

REMARKS.—No man within our knowledge is more deeply interested in the prosperity of agriculture, or more zealous in the cause, than our correspondent above. He writes with a bold pen, and expresses his opinions without circumlocution, so that if they sometimes lack a little gentleness, we can readily enough impute it to the zeal manifested by him in the cause generally. He puts his hands cheerfully and earnestly to whatever he thinks will benefit the farmer.

JEFFRIES' PATENT BALL VALVE PUMP.

I would inform your subscribers that I have one of "Jeffries' Patent Ball Valve Pumps" in use, which I like very much; they are manufactured by Mr. George L. Newcomb, in Harbor Street, Salem, who has them for sale, and where one can be seen in operation. I think his price is \$25 and \$35 for the two sizes of very thorough manufacture.

Salem, Mass., 1858.

B. P. WARE.

POTASH AND COAL ASHES.

I wish to know through the *Farmer* what amount of first rate potash, dissolved, will make a bushel of anthracite coal ashes equal to one of wood ashes in that article alone.

I am aware there is other good fertilizing material in wood ashes, but can't we compound with coal ashes, potash and bone dust, a very good manure for fruit trees?

L. C. C.

East Lexington, Nov., 1858.

MILCH COWS AND DAIRY FARMS.

MR. BROWN:—In a late number of the *Boston Cultivator*, I noticed a severe criticism on the late publication of Secretary Flint, on "Milch Cows and Dairy Farming," in which the plates illustrative were strongly condemned. I was astonished to see such strictures from such a source. I had looked upon the editor of that paper as high authority in these matters, and as candid and reasonable in his judgment. For instance, in speaking of the representation of the Oakes cow on the 73d page, he says it looks more like a kangaroo—than like the original. After more than forty years' interval, I cannot bring to mind distinctly the points of that celebrated animal—but until I saw Mr. H.'s criticisms, I thought Mr. F.'s representations gave a fair idea of her. I have compared it with the representation given of her in the sixth volume of the *Massachusetts Journal and Reports*, while she lived—and do not perceive sufficient variance to condemn the print entirely. What could have induced Mr. H. to speak thus harshly of a publication favorably received by farmers generally? My attention was particularly called to this fact, yesterday, by a complimentary reference to this volume in a "Report on Milch Cows," drawn by Hon. R. S. Rogers, who illustrates his fitness for such a task, by the purely-selected stock of animals on his splendid estate. Has our friend swallowed a file in his late tour, or has he lost his balance among the hills of Ayrshire?

Essex Co., Nov., 1858.

ESSEX.

DISEASE IN POTATOES.

I am not unwilling to be classed with unbelievers, while I have such associates as a major part of the Board of Agriculture, and your intelligent correspondent from West Medford. I know it is generally deemed a reproach to be thought skeptical; but I deem it a greater error, to yield assent upon authority, without sufficient reason therefor. As the Board of Agriculture have taken into consideration the question of the decay of the potato, I hope we shall hear from them a distinct exposition of what is known in relation to it. I am clear in the opinion, that the theories put forth by Messrs. Reed, Henderson, &c., of bugs being the cause of the rot, are not the true cause.

J. W. P.

Nov. 1, 1858.

A TURKEY CROP.

I have raised this year, from five old turkeys, seventy-five. They are now about five months old, and the males weigh from fifteen to twenty pounds each. The old male, (seventeen months old,) weighs thirty pounds, and has gained five pounds in the last seven weeks.

DAVID R. GATES.

New Worcester, Nov., 1858.

POROUS CHEESE.

Will you, or some of your numerous readers, inform me what the cause is of porous cheese? Is it too much scalding, or not enough? I should be pleased to read any dairyman's opinion on the subject.

NEW SUBSCRIBER.

North Ferrisbury, Vt., 1858.

APPLES.

The three varieties sent by WM. F. BASSETT, of Ashfield, Mass., are all new acquaintances. The variety he calls "Russett Sweet," resembles the apple of that name we are familiar with, but has more color, and the skin is smoother and fairer. It is a good apple, but rather dry. The other sweet apple we are not aware of ever having met before, but think it better than the "Russett." The sour apple is also new to us, and from the specimens sent, we can hardly pronounce an opinion as to its merits.

FINE SHEEP.

I have a pretty good-sized buck of the English breed, one year and six months old, the sixth day of this November, that weighs 230 pounds, and a ewe of the same breed whose weight is 162 lbs. They were sired by the big imported buck of Mr. Baldwin, of Montpelier, which weighs 350 lbs. The ewe has raised me a lamb this year that weighs 94½ lbs. They are cross bloods. The buck is of the Cotswold breed, and the ewes were of part Leicestershire. The buck when one year and nine days old sheared 8½ lbs. of good clean wool the 15th day of May, and the ewe 6½ lbs. when one year and fifteen days old. They have had no extra keeping from that of the rest of the flock.

JOEL LEARNED.

Waitsfield, Vt., Nov., 1858.

THE BASKET WILLOW.

In reply to the query of Mr. MULLIKEN, of Lexington, for information respecting the Basket Willow, in the *Farmer* of Nov. 6, we would refer him to Messrs. GEORGE J. & E. A. COLBY, of Waterbury, Vt. They are intimately acquainted with the whole process of cultivating and preparing it for the market.

PASTURE EXPERIMENT PROPOSED.

MR. EDITOR:—There is one experiment I would like to see tried in this State, in the way of pasturage, viz.:—If a farmer has 25 acres of pasturing, let him plow one-fourth of it and sow it with oats, rye or any kind of grain he may choose, and seed it down at the same time with grass, and let his cattle crop all that grows. The next year let him take another fourth and treat likewise, and so until he has cultivated the whole, and then repeat, and my word for it, you would see better stock in your pastures in autumn, and the butcher would not have to carry an extra pair of mittens to put on, that the bones might not hurt his hands, when he has to examine so closely to know if they will possibly do to eat.

Note.—The plan proposed by our correspondent is a very good one where the plow can be used, and it should be done more often than it is. But what shall we do with those pastures which are so rough that the plow cannot be used? Shifting the kind of stock pastured on them occasionally, from neat stock to sheep, and *vice versa*, is a good plan. Sowing on plaster and bone dust is also a good plan.—*Maine Farmer.*

NEW BOOKS.

MILK COWS AND DAIRY FARMING; comprising the Breeds, Breeding and Management, in Health and Disease, of Dairy and other Stock; the selection of Milk Cows, with a full explanation of Guenon's Method; the Culture of Forage Plants, and the Production of Milk, Butter and Cheese; embodying the most recent Improvements, and adapted to farming in the United States and British Provinces. With a treatise upon the Dairy Husbandry of Holland; to which is added Horsfall's System of Dairy Management. By CHARLES L. PLINT, Secretary of the Massachusetts State Board of Agriculture. For sale by A. Williams & Co., Boston.

Every person engaged in dairy business, should own this book, and read it attentively, as it contains many facts, and abounds with suggestions that must be of value to all who have not already a large experience in dairy matters. We recommend it *as a matter of economy*, because, if studied, it cannot fail to impart facts of more value to most dairymen and dairywomen than several times its cost.

The chapter on the *diseases of animals* is judicious,—the remedies recommended mild and safe, and that upon the *culture of grasses and plants to be used as fodder*, is one of great importance.

The work is printed on fine, white paper, and beautifully illustrated with engravings of various breeds of dairy stock, and with the utensils usually employed in the making of butter and cheese, and a copious index is added for the benefit of those who use it as a book of reference.

If the cotton and wollen goods of our manufactories, as a whole, were no better than the products of our dairies, we question whether the manufacturers would be entitled to the credit of skilful workmen in the production of their fabrics. Perhaps there is no single article brought to our markets, in which there is so much that is indifferent, or decidedly bad, as in the article of butter. It is strange that so much of it is badly made and put up, when the fact is so obvious that *good butter* always brings a high price everywhere.

FRUIT CULTURE FOR THE MILLION, A Hand Book of Fruit Culture; being a Guide to the Cultivation and Management of Fruit Trees; with Condensed Descriptions of many of the best and most popular varieties in the United States. Illustrated with ninety engravings. By THOMAS GREGG. Fowler & Wells, New York, 1858. Price 50 cents.

This is a cheap and useful book for those who think they cannot afford to purchase a larger one. But our opinion is that Downing's *Fruit and Fruit Trees of America* is cheaper at one dollar and fifty cents.

EATING FRUIT.—No liquid of any description should be drank within an hour after eating fruits, nor any thing else be eaten within two or three hours afterwards—thus time being allowed for them to pass out of the stomach, the system derives from them all their enlivening, cooling and opening influences. The great rule is, eat fruits in their natural state, without eating or drinking any thing for at least two hours afterwards. With these restrictions, fruit and berries may be

eaten with moderation during any hour of the day, and without getting tired of them, or ceasing to be benefited by them during the whole season. It is a great wast of lusciousness that fruits and berries, in their natural state, are not made the sole dessert of our meals, for three-fourths of the year; human enjoyment, and health, and even life, would be promoted by it.—*Hall's Journal of Health.*

AGRICULTURE AND HORTICULTURE.

THE TRUE FRIENDS.

BY MRS. LYDIA H. SIGOURNEY.

"They leave no sting in the heart of memory,—no stain on the wing of time."—*Hon. Marshall P. Wilder.*

Brown Ceres, one day with Pomona was meeting

'Neath Autumn's Spiriting smile,
So giving each other a sisterly greeting
They sat down to gossip awhile.

"I hope you're quite well, dear, this elegant weather,"

"How charming the country," they said,
"And how do you prosper," both speaking together,—
"With regard to your business and trade?"

"Look, where the rude thorn bush and bramble were springing
With fruitage the apple tree bends,
The scythe of the mower at sunrise is swinging,
And the song of the reaper ascends."

"Let us walk hand in hand, for no obstacle caring
Till vines o'er the mountains shall grow;
His suit of green velvet, the brown heath be wearing
And deserts with plenty o'erflow."

"The gold in its mine, with excitement and wonder
May summon an emigrant band,
And the chariot of Mars, trample on in its thunder
But we're the true strength of the land."

"For us, no torn wife in her cottage is grieving,
Earth welcomes us both in her prime,
No sting in the bosom of memory we're leaving,
No stain on the pinion of time."

HOW TO IMPROVE CIDER.

The following letter upon preserving cider in a mild form, is from Professor HORSFORD, of Cambridge, to the President of the Massachusetts Horticultural Society, and may be valuable to some of our readers.

We add also, another simple recipe for improving cider, but probably much like the Professor's method.

Cambridge, Oct. 25, 1858.

DEAR SIR:—I beg to inclose a recipe for improving cider. The object to which my efforts have been directed, was to provide a cheap, easily-managed, and perfectly safe agent for arresting fermentation at any desired stage of its progress. The fermentation of the sugar of the cider, it is well known, is due to the fermentation of an albuminous substance which the cider holds in suspension or solution. By fermentation, the sugar is first converted into alcohol and carbonic acid. If the albuminous matter be in great excess, as it uniformly is, its fermentation goes forward to convert the alcohol into acetic acid, and the cider becomes sour. If the quantity of sugar be large, a corresponding quantity of alcohol is produced. When it is not in sufficient quantity it may be added to the cider, and more of the albuminous

matter consumed to produce alcohol and carbonic acid, and of course less will remain to convert the alcohol into vinegar.

But if, when the fermentation has been carried forward just far enough to impart to the cider the taste which is most preferred,—when it is sparkling, still sweet, but slightly acid,—if at this stage the albuminous matter be withdrawn, the cider will permanently retain its acceptable flavor.

To accomplish this withdrawal I employ *Sulphite of Lime*—a salt made soluble only by acid, and, of course, quite inert until acid presents itself to the cider. As soon as fermentation produces acetic acid, this salt yields sulphurous acid, which destroys the ferment. This is essentially the agent employed to prevent fermentation in the wine production of France.

The substance I employ settles out at the bottom with the lees, and may be entirely separated from the cider.

The testimony of quite a number of friends who have for the last three years followed the recipe, as well as the experiments I have myself directed, are so emphatic as to the excellence of the result, that I feel justified in submitting to the attention of the Horticultural Society this method of improving cider.

E. N. HORSFORD,
Prof. of Chem. to the Mass. Hor. Society.

RECIPE FOR IMPROVING CIDER.

Let the new cider from sour apples (sound and selected fruit is to be preferred,) ferment from one week to three weeks, as the weather is warm or cool. When it has attained to lively fermentation, add to each gallon, according to its acidity, from half a pound to two pounds of white crushed sugar, and let the whole ferment until it possesses precisely the taste which it is desired should be permanent.

In this condition pour out a quart of the cider, and add for each gallon, one quarter of an ounce of sulphite of lime, known as an article of manufacture under the name of *anti-chloride of lime*. Stir the powder and cider until intimately mixed, and return the emulsion to the fermenting liquid. Agitate briskly and thoroughly for a few moments, and then let the cider settle. The fermentation will cease at once.

When, after a few days, the cider has become clear, draw off and bottle carefully, or remove the sediment and return to the original vessel. If loosely corked, or kept in a barrel on draft, it will retain its taste as a still cider. If preserved in bottles carefully corked, which is better, it will become a sparkling cider, and may be kept indefinitely long.

A DOVE STORY.—A gentleman of this city who has a dove cot at his residence at the West End, relates the following incident as having occurred last week. In the cot were a male and female dove and two squabs. The male squab having died, the elderly dove drove from his nest his female mate, and promoted to his bed and board the young female squab, pecking at and driving from his cot the female dove. Finally, upon one occasion, when the female appeared at the door of the cot, the male sallied out,

pecked at her and drove her away. The persecuted mother flew down to a perch below, where, with her head under her wing she remained for a short time, and then fell suddenly to the ground. The inmates of the house, who had witnessed the proceeding, immediately went out and ascertained that the dove was dead, but no wound was found sufficient to cause death. Possibly she died of a broken heart from the brutal treatment of her false and fickle mate.—*Traveller.*

PLANTS MUST HAVE FOOD.

Vegetation annually appropriates to itself, and removes from the soil, a portion of nutritive principles therein contained, and if they be removed without compensation in some way, barrenness will ensue. Upon the facilities which the farmer may be able to command to secure an adequate supply of food for his crops, his success must in a great measure depend.

Manure is a term of broad application. It was formerly confined chiefly to the excrements of animals, but now has a wider signification, and may be understood as embracing any animal, vegetable, or mineral matter, capable of improving and fertilizing the soil, or of correcting its faults and supplying its defects. Whether artificial fertilizers may or may not be profitably employed, is of far less moment for us to understand, than how to make the most of home resources; the true policy being to increase the productiveness of the farm from within itself. To accomplish this, every source of fertilizing material upon the farm should be made to contribute, and care should be taken that nothing be wasted. Not only should the solid excrement of animals, which too often is the sole dependence of the farmer, be properly cared for, but special efforts should be directed to the liquids also, which are not only more exposed to waste, but possess a superiority over others, which renders their loss irreparable. An eminent agricultural writer says: "When it is considered that with every pound of corn is sustained, and that with every pound of urine a pound of wheat might be produced, the indifference with which these liquid excrements are regarded is quite incomprehensible." Another says: "The quantity of liquid manure produced by one cow annually, is equal to fertilizing an acre and a quarter of ground, producing effects as durable as do the solid evacuations. A cord of loam, saturated with urine, is equal to a cord of the best dung. If the liquid and solid evacuations, including the litter, are kept separate, and soaking up the liquid by loam, it has been found that they will manure land, in proportion by bulk, of seven liquid to six solid, while their actual value is as two to one. The simple statement, then, in figures, of the difference in value of the solid and liquid evacuations of a cow, should impress upon all the importance of saving the last in preference to the first."

Excrementitious matter, whether solid or liquid, is by no means our only source of food for plants. Almost every farm possesses an indefinite, and oftentimes a most abundant supply, in the deposits of decayed vegetable matter known as muck or peat. This, to be sure, in its natural

condition, is not readily available by plants; they would relish and thrive upon it about as well as we would on raw potatoes, but nevertheless, the food is there, and only needs due preparation to make it both palatable and nutritious. Muck or peat is also of great value, and almost indispensable as an absorbent of liquid manure, and of the gases generated during decomposition.*

In this way it not only proves a most effectual and economical means of preventing waste, but is itself, in so doing, modified or changed so as to be converted into valuable and available manure. Muck, treated with ashes, is found to do exceedingly well. Another mode of treating it, which has many advocates, is, to slake quicklime, with a saturated solution of common salt, and mingle with the muck, in the proportion of one cask of lime to a bushel of salt, mixed with a cord of muck. Thus prepared, it is not a simple mixture of lime, salt, and muck, but during its preparation as stated above, a decomposition of the salt takes place, alkali is liberated equivalent to the ashes used in the other case, and by its action the vegetable food in the muck is rendered soluble, and thus made available to plants.† —*Plough, Loom and Anvil.*

* Too much can hardly be said of the value of dried muck, to be thrown into the stalks, as an absorbent for the double purpose of adding to the value of the manure, and of purifying the air of the premises.

† If convenient, it would be well to prepare this some weeks before applying it, and if turned over a few times, all the better.

OUR EXPORTS.

Our often stated and reiterated assertion, that we do not raise our own food, is true,—importing, as we do, corn, and wheat, and flour, beef, and mutton, and pork; while the agricultural capabilities of our soil are such, that with only a little more intelligent farming, our home production of the very things we import might be vastly increased; perhaps so that the exports would more than counterbalance the imports; and this without involving the employment of much more labor or capital, or even mooted the question whether these are the most profitable things we can raise. Yet we can learn many a useful lesson from the exports of our State and neighboring region.

This year the apple crop attracts most attention among our exports, for we have been favored with comparative abundance, while the general crop of the country is next to nothing. Sloop-load after sloop-load has floated down the river, and the cars have taken many more. Speculators have gone through the land, and many apples have been engaged at moderate prices, before the market price became settled. This practice of selling to speculators is generally well enough under our present system of doing things, though we hold that the ware-house system, wherever practicable, should be employed. Speculators and their agents will, if held to it, generally offer all that they can afford to give, and, if the risks and expenses of marketing are taken into the account, they usually leave themselves a small enough margin, and offer more than the small farmer can get for his crop, if he should market it himself.

We have often alluded to the Golden Rule, at

apple as our most profitable sort for shipping. The demand for winter apples has been such that this year the Golden Sweet crop is quite thrown in the shade. The market is still active, and will continue to be, for sometime, we presume, constantly advancing prices, for good, sound winter fruit.

Potatoes have long been a prominent article of export, probably in value this far exceeds any other. The towns which particularly enjoy this trade and make preparations for it, are those situated upon tide-water. We cannot come at any reliable estimate of the quantity or value of potatoes annually exported. It will be larger than usual this year. Our imports in this line are small in comparison, if we do not include sweet potatoes. In early spring considerable quantities of Bermuda potatoes are imported, at a cost of two to six times as much, bushel for bushel, as we can get for those we export.

Certain localities also derive great profit from certain peculiar articles of export, for instance: Stonington, and some towns in its neighborhood, export poultry in great quantities; Hartford and Middlesex counties in our own State, and the river counties in Massachusetts, export to bacco, both in the crude state and manufactured, in value to a very large amount; Wethersfield has long been famous for its speciality, onions, and should now be equally so for garden seeds, for these enterprising seed gardeners send their precious crops by tons almost to all parts of the Union.—*Editorial, in Homestead.*

LIGHT IN STABLES.

Stables should be so constructed, by the insertion of windows in various parts of the building, that they should be "light as day." A "dark" stable is only a suitable *black hole*,—prison-house for such a vicious specimen of the equine race as the notorious "*Cruiser*;" it is also the very worst location for any kind of animal. Sir A. Nylie (who was long at the head of the medical staff in the Russian army) states that cases of disease on the dark side of an extensive barrack at St. Petersburg, have been uniformly, for many years, in the proportion of three to one, to those on the side exposed to a strong and uniform light. Humboldt has also remarked that, among bipeds, the residents of South America, who wear very little clothing—thus allowing the cutaneous, as well as the orbital surfaces, to receive a free ray of light—enjoyed immunity from various diseases which prevailed extensively among the inhabitants of dark rooms and underground locations, and so excellent an authority as Linnaeus contends that the constant exposure to solar light, is one of the causes which render a summer journey through high northern latitudes so peculiarly healthful and invigorating. Dr. Edwards has also remarked that persons who live in caves or cellars, or in very dark or narrow streets, are apt to produce deformed children; and that men who work in mines are liable to disease and deformity.

Light, therefore, is a condition of vital activity, and in view only of preserving the sight of a horse, it is absolutely necessary that while he be the habitat of the stable, his optics shall have free access to the sun's rays.

If a horse was in the same condition as a potype, with no organ of vision, who shuns light, a dark stable might prove to be his earthly paradise, but as the horse has *special* organs of vision, evidently susceptible to the influence of light, and the integrity of his organism, or a part of the same depending entirely on the admission of light, it is absolutely necessary that stables should be constructed accordingly.—*American Veterinary Journal.*

ERGOT AND HOOF AIL.

FRIEND HARRIS:—In my last communication for the *Cultivator*, (June 1st,) I mentioned having purchased five head of cattle, diseased from eating the ergot of hay, for the purpose of experiment. Three head were considered hopeless, one old cow was much enfeebled, scarcely able to rise, and most of the time refused to set one hind foot to the ground. Two two-year old steers, much shrunken in muscle and bowels, and very lame. Two one-year old steers not quite so bad. I commenced treating them all with diuretics and alteratives, medicines internally, and applying antiseptics to the lame feet. I used different articles of the same properties on different animals with the same results. The cattle all soon exhibited a favorable change of symptoms, which continued until they were turned to grass, since that time they have done as well as any other cattle in the same herd. Nearly all lost one, and some both shells of the hoof off one foot, but not until a new one had nearly grown out. They all appeared to feel well, and playful as any cattle after treating them ten days, lameness excepted.

It has been stated in the prints that the ergot is the cause of cows casting untimely calves. This is not my experience; on the contrary, all the calves of such diseased cows appear healthy although not strong, and have taken the milk up to the time of the death of the mother, without inconvenience. Many new ideas have suggested themselves to me while treating the above cases; one I will here suggest for future observation: Does the ergot so affect the urinary organs, that the urine, coming in contact with the hind feet, causes gangrene and sloughing of the same? It has been observed that those cattle that run out to stacks, and not stabled, were less liable to lameness, although their systems suffered equally. Those that run out appear to be more affected in the nervous systems, stiffness of the joints, &c.

I have had opportunities of knowing that the ergot is more abundant than usual in all the northern counties in Ohio. I have seen several small meadows that I would not think of cutting for fodder. However, the people are mostly aware of its existence and its effects on cattle; some, no doubt, will be careless, others indifferent, and others over nice respecting the use of it. This must necessarily be the case as long as some are trying to investigate, and apprise the people of the danger, while some of our learned scientific M. D.'s deny its bad effects on cattle. Some of us, if not all, are certainly behind the times. This matter should have been settled years ago; however, caution is advisable at this time of gathering in our hay. We would suggest the leaving of the worst spots, threshing before

feeding, if bad, and salting the hay, when put in, with nine parts common salt and one part salt-petre; also, salting cattle thus exposed, with a composition of salt, wood-ashes and sulphur, frequently through the winter, and if stabled, keep the floor as clean as possible.—W. PIERCE, V. S., in *Ohio Cultivator*.

RIVER COTTAGE.

JOEL NOURSE, ESQ.,—*Dear Sir*:—The express has just brought me a very pretty picture of *River Cottage*, the place where the Editor of the *New England Farmer*, escaping from the turmoil of city life, is accustomed to enjoy his *otium cum dignitate*, setting us, at the same time, an example of good taste and good husbandry. The sketch, I understand, is to go into the *January* number, and if you can somehow arrange with the printer, while the editor is out on his farm, to slip into the number what I am writing, perhaps his modesty will not be very painfully shocked, and our readers may be enabled to find more in the picture than can be seen at first glance. You will see, before long, that I know something about River Cottage, and the people that dwell therein.

To write a perfect history of any event, it has been said, that it is necessary to begin with the garden of Eden, but for the sake of brevity, we will omit some of the "first causes," and come down to about a dozen years ago, when our friend, after several years' residence in the wicked city of Washington, departed therefrom, like righteous Lot out of Sodom, determined to seek in some spot nearer the rising sun, the realization of his long-dreamed-of happiness on a New England farm.

More fortunate than the good man of old, he left no pillars of salt to mark the spots of looking backward in the journey, but brought his small household, *fresh* as ever, back to their native hills. And then, to adopt the style of a modern novel-writer, one beautiful spring morning, two travellers might be seen slowly wending their way among the green hills of the Bay State, in "a one-horse shay," stopping ever and anon, to take an agricultural survey of some field or meadow, some vine or fruit tree, some Shorthorn or Devon, or, perhaps, to make thorough examination of a farm advertised in the papers as "suitably divided into mowing, tillage and pasturing, with uncommon school and gospel privileges."

In these two travellers, the discerning reader will not fail to discover, with very little assistance, the present editor and his humble associate, the one a gentleman in search of a farm, ardent in the faith that he could take off his coat, work all the year like a day-laborer, make a first-rate living, and be perfectly happy on a New England

farm,—the other painfully dubious whether his companion's agricultural zeal would not outrun his discretion and his purse, and *land* him so high that he would never get comfortably off!

"What do you sell from your farm?" was the test question of profit or loss. Every body knows what a farmer must buy, such as clothing, groceries and implements, and that he must pay taxes and doctor's bills, and a thousand incidentals in cash, and these almost any one may estimate. If, then, the farmer does not sell enough to pay these expenses, he is running in debt. It was, usually, pretty hard work for the man who wanted to sell his farm, to furnish the items of sales from the produce of it so as to bring out a living balance.

So we looked the State over, and made no purchase, and the next thing I knew, this individual, whose interests I had guarded with such watchful care that he could not begin to buy any farm we had examined, had bought his present residence, without even the compliment of asking my advice!

Of course, I was determined not to approve of a step so inconsiderate, and when I accepted an invitation to look at the purchase, it was with a fixed resolve to withhold my judgment of disapproval, and not to find much to praise.

The cottage and twenty acres of land was purchased in April, 1848, and, except to the eye of faith, it was rather a hopeless establishment to be called a farm. There was the house, to be sure, new, and in much the same style as now, a pretty, snug, convenient dwelling. Then there was an old tumble-down barn, good for nothing but fire wood, and a little mean shed. The land was mostly up-hill or down-hill, and where there was no ledge, there were round stones in abundance, varying in weight, from one to twenty tons. The last owner, who was a paper-hanger, had set out some fruit trees, which were struggling along at a poor dying rate, and had grafted a few of the old apple trees. The land was run out, to the lowest ebb, and its chief recommendation seemed to be that "the oldest inhabitant" could remember when it bore sixty bushels of corn to the acre, and other crops to match. The farm then cut hay enough for two cows and a horse, and produced about twenty bushels of cider apples, by way of fruit.

Now, agriculturally speaking, that was not much of a farm,—but there was another side to the picture, which, after all, is worth looking at. You have seen a young man, sometimes, who had thoughts of marriage. He determines to do the thing in a rational, considerate manner. He will find some discreet girl, who understands house-keeping and accounts, who is sober-minded, and perhaps has a little property of her own, and ar-

range matters on a fair business basis,—but the next thing you know, he is engaged to some little sentimental school-girl, with apparently only poverty and pretty looks and ways for her portion. Be patient, and the application will be seen.

We walked up on to the hill behind the cottage, on to the bald ledge, which commands a view of the distant hills, and of the beautiful quiet meadows through which the Concord, the river of harmony, gently flows. Here, on the verge of this rock, on the memorable 19th of April, 1775, were "the rebels" watching the progress of Earl Percy's troops up to the bridge, whose abutments may still be seen, and there, where the granite shaft rises by the further river's bank, among the trees, the British soldiers received the fire of the brave farmers who had made their stand for freedom and their homes, and there was shed the first British blood of the Revolution.

"By the rude bridge that arched the flood,
Their flag to April's breeze unfurled;
Here once the embattled farmers stood,
And fired the shot heard round the world."

Driven back in disorder, the flower of the English army, attacked from behind fences, and woods, and buildings, slowly retraced their weary eighteen miles, to Boston. In a field in view from the spot where we stand, some of the cannon, which the soldiers came up to destroy, were placed in the open furrow, and buried by the plow. And there, beyond the battleground, is the "Old Manse," of Hawthorn's tales, and in the village lived the good old man who went on a mission of freedom to Charleston, and was, to the eternal disgrace of that Southern city, compelled to flee from it for his life. Emerson's home is here, and his pen and the pens of Channing and Thoreau have made classic ground of the shores of the Concord and the Assabet.

And so, after all, our friend had given way to sentiment and imagination, and had paid his dollars for revolutionary associations, for beautiful views, and the good society of one of the best of New England towns.

And now, when ten years have passed, our sober verdict must be, that it was money well expended. Glancing again after our young friend who married for love, we shall most likely find him, ten years after, a happier and a more prosperous man than he who married from prudential motives. He has worked hard, but hopefully, and of his young dreams, he has wrought out a reality which is not a disappointment. An "Angel in the House" has made his home more than earthly; a "home where the heart is," and that is better than a palace.

Ten years have changed the scene at the cot-

tage. Various duties of a private and public nature have claimed its owner's attention, but the centre of all has been Home. Slowly, year after year, the scene around it has been wrought into the proportions with which imagination clothed it from the first.

A large and convenient barn has been built, with cellars under the whole extent. The huge boulders have been blasted and built into walls, wet places have been tile-drained and made fertile, several acres of apple trees have been set out and already brought into bearing, and the gardens are filled with pears and cherries and plums and grapes of the choicest kinds. Sixteen acres of land have been added to the farm, and it now winters a dozen head of cattle and four horses. The birds find none but friends in these grounds, and you see in the picture, how they are clustering as doves at their windows, and the bees, that never will work for any person who does not give away part of the honey, are busy all the summer long, with their labors. But that is all matter of fact.

Do you see that elm tree, in front of the house, around which a vine is twining? One cold winter day, about nine years ago, the editor and the writer hereof, with some half dozen yoke of oxen and men to help, hauled that same tree about half a mile with a ball of frozen earth of half a dozen tons weight, and set it where it now is. It has grown finely, and as a mere tree, is valuable, but when we look at it with the associations of bygone days, it takes its position with the battle monument. Like Tennyson's "Talking Oak," long may it stand the guardian of the place,

"And flourish high with leafy towers
And overlook the lea,"

recounting to future generations stories of the prospered loves and realized hopes of the cottage inmates.

And so our friend has wrought his life into his Home. The helping hands of kindred and family have aided to adorn its surrounding grounds. Within, a new life has recently been added to the family group, and the child's prattle reminds us that a third generation is begun, though the grandsire's raven locks tell us that time is dealing gently with him, or rather that he has taken this second degree somewhat earlier in life than is usual.

And now with this picture before us of the pleasant home of one who is doing all he can to improve the homes and the hearts of others, and to make the earth more fruitful and beautiful, let us unite in wishing a Happy New Year to the inmates of River Cottage. With the like wish for yourself, I remain your friend,

HENRY F. FRENCH.

Exeter, N. H., Dec. 1858.

For the New England Farmer.

THE MUCK BED, AND ITS FUTURE PROSPECTS.

MR. EDITOR:—Twenty-five years ago, the low lands in New England were a very different affair from what they now are. They were then considered great useless affairs, good for nothing, unless for growing Tamarack poles and black ash basket timber, which could be obtained only, as people then thought, in severely frozen times in winter, or, when excessively dry in summer. Every spring, somebody's cattle got mired on their margin, in their exertion to grasp the first green tuft of wild grass, and then, when the animal was once ashore, what wishes that the swamp would sink into a clear pond of water.

Times change. The market for wood increases, and the swamp is, on a cold winter's day, full of the music of axes. Tree and shrub suffer the same fate. When the sun returns on his northern visit, he sends searching rays of light and heat into the hitherto impenetrable moor, to scan the changes winter has wrought upon its products. The bogs shrink, and the quagmires evaporate under his penetrating glances. Cattle no longer mire there, and tall grass and weeds wave luxuriantly, to tell that deep fertility gathers at their roots. What a beautiful lesson to man, of the value of the old, deprecated swamp! Fertility, strong and durable, lies in its cold bosom.

The first time we ever heard of the application of muck as a manure, was many years ago, when we saw an individual going two miles to a swamp to get a load for his garden. He described his course of management as follows: The muck, with some three or four bushels of ashes to a load, was allowed to lie only a day or two to dry. The compost was then put under cucumbers and spread for a top-dressing on radish beds, when prepared for the seed. No insect destroyed plants sown or planted on lands thus prepared, and they grew with peculiar freshness and vigor. Its value for the kitchen garden was, by one experiment, placed beyond a doubt.

In passing through the Shaker settlement in New Lebanon some autumns since, we saw some fine beds of compost of which muck was the base, and in the same field, men were employed in opening holes five or six feet square. Subsequently we passed that way, and found apple trees standing where these holes were opened, and that the compost had been liberally applied around the roots of those trees in setting. These trees now show for themselves, showing the growth and vigor of trees in a new and favorable soil.

Equally favorable results from the application of muck have been noticed in other places and circumstances. Still, with oceans and continents of it in every neighborhood, and on almost every farm, the agricultural community has been slow to adopt its use.

But a new era is fast opening in this matter. The summer and fall of 1858 have been favorable to the progress of farm labor in general, and it may be, farmers have had more time than usual to turn aside from the hitherto usual routine, and work out improvements. At any rate, it is a pleasant certainty, that a vastly increased quantity of muck has been taken to the uplands for

composting, over that of any past year, for now, almost every farmer has a good pile, and many three or four stout piles. This is but the beginning of progress in the matter. Another year will bring them a full reward for all their labor and cost in the matter, and yet good effects will be in store for years to come, and the effect once seen, extra exertions will be made in successive years to increase the quantity annually, until the uplands shall have been well fattened from the richness of the cold, wet, miasma-breeding swamp; and hereafter, when the farmer goes to purchase land, one of the earliest inquiries will be, *is there a muck bed on the place?* a consideration next in importance to the supply of wood and water; for a very great proportion of the future agricultural fertility of New England lies in her now profitless swamps and quagmires.

Reader, we fully anticipate the exclamation you are about to utter. We expect, as a matter of course, to be denounced as visionary, eccentric, and all such pretty things. But what then? We predicate our opinion from facts that already exist; that greater and more astonishing facts will, from similar causes, develop themselves, not in a year, or it may be not in a decade, but in the course of sure and untiring progress, with the assurance that he who labors first and most earnestly, will earliest reap the reward. W. B.

Richmond, Nov. 23, 1858.

For the New England Farmer.

MATERIALS FOR ROOFING.

This is the subject of an article in your November number, and while I cheerfully agree with the author, so far as he compares slate with any or all other materials for roofing, in this climate, (New England,) when he takes into account expense, durability and security from fires, and while I also agree with him in his comparison between the slates of Vermont and those of Maine, New Jersey, Maryland, Pennsylvania, &c., yet I find him in error when he settles down to compare the slates of Vermont. There is no question but that poor slate will absorb more water than good slate, neither is there any doubt but that a soft, poor quality of slate stone, requires a greater thickness, and consequently much greater weight than a moderately hard stone of pure quality. I am well acquainted with the slate made at sixteen different quarries, all of which are within a range of four miles from the railroad station at Hydeville, Rutland Co., Vt., of which the Glen Lake and Eagle, (which your correspondent asserts are the best,) are a part. The Eagle slate are a good slate, weighing, on an average, 700 pounds to the square. The Glen Lake slate average, in weight, about 580 to the square. There is another kind of slate far superior to either of these two, in my estimation, so far as uniformness of color, thickness and strength are concerned. These slates are made by the Forest Slate Company, but in the immediate vicinity are better known as the "Humphrey slate." They are of a uniform purple color, split true, and the stone is of such purity that there is no difficulty in splitting the slate all of one thickness. Many of these slates, I am told, have been made during the past season in Massachusetts, at and

near Springfield, North Adams, Chicopee, &c. The average weight, per square, is 560 pounds. Without the fear of contradiction I have never seen, either in the Welsh yards of Boston, or other places, or in the slate yards of Vermont, as beautiful piles of slate as I have repeatedly seen at the yards of the Forest Company, at Hydeville. There is no reason why these slates cannot be delivered in Boston or Charlestown at six dollars per square. A SUBSCRIBER.

November, 1858.

FARMERS' CLUBS.

The constant attendance upon the meetings of a Farmers' Club for six months in a year, through several years, and a constant watchfulness of the opinions and practices of those who have been associated with us in such a club, give us a high opinion of their usefulness.

A correspondent from Hopkinton, Mass., writes us as follows:—"As this is a favorable season in the year for the formation of Farmers' Clubs, and especially as my neighbors are agitating the subject, I wish you would say a few words in regard to the usefulness of such institutions, and also in regard to the formation and manner of conducting the meetings of a successful Farmers' Club. And I should like to hear from those who are connected with clubs in different parts of the State."

In response to this appeal, we cannot urge upon our readers with too much earnestness the importance of forming clubs for the discussion of all matters relating to the farm.

Now is the appropriate time—suffer it not to pass unimproved. You will find amusement, improvement, and *capital*, in its deliberations, which you cannot now appreciate. Form the club, and be determined to take an active part in it, and you will find your thoughts ranging in new and delightful fields through another year. Meet at your own dwellings, and thus while you are interchanging civilities with each other, you will save all expense of hall hire, fuel and lights.

The following is a suitable form of a constitution:—

CONSTITUTION.

ART. 1.—This Association shall be styled *The Farmers' Club*.

ART. 2.—Its officers shall be a President, Vice President, Secretary and Treasurer, who shall be chosen annually by ballot.

ART. 3.—The President shall preside in all meetings of the Club, with power to preserve order, appoint Committees, and assign topics for discussion.

ART. 4.—In the absence of the President, all his powers shall be exercised by the Vice President.

ART. 5.—The Secretary shall keep a record of the proceedings of each meeting, which shall be read by him at the next subsequent meeting. He shall preserve all reports of Committees, and

conduct whatever correspondence shall be ordered by the Club.

ART. 6.—There shall be at each meeting a discussion upon a topic previously announced, which shall be commenced by four members designated at the preceding meeting by the presiding officer; and such other exercises as the Club shall deem proper.

ART. 7.—There shall be in the Club twelve Standing Committees:—One on Manures; Hoed Crops; Root Crops; Grain Crops; Grass Crops; Live Stock; Farm Buildings and Farms; Farming Tools; Reclaiming Waste Lands; Garden Fruits; Ornamental Gardening; Fruit and Ornamental Trees.

ART. 8.—Select Committees may be appointed as the exigencies of the Club may require.

ART. 9.—Each Committee shall make report in writing, from time to time, as the Club may order, and the reports so made shall be at the disposal of the Club.

ART. 10.—Any person may become a member of this Club by paying one dollar to the Treasurer.

ART. 11.—The Annual Meeting of the Club shall be holden on the first Monday of November of each year, for the election of officers; and all officers to hold over until new officers are elected.

Aside from the agricultural information that may be gained by such association, it will make families of the same town better acquainted with each other, excite a bond of sympathy and interest, and promote those delightful social relations which ought always to exist among a rural population. Merchants, manufactures and mechanics have their meetings to discuss their business affairs and lay down some common platform or rules by which they may be guided, and in this way they strengthen each other's efforts, and profit by each other's example. In the language of the *Working Farmer*, we say, "take your sons and workmen to these meetings, and they will learn to respect an employment which calls into active use the talent of all. If you have a sick animal, you may have advantage by the experience of all your neighbors, and probably save the life of the animal. If you have excess of crops, such as are usually used on the farm, or are short of others, may you not at such meetings learn where you may sell or exchange? Do not such meetings tend to soften asperities, cement friendships, and do away with peculiarities of temper, which always occur with men who work alone? We would sooner forget much of our reading, than to lose the recollection of such practical improvements as we have been acquainted with at farmers' clubs."

LARGEST YIELD OF CORN ON RECORD.—A correspondent writing from Vanderburg county, Indiana, informs us that at the State Agricultural Exhibition a silver pitcher was awarded for the best *five* acres of corn. The award was made upon the decision of three disinterested men:

each town, who examined the corn growing in the fields, and measured one acre of each plot. They then made oath to the yield of the single acre, and of the whole five estimated from the acre actually measured. The award made, under oath, was for 857½ bushels of shelled corn on five acres, or 171½ bushels to the acre.

If this has been excelled at any other time, or in any other place, we shall be glad to hear of it. Till we do, we shall put VANDERBURG COUNTY, INDIANA, at the head of the corn column—unless we hear of some mistake in the above report.

For the New England Farmer.

"POTATO DISEASE."

MR. EDITOR:—For several years past, I have made it an almost invariable rule to omit the reading of any article in your paper, if its heading indicated that it treated of the "potato disease,"—more especially if it professed to expound the cause of the disease and prescribe a remedy. There have been such multitudes of various and contradictory causes put forth, each claiming to be the certainly true one; such a variety of infallible recipes for the prevention and cure of the plague, that I am ready freely to acknowledge myself a skeptic in regard to ninety-and-nine-hundredths of them. An inquiring mind is an object of my especial respect; I would not discourage any one from the most searching inquiry into any of the wonderful and interesting works and ways of nature around him. It has often happened that important discoveries have been made for science, by those belonging to what is called the unlearned class; and even if no important fact, before unknown, should be brought to light, yet the habit of a wide awake observation of what is going on around him, is of incalculable importance to the individual, as a means of giving activity and strength and clearness to his intellectual faculties, and of improving the manhood of the real man. But I would ask that their discoveries be not published to the world as absolute verities, till they have been tested under different circumstances for several seasons, with a single and sincere desire to get at the truth, with no bending of facts to the support of favorite preconceived theories.

I did not intend to make so long an introduction to my story. I merely intended to say, that I was, last spring, induced to read a letter from an English farmer, introduced to your readers by Judge French—and they will doubtless all agree with me that what he is willing to recommend will generally be found worthy of a careful consideration. This Englishman's letter gave a detailed account of planting potatoes with a pea inserted in each one, and the result was the absence of rot in those so planted, while others, planted without the pea, in the same or adjoining fields, were badly affected. (I write this from my recollection of the letter, and may not be exactly correct.) This had, at first sight, the aspect of an empirical remedy; but my confidence in the Judge's character for judicious caution in his statements, led me to try the experiment, but in a modified form. Instead of cutting the potato and inserting the pea in it, I merely planted two or three peas in each hill. This was tried

with about a half peck of chenangoes, a variety that has so invariably suffered badly from the rot, that I had not intended to plant them again; and the result was almost entire freedom from disease among them, though the varieties that I planted for my main crop were more than usually affected. How the pea-vine operated, if it had any effect, is not for me to say. Perhaps it might be by absorbing into its own tissues some element in the atmosphere that is deleterious to the potato; perhaps it exhales elements, that, combining with the surrounding air, so affect its condition as to make it suitable and wholesome for the potato. But, before theorizing extensively on the how, perhaps it is best to ascertain if it has any effect. This is not put forth as a certain remedy; it has not been sufficiently tested. I intend to try it on a larger scale next year. And if any one of your readers has perused this article, I hope he will assist in giving a fair and thorough trial of the proposed remedy under different circumstances, by carefully observed experiments, and note the result. MINOT PRATT.

Concord, Nov. 27, 1858.

NIGHT-AIR.

During the months of September and October, throughout the United States, wherever there are chills, and fever and ague, intermittents, or the more deadly forms of fever, it is a pernicious, and even dangerous practice, to sleep with the outer doors or windows open; because miasm, marsh emanations, the product of decaying vegetation—all of which are different terms, expressing the same thing—is made so light by heat, that it ascends at once towards the upper portion of atmospheric space, and is not breathed during the heat of the day, but the cool nights of the fall of the year condense it, make it heavy, and it settles on the ground, is breathed into the lungs, incorporated into the blood; and if in its concentrated form, as in certain localities near Rome, it causes sickness and death within a few hours. The plagues which devastated Eastern countries in earlier ages, were caused by the concentrated emanations from marshy localities, or districts of decaying vegetation; and the common observation of the higher class of people was, that those who occupied the upper stories, not even coming down stairs for market supplies, but drew them up by ropes attached to baskets, had entire immunity from disease, for two reasons, the higher the abode, the less compact is the deadly atmosphere, besides, the higher rooms in a house, in summer, are the warmer ones, and the miasm less concentrated. The lower rooms are colder, making the air more dense. So, by keeping all outer doors and windows closed, especially the lower ones, the building is less cool and comfortable, but it excludes the infectious air, while its warmth sends what enters through the crevices immediately to the ceilings of the rooms, where it congregates, and is not breathed; hence is it that men who entered the bar-room and dining-saloons of the National Hotel, remaining but a few brief hours, were attacked with the National Hotel Disease, while ladies who occupied upper rooms, where constant fires were burning, escaped attack, al-

though remaining in the house for weeks at a time. It was for the same reason that Dr. RUSSELL was accustomed to advise families in the summer time, not being able to leave the city, to cause their younger children especially, to spend their time above stairs. We have spent a lifetime ourselves in the West and extreme South, and know in our own person, and as to those who had firmness to follow our recommendation, that whole families will escape all the forms of fall fevers who will have bright fires kindred at sunrise and sunset in the family room. But it is too plain a prescription to secure observance in more than one family in one thousand. After the third frost, and until the fall of the next year, it is an important means of health for persons to sleep with an outer door or window partly open, having the bed in such a position, as to be protected from a draught of air. We advise that no person should go to work or take exercise in the morning on an empty stomach; but if it is stimulated to action by a cup of a crust of bread, or apple, or orange, exercise can be taken, not only with impunity, but to high advantage in all chill and fever localities.—*Hall's Journal of Health.*

FATTENING ANIMALS.

There are certain principles which apply to the feeding of all animals which we will shortly notice.

1. The breed is of great importance. A well bred animal not only affords less waste, but has the meat in the right places, the fibre is tender and juicy, and the fat is put on just where it is wanted. Compare the hind leg of a full-blood Durham ox, and a common one. The bone at the base of the tail extends much further in the former, affording more room for flesh, and the thigh swells out, of convex or circular shape; while in the common ox it falls in, dishing and hollow. Now the "round" is the most valuable cut, and is only found in perfection in high-bred stock. The same is the case over the whole body. So well do eastern butchers understand this, that their prices are regulated by the breed, even where two animals are equally fat. They know that in a Durham or Hereford ox, not only will there be less offal in proportion to weight, but the greatest quantity of meat will be where it brings the highest price when retailed, and will be of a richer flavor, and more tender fibre. The same is the case with hogs. A large hog may chance to make more meat on a given quantity of food than a small one, but the meat of the first will be coarse and tasteless compared with the other; and in the east, flavor and tenderness greatly regulate prices. Consequently, moderate sized, short-legged, small-headed hogs, always, in the long run, beat large breeds out of favor. In preparing for a market, "fashion and taste" must be as much considered by the farmer as by the tailor. This one fact is at present revolutionizing the English breed of sheep. The aristocracy always paid high for small Welch and Scotch mutton; but the great consumers, the mechanics, preferred large fat joints. The taste is now changed. In Manchester and other such cities, these large joints have become unsaleable; and all the efforts of the breeder are now turned

towards small breeds maturing early, with comparatively little fat. According to late writers, the large Leicester and Cotswold are going quite out of fashion. When we give \$3,000 for a Durham bull, it is not that his progeny are "intrinsically" more valuable to that amount, but the increased value and the fashion together, make up the difference. And it is thus, that while Durhams and Herefords are preferred for ships and packing, Devons are high in repute for private families. The joints are smaller, but the meat has a peculiar richness, probably found in no other kind of stock: and the proportionate waste is said to be less than in any other breed. Thus in the London market, the Scotch Kyloes, and then the Devons, (the former even smaller than the latter,) bring the highest price, because preferred by the aristocracy. So in Dublin, spayed heifers are sought for. But the breed also regulates the profit. There is nothing more certain than that one kind of animal will fatten to a given point on much less food than another, and as fattening our stock is only another mode of selling our grain and grass, those animals are to be preferred which come to maturity soonest, and fatten on the least food. The difference in hogs is very great and important. While some breeds must be fed for two, or even three winters, others are full grown and fattened at ten months old; and the difference in profit is enormous. We cannot go into particulars, but the following rules may be considered as applying to all: An animal may be expected to fatten easily when it has fine, soft, elastic skin, with thin or silky hair; the head and legs short, the "barrel" large, but chest and lungs small; and when it is quiet, sleepy and easy in temper. An unquiet, restless, quick-tempered animal, is generally a bad feeder, and unprofitable.

2. Much depends in fattening, on outward and mechanical management. Fat is carbon, or the coal which supplies the body with heat. If we are exposed to cold, it is burnt up in our lungs as fast as it is deposited by the blood; but if we are kept warm, by shelter or clothing, it is deposited throughout the body, as a supply on hand when needed. Warm stables and pens are a great assistance in fattening, and should never be neglected. So, also, quiet and peacefulness are important. Every excited action consumes some part of the body which has to be supplied by the food, and detracts from the fat. In the climate of Michigan, warm stables, regular feeding at fixed hours, and kind treatment, with perfect cleanliness, save many a bushel of grain. Animals fed at irregular times are always uneasy and fretting.

3. Ground and cooked food fatten more profitably than raw food. Mr. Ellsworth found that hogs made as much flesh on one pound of corn ground and boiled to mush, as two pounds raw unground corn; though the first did not fatten quite as rapidly, as they could not consume as much food in the twenty-four hours. By grinding and smoking, ten hogs will each gain 100 pounds in weight, on the same food that five would do if it were raw.

4. A change of food helps in fattening. Thus an ox fed entirely on corn and hay, will not fatten as fast, or as well, as one which has roots, pumpkins, ground oats or buckwheat, &c., fed to

it at regular periods. The latter may contain intrinsically less nourishing matter than the corn, but the change produces some unknown effect on the stomach and system, that adds to the capability of depositing fat. The best feeders change the food very frequently, and find that they make a decided profit by so doing. Salt should be given with every meal to cattle—say an ounce a day. It preserves the appetite and prevents torpor of the liver to which all fattening animals are subject. This torpor, or disease, is to a certain extent conducive to fat; but carried too far, the animal sinks under it.

5. In cattle the skin should be particularly attended to. A fat animal is in an unnatural state, and consequently subject to disease. Taking no exercise, it has not its usual power of throwing off poisons out of the system, and if the skin is foul, the whole labor is thrown on the kidneys. It is found by experience that oxen, regularly curried and cleaned daily, fatten better and faster than when left to themselves; and if the legs are pasted with dung, as is too often the case, it seriously injures the animal.

6. Too much rich food is injurious. The stomach can only assimilate a certain quantity at once. Thus an ox will prosper better on thirty pounds of corn and thirty pounds of cob ground together daily, than on forty pounds of ground corn. These mixtures are also valuable and saving of cost for hogs when first put in the pen. If an animal loses its appetite, the food should at once be changed, and if possible roots, pumpkins or steamed hay may be given.

7. Oxen will fatten better if the hay or stalks are cut for them, but care must be taken not to cut too short. An inch in length is about the right size for oxen, half or three-quarters of an inch for horses.—*Farmers' Com. and Horticultural Gazette.*

For the New England Farmer.

FARM LIFE IN NEW ENGLAND.

WHO SHALL DECIDE WHEN DOCTORS DISAGREE?

The recent discussion upon "Farm Life in New England," and the noted caricature of the farmer that has appeared in the kid glove magazine of the city, has awakened a degree of attention, that will probably be productive of sound instruction. In that paper are some statements prettily made, and others neither pretty nor trite, so far as my observation has extended. That a lady of New Hampshire should have been indignant at the assertion that her sex were treated by the lords of the soil, with less sympathy and kindness, under circumstances of greatest trial, than the animals of the stall is not surprising. No gentleman, who has been permitted to enter the abode of a respectable farmer would hazard such an assertion. No one well informed, would presume to say that the wives and daughters of the substantial yeomanry of New England are in any respect inferior to the better class of wives and daughters in our cities. True it may be, that the life of the farmer is hard—work, work, work, from morn to eve,—with but a slight balance in his favor, accruing at the end of the year, upon the observance of the strictest economy. But firm muscles, ruddy cheeks, and a clear conscience, are its sure accompaniments.

ESSEX.

For the New England Farmer.

HOW TO KEEP FOWLS.

In my younger days, when on the old homestead farm, I always kept hens; but more for the convenience of having good new eggs, than for the profit of them, if profit there is.

It is thought by most farmers, and many others, that there is no profit, at all, in keeping hens; still, I have heretofore read accounts of the keeping of fowls, where the credit was considerable of a balance in favor of the hens. I presume many persons make it profitable.

Having some eighty or ninety hens and chickens on hand, I mean to keep debt and credit with them, on and after January 1st, so that I can know exactly the cost of keeping them, and the profit, if any there is. We have a good henry, so that I can keep them confined in the building, with the privilege of the cellar under a barn, or can let them run at large, when the weather is suitable. I would like to be informed of the best way to manage and feed the hens through the winter, in order to keep them laying eggs, or to make them lay at all—as, unless they do lay, more or less, through the winter, there cannot be any profit in keeping them. JAMES LEONARD.

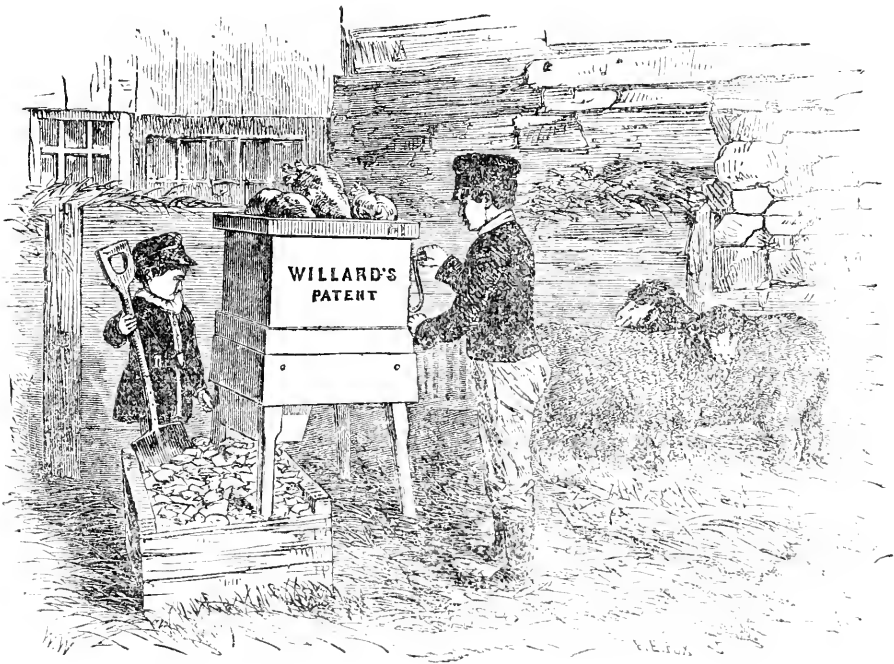
Leominster, Nov., 1858.

REMARKS.—Keep the hens in a *warm*, clean place, where they can have access to the sun whenever it shines. Feed them regularly with a variety of food, such as corn, which may always be before them, barley, wheat, boiled potatoes, mashed, and mixed with cob meal—that is, corn and cob ground together, and give them access to plenty of gravel, old plaster, or broken oyster or clam shells. The barley and wheat may be fed to them occasionally, if convenient. Add to these plenty of clear water, and pork or beef scraps or bits of fresh meat two or three times each week, and you will not fail to find your fowls profitable.

We shall expect an account of your experiment when completed, for the benefit of others.

FARMING WELL.—The great difficulty in the way of good farming is too much land. Farmers are so hurried in the getting in, and in the harvesting of their crops, that they have really no time to devote to the improvement of the soil. Let any one visit some of the ten-acre farms in the neighborhood of Cincinnati, and the truth will soon become apparent, that more profit can be made from ten acres, properly tilled and manured, than can be realized from one hundred acres run over in the usual negligent manner. The occupants of these "ten-acre farms" are growing richer every year, while many who occupy large farms barely "hold their own."—*Ohio Valley Farmer.*

FATTENING BEEF ON POTATOES.—About twelve years ago I fattened a heifer for beef wholly on potatoes. My plan was to feed small potatoes whole, without cooking, with as much hay as was wanted, and but little water, and I had as good beef as those fattened on corn meal.



WILLARD'S PATENT ROOT-CUTTER.

"This cutter is a recent invention. It cuts vegetables very rapidly, and in slices thin and fine enough for sheep, lambs or calves. It is very easily operated, so that a boy can turn the crank rapidly. The inside arrangement is such as to prevent all liability of clogging the cutter while working it, and the knives are easily repaired. The vegetables, after being passed through the cutter, may be mixed with straw, coarse hay, or other cheap forage which one would like to dispose of economically, and the mixture, after lying a little time, so that the forage may become impregnated with the seed and juices of the sliced roots, will be greedily and wholly consumed by the stock. Pumpkins (if not hard-shelled,) are easily cut with this machine, so as to be conveniently and quickly cooked for swine."

It would be a matter of economy for any person feeding out two or three hundred bushels of roots annually, to purchase one of these machines. They are very thoroughly made, and sold, singly, for \$10, by *Nourse, Mason & Co.*, Quincy Hall, Boston.

HORSES' COATS.—Lately going to the country to spend a few weeks with a friend of mine, I drove a very handsome horse, and a good one—but he was always annoyed about his coat. It

was more like a lot of bristles than a horse's smooth skin, and all the grooming he could get "wouldn't do it no good." My friend, who is a great horse-breeder and fancier, made me try giving him a few raw carrots every day to eat out of my hand, saying that he would have a good smooth coat in three weeks,—and he was right, for in that time my horse had a beautiful, sleek, glossy coat, and all from eating a few raw carrots daily. He tells me it is infallible.—*Cor. Porter's Spirit of the Times.*

For the New England Farmer.

FOWL MEADOW GRASS SEED.

MR. EDITOR:—Much inquiry has of late been made for fowl meadow seed, as to where it can be found, &c. I read with much interest the description, as given and represented by cut, in the *N. E. Farmer* of June 26th, never having known before what "fowl meadow" was. But I have for years known that the grass more abundant than any other, which goes to seed at the height of a few inches in all our pastures and by the roadside, bearing a very fine seed, is considered by many as the native grass of this country. Upon reading the article above alluded to, it appeared to me that the "fowl meadow," the "*Poa nervata*" there described, was identical with this grass which is so common among us. Mowing on low ground last July, I found the grass you describe, which had crippled down and produced

an out-growth from the joints, answering the description given of fowl meadow precisely. Near this which had crippled, grew that which had not crippled, but which was precisely similar, except the new growth at the joints. I traced it along to the upland and to high land, and found the same grass there, precisely the same. And it is that grass which I had before supposed to be the native grass of this country. Our farmers call it blue grass. It grows in all our pastures and cultivated fields more or less, and by the road-side, up and down the country everywhere, in soils suited to its growth. It produces the finest and softest seed of any grass, and it is the heaviest and most valuable hay. I have saved some from the meadow and some from the upland for seed, and if there is any difference, should be glad to have it pointed out. As usually cleaned, the seed weighs about fourteen pounds the bushel, and farmers get for it from three to five dollars the bushel.

There is another kind of grass among us, somewhat resembling this, which we call "red-top," called by some "Rhode Island blue grass;" it looks of a beautiful blue when mown down. It grows taller perhaps, but thinner, not having the thick bottom of our blue grass, and is consequently not so productive; the quality of the hay not as good, and the second growth is nothing. This may be the German grass of which you speak.

But I have no doubt that your fowl meadow and our blue grass are identical, and if so, fowl meadow seed is raised here in large quantities.

R. F. COPELAND.

East Bridgewater, Mass., Nov., 1858.

For the New England Farmer.

A NEW CORN.

MESSES. EDITORS:—I have what I consider a new variety of corn, which I obtained in the following manner.

A few years since I purchased some corn at a seed store and planted it, and while it was in the process of maturing, I discovered two or three stalks, each having two and three ears upon them, and being *eight* or *ten* days earlier than the rest. I picked these stalks with the corn ripe upon them in the middle of August, and this is the origin of the corn.

For two years past I have raised the Rhode Island premium corn, in order to test it, and I am able to state that mine is at least one week earlier, and is *fifteen* per cent. more productive than that, while it has the advantage in color, being a bright yellow, with a trifling intermixture of blue. Taking into consideration its color, compactness, shape of the ear and the remarkably short time required to bring it to maturity, I cannot but believe that it is the best variety of corn that has yet been introduced among us.

WILLIAM HOWE.

Brookfield, Mass., Nov., 1858.

REMARKS.—We have seen specimens of the corn mentioned above, and they are certainly very handsome. We have no other knowledge of it.

For the New England Farmer.

VALUE OF TURNIPS AS FEED FOR STOCK.

MR. EDITOR:—I should like to ask your correspondent, W. F. P., for a little more information than he has given me, as to the culture and feeding of his turnips. I say turnips, because it was turnips that I spoke of particularly, in a former article.

He says he has raised over 2,500 bushels of turnips this year. How much land did he cultivate with turnips? How does he feed them? How much manure did he put on it, and what was the state of the land when he commenced on it this year? How many days labor of man and oxen did it require to put the crop in the cellar? How far was the field from the house or barn where he housed them?

If I am wrong as to the profit of the turnip crop, I shall like to be informed of it. I experimented on turnips until I thought they were not profitable.

I had an ox that would eat two bushels of turnips a day, and about as much hay as though he had not had the turnips, but he did not care about any water. It was a great saving of *water*. I would recommend turnips for any one who is short of *water*.

A cow may be put into the barn and given half a bushel of turnips or potatoes night and morning, with other dry feed, and she will do without water by the month at a time. I tried it. I have put up a breeding sow, and kept her four months on turnips; she had nothing else except what she picked out of the manure of two horses. She lived and brought a great litter of pigs. I gave her about three pecks of turnips a day, and one quart of corn in meal a day would have kept her better.

I think turnips have from 92 to 95 per cent. of water. If that is the fact, my friend's 2,500 bushels of turnips had from 2,300 to 2,375 bushels of water in them. I think his comparison of one and a half tons of hay, or fifteen tons of turnips, to the oxen, should be looked at a little more. He should take his turnips and cut them as fine as the hay, and then spread them over an acre of ground, and let them have the advantage of two good hot days' sun in July or August—carefully turning it as we do hay, and then weigh it, and he will find his fifteen tons of turnips have lost a great part of their 90 to 95 per cent. of water, and would then weigh less than the hay. As my friend has disposed of that lion, if he will give me the above information asked, I will be much obliged.

ED. EMERSON.

Hollis, Nov. 25, 1858.

WATERING SHEEP IN WINTER.

That sheep can do with less water than other domestic animals, is well known. That they should be *forced* to do with a less quantity than they desire, or compelled to do without any except what is accidentally supplied by melting snow or rain, no reasonable or merciful man can believe for one moment. In some experiments on South Down sheep, at Rothamstead, we found that in the summer months each sheep eat three pounds of clover hay, and drank about six pounds

of water daily. Thinking that they drank more than was favorable for the deposition of fat, we confined them to a less quantity of water for one week. The result was that during that time they eat less food and *lost weight*. This result satisfied us that sheep knew better than man, though he were scientific, how much water they required.

But we need not quote experiments. The common sense of every man tells him that sheep, as well as all other animals, should be abundantly supplied with good, fresh water. Cows and sheep, if possible, should have free access to it *at all times*. For, unlike the horse, they will not always drink at stated times, however regularly observed. A well, pump and troughs would seem, therefore, to be necessary appendages to every well-managed barn-yard or sheep-fold. Kind reader, *act* on this matter, and your sheep and cows will bless you, if not in words, at least in wool, milk and profit.—*Genesee Farmer*.

EXTRACTS AND REPLIES.

THE APPLE AND PEACH TREE BORER.

Is there any application in use which will prevent the ravages of the borer? What is the most direct method to dislodge them and stop their depredations? A SUBSCRIBER.

Nov., 1858.

REMARKS.—Various remedies have been prescribed, such as whitewashing the tree, washing with spirits of turpentine, with whale oil soap, &c., but it is doubtful whether with beneficial results. Some persons insert a bit of camphor gum into the hole and then plug it up with a piece of soft wood, while others cut out the grub with a knife or gouge. The latter remedy is a rough one for the tree, in unskilful hands—but often is efficacious in dislodging the enemy. One of the oldest, safest, and most successful methods that we have adopted, is killing the worm by thrusting a pliable wire into the holes it has made. This does no injury to the tree, is cheap, convenient, and quite often effects the desired object.

Below we give an article from the *Genesee Farmer* on the subject of borers, merely adding that we have often expressed the opinion *that the borer will attack an unhealthy tree in preference to a healthy one*, and this we believe to be in accordance with that law of nature, that when animals or vegetables begin to decay, there are immediately agencies at work to hasten their destruction.

THE APPLE TREE BORER.

EDITORS GENESSEE FARMER:—Conversing with an intelligent friend, who is largely engaged in apple growing, the conversation turned upon the apple tree borer. His opinion in regard to this insect was, that *it would never attack a perfectly healthy tree*. There was a vast difference between a *thrifty* tree and a *healthy* one. A *healthy* tree, according to his idea, is one that has received nothing but vegetable manure, whereas a *thrifty* tree may have received animal manure.* It was his opinion that the borer would not mo-

lest a tree which had been grown wholly by the aid of vegetable manures.

To illustrate this theory, he referred to one of his orchards, which was set out on unbroken pasture land, receiving but one plowing and no manure. Receptacles were dug and partly filled with fragments of turf, on which the tree was set, covered with earth, and thoroughly mulched with straw, brakes, leaves, and other refuse vegetable matter, which was repeated as often as necessary. In this orchard the borer is not to be found; while in others, which have been repeatedly plowed and fertilized with animal manure, they commit their yearly depredations.

Has any one else noticed a similar result?

Belfast, Me., Nov., 1858. G. E. BRACKETT.

* By animal, we understand common barn-yard manure, made up in part by the droppings of animals. Why such manure is unhealthy, we cannot conceive.—*Els. Genesee Farmer*.

DISORDER AMONG LAYING HENS.

For some years past, but the last more particularly, my hens have been taken, in the season of laying, with a dangerous disorder which often proves fatal. The sick hen will lose her eggs prematurely, but will continue to set on her nest daily, and sometimes lays an egg, though seldom. I have sometimes found under the roost two or three eggs partly developed. Frequently the egg will break in the passage, in which case the hen often dies or suffers very much, drooping around for a number of days. I think that sometimes the passage itself is broken, so that the broken egg runs in among the intestines, as I have dissected a number that were filled up with the yolk of eggs. Out of about a dozen hens, I have lost the use of, or had die, as many as seven. This winter I have commenced with twelve, and I have already had one attacked. I first found her sitting and unable to walk; but she got up and appeared as well as ever next day, but she has not laid from that time, and probably she will never be worth much more as a layer. If any one can tell of a preventive or a cure for this disorder, I hope he will give us the benefit of his knowledge.

C. T. PAINE.

East Randolph, Vt., Dec., 1858.

REMARKS.—We can think of no cause of the disorder you describe, but a want of proper food and shelter. It may not be either, but these are the points to which we should especially direct your attention. Fowls will not prosper well in damp places, or without a *variety* of nutritious food, and access to plenty of gravel or shell-forming substances. Look, also, to the breed, and learn whether your present stock is from those long kept together on the same farm or neighborhood. See article in another column entitled, "*How to keep Fowls.*"

DRAINS AND WIRE FENCES.

Would you advise underdraining and subsoiling, either or both, on a side hill, the soil of which is a gravelly loam? It is new land. In the *Farmer* of Aug. 14, there is an article taken from the *Working Farmer*, entitled "Restoration of Exhausted Soils," wherein the writer advocates

underdraining and subsoil plowing, as among the best means of bringing the soil to that condition necessary to a high state of fertility. Would it be advisable on such lands as the above?

Hon. H. F. FRENCH, in one of his articles on wire fences, speaks of the necessity of some one inventing a spring to hold the wires that would relieve them of the continual strain upon them. Would not India rubber be just the thing? It seems to answer every purpose in summer and winter when used as ear springs. Would it not do as well for the above purpose?

In regard to a corner-post to strain and fasten the wires to, I would ask, where there are no trees that can be used for that purpose, and there are large rocks near the spot, could not the wires composing the fence be gathered to one point and fastened to an iron staple driven in the rock? Would the frost heave the rock so as to slacken the wires?

B. F. M.

Lowell, Nov. 29, 1858.

REMARKS.—It is difficult, if not impossible, to give valuable advice about draining land, without a personal inspection of it. There are some evidences, however, in the vegetation itself, of the necessity of draining, where too much cold water is near the surface. In most instances of this kind, such grasses will appear as naturally grow in low, wet places, and they will gradually assume the whole ground, by pushing out the grasses which we usually cultivate. Where these evidences are found, the land, as a general thing, needs draining. It is difficult to plow or otherwise work such lands in season to get in the crops.

Perhaps your suggestion about the India rubber springs may induce some to try them. There can be no question, we think, but that attaching wires to a rock would be effectual.

TO PREVENT FLOWING SAP IN TREES.

FRIEND BROWN:—In your paper of Nov. 13, I noticed an article by T. ELLIS, of Rochester, in which he inquires if any one can tell him how he can save his trees? I would say that I have an infallible remedy for stopping the flowing of sap, or bleeding, as we term it. It is simply to dip the end of the limb, twig, or grape vine, into boiling pitch or rosin, and let it remain two or three minutes. But this remedy probably cannot be applied in his case, and I will give another: Take a flat bar of iron and apply it red-hot to the end of the stump until the bark and wood are well seasoned downward, say half an inch; then apply a good coat of pitch or rosin, and melt it in with the same iron, moderately hot; this will form a cap that will keep all sap in, and all weather out, until friend Ellis is too old or too wise to trim his valuable trees in May.

Peterboro', N. H., 1858.

S. MAYNARD.

THE SEASON.

After a beautiful season for ripening and gathering, winter appears to have taken a permanent hold. The 13th gave us an easterly snow-storm, and the rough, March like north-west winds of

the following week kept the snow in perpetual motion. The atmosphere, through the week, felt like winter and the young drifts looked like winter.

Sunday evening, the 21st, we had another fall of about three inches of snow, which settled one-half under the mild sunshine of the following day.

On Wednesday morning, the 23d, another snow storm commenced at about two o'clock from the north east, and continued for twelve hours, giving a fall of about four inches, very damp snow, lying nearly level which gives a prospect of sleighing for Thanksgiving. w. B.

Richmond, Nov., 1858.

BARLEY AND OATS.

Will barley turn to oats if cut down by frost, or eaten off by cattle? E. B.

Chester, N. H.

REMARKS.—We have never heard of such a case, and find nothing like it recorded in the books. Barley is a grain, however, that rapidly deteriorates on soils unsuitable for it—or under careless cultivation. It is a tender plant, and easily hurt in any stage of its growth; and as it is so easily affected by soil and cultivation, we should not be surprised that if it were cut down by frost, or eaten off by cattle, it might be so far affected as to resemble oats when it had headed out.

For the New England Farmer.

MARROW SQUASH---SCOTCH DRUM-HEAD.

MR. EDITOR:—The question regarding the first introduction of the autumnal marrow squash, called Boston marrow, into the city, I have thought might be interesting to some of your readers; I herewith send you the following condensed account, so far as I have ascertained, of its origin. A specimen of this vegetable was brought to my place in North Salem by a friend from Northampton, in this State, in 1831. In the spring of 1833 I distributed seeds to many members of our Mass. Horticultural Society, they never having seen it previously. At the Annual Exhibition of this Society at Faneuil Hall, Sept., 1834, I exhibited a specimen, merely marked "New Squash." This was previous to the description or cut being made. One month from this (in Oct., 1834) I forwarded the name, autumnal marrow, together with a wood cut, to the *N. E. Farmer*; it soon after appeared in the *Horticultural Register* of Teschemacher, and also in *Hovey's Magazine*. Some years after this the Mass. Horticultural Society presented me with a testimonial for the introduction of this vegetable. Regarding its origin, I can only say that it was received from Buffalo, N. Y., and that it was brought there by some Indians who visited that city. This I ascertained from my Northampton friend. This vegetable hybridized with all the tribe of pumpkins, hence it is a true, sweet pumpkin; the Valparaiso or Lima, and all those we call true pumpkins, will mix; but not so with the Winter or Canada crookneck, which I consider

a true squash; this will not hybridize (as far as I can ascertain from others, as well as by my own experience,) with the pumpkin tribe. I cannot say but that it may with the gourd family, but I have not as yet observed this.

MIXING OF THE MARROW.

The first indication of the mixing of this fine vegetable with others, is the thickening of the skin and contracting or smallness of the stem. Second, in the green color at the seed end. Third, in the enlargement of the fruit, and lastly, the disappearance of the elevated margin around the seed. This vegetable is now raised in abundance in New York and Pennsylvania, and having received them originally from your city, they are known as "Boston marrow."

Another vegetable which is considered by the cultivators around Marblehead, as an acquisition, and which they raise with great success, is a mammoth cabbage, weighing twenty-five pounds and upwards. These were first raised by Mr. Mason, of that place, and hence are called Mason's cabbage. This variety was first raised from seed which I received some fifteen to eighteen years since, from Charwood & Sons, Seedsman, Covent Market, London; it came to me as a new cabbage, marked "Scotch drumhead;" I gave the small paper to Mr. Mason. This vegetable, by the high manuring for which the Marblehead cultivators are famous, has increased the size of this variety at least one-half. I recently visited a field of these enormous vegetables with a friend, who suggested that in order to identify this variety with the town, it should be called "Marblehead mammoth cabbage." JOHN M. IVES.

Salem, Mass., Nov., 1858.

For the New England Farmer.

TOPPING CORN STALKS.

"The practice of cutting corn-stalks as soon as the corn is glazed, is still followed, notwithstanding the loss in the weight of the corn is more than the value of the stalks."

I extract this sentiment from page 72 of the forthcoming *Transactions of the Essex County Agricultural Society*; a work to which I am accustomed to look for sound instruction. I know of no work of the kind, prepared with more care, or better entitled to confidence. Is it true that this error among farmers is "still followed" almost universally, to the prejudice of the crop? Who knows that the quantity of corn is diminished by the removal of the stalks? Has there been any well-conducted experiments to determine the fact? Without doubt, the stalks are more valuable to be taken off, and properly cured. But corn is not cultivated for the stalks that can be saved, but for the corn itself. I have often heard it averred, that the kernel will be better filled, if the stalks are left on until the harvest. But this may be all theoretical. If any one knows the fact, let them come forth, and be heard.

I am pleased to see among the contributors to the pamphlet above named, several talented young men. There is no danger of knowledge fading away, although the fathers decay. I hail with satisfaction, among these contributors, the names of Page, Gregory, Sargent, Phippen, Putnam, Preston, and others.

November, 1858.

For the New England Farmer.

AGRICULTURAL PROGRESS.

BY WILSON FLAGG.

Dr. Franklin, on seeing a fly make his escape from a bottle, in which for a long period of years it had been corked up in a torpid state, expressed a wish that he could sleep half a century or more, and then awake, like the fly, to witness the progress which had been made in his beloved country. But if steam-power had been carried into operation to its present extent in Franklin's day, I do not believe he would have expressed any such wish. When I consider the inevitable tendency of this great invention to concentrate all wealth and power into the hands of capitalists, I feel as if I should be reluctant to wake up some ages hence, to view my country when the world is finished. Though it will be admitted that steam, in its application to travelling and to manufactures, has conferred great *apparent* benefits upon mankind, we still have reason to ponder seriously upon the ultimate consequences to small independent farmers, of the introduction of steam power into the operations of agriculture.

I read in the journals of the day, some weeks since, that a company had been formed in the western part of the State of New York, for agricultural purposes, and that they had purchased a "mammoth farm," on which they designed to operate by steam, in connection with the several magnificent inventions which have lately attracted the attention of our agricultural societies. However expedient this system of associated capital may be for the growth of manufactures, it would very soon be found destructive to the prosperity of individual farmers. These corporations, executing almost all their heavy labor by steam power and mammoth implements, would crowd out of the ranks of agriculture all those whose farms were of such small extent, that steam could not be profitably used by them. In competing with the companies, the small farmer would find himself in the situation of the hand-spinner and the hand-weaver, who should undertake to compete with the manufactories of Lowell and Lawrence.

Last year, the Illinois State Board of Agriculture offered a premium of \$5000 for the best steam-plow—thus encouraging an invention calculated to make the business of farming profitable exclusively to great corporations or capitalists; to destroy the value of the present mode of farming, and to extirpate the whole class of small farmers from the State! All such inventions tend to make it necessary that agriculture should be carried on by large employments of capital, and on a magnificent scale of operations. All agricultural implements which are moved by steam must be profitable in a certain ratio to the extent of even and uninterrupted surface which is to be tilled. On small fields it would be impossible to use them with success. Hence follows the necessity of farming by associated capital, of greatly increasing the size of farms by combining many into one; and under such *improved* circumstances, the present system of farm labor could not stand in competition with steam-farming. The agricultural steam-company, with their implements carried by steam-power, would cultivate ten acres with about the same expense

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of labor which is now employed in cultivating one acre. If the moral education and physical improvement of laboring men were to be the effects of this new system of farming, there would be reason for rejoicing over the prospect of the change. But no such happy results would spring from it; laboring men, instead of being elevated into lords, would be degraded into mere machines.

Men are too prone to base their theories of human progress on the assumption that labor is a curse, and not, as it is undoubtedly, when it is free and justly rewarded—a blessing. But labor ceases to be free, in the highest sense, when the laborers are under the control and in the power of mammoth associations. Labor then becomes *servitude*, which is closely allied to *slavery*. No one would say, that under the present circumstances of the country, the operatives in our manufactories, however well paid, are as free as our farmers, masons and carpenters. It should be remarked, also, that when labor is performed by powerful machines, man becomes a slave to the machinery; when, on the other hand, the implements in use are small, the machinery is the servant of man. The production may be greater in the former case; but the health and freedom of the masses are sacrificed to obtain it. The object of the statesman and the philanthropist should be to make the people free, virtuous and happy; and any increase of the wealth of the nation which must be obtained at the expense of the moral and physical welfare of the people, is not to be desired.

But it may be asked by some jealous friend of "progress," if it is right to refuse to agriculture those *aids* which have built up our manufactures? I would answer that we should refuse to agriculture any aid which is not beneficial to the agriculturist—for the farmer is of more importance than his crops. Let us not improve agriculture by any such means as will degrade man. If we could double the agricultural produce of the whole country at the present cost, by a system which would destroy the independence of our farmers, we should turn all our forces against it, as against the invasion of a foreign army.

In order to illustrate the consequences of this sort of "progress," we will apply it to an imagined case. We will suppose, for example, that in some indefinite period of the future, when steam-farming by associated capital has become nearly universal, there remains, in a certain part of the country, one of those farming villages which are now so common in our happy land. The farmers in this place are intelligent working-men, and small land-proprietors, who have but little capital except their lands and stock, and support themselves by industry and honest trade. After steam-plows, steam-rakes, steam mowing-machines, and other magnificent improvements connected with them, have swept over the country, they have arrived at last, at this antiquated village, where labor is free, and where the farmers are so old-fashioned and behind the times, as to own the lands they till, and carry on farming as we carry it on in the present barbarous age of political and social equality.

These industrious farmers have ascertained now by bitter experience, that by the use of hand implements and horse and cattle power, in the op-

erations of the farm, they cannot compete with the great agricultural corporations, which by means of steam-power can produce at an expense of ten dollars, results which they could not produce at an expense of less than one hundred. The agent of a new company, chartered with ten millions of capital, offers to these unhappy men a price for their farms, which, through exceedingly low, is such as under their present circumstances they feel obliged to accept, especially as a promise accompanies the offer, to employ them as laborers on the soil, under the direction of the officers of the company. The majority consent to the sale, and the remainder are obliged to consent by a law of the legislature placing it in the power of corporations "*established for the public good*," as it is now in the power of railroad corporations, to seize upon a refractory individual's land and estate, after paying him what a body of commissioners deem an equivalent for the property seized. These mammoth agricultural corporations, by means of bribery and political manœuvring, would easily obtain sufficient influence over legislative bodies to cause the enactment of such a law. This any one will believe who has had any political experience, and who knows how easily the worst measures may be carried by making them party tests.

Let us now examine the consequences in detail, after this little village of happy and independent laborers has been converted into a mammoth farm, owned by a company, and carried on by steam-power. At the commencement all the pleasant old farm-houses are removed, because they stand in the way of tillage, which is performed as much as possible in large, undivided lots. All fences and boundaries, except those by the roadside, are for the same reason taken down, to open many small fields into one. It has been ascertained, by experience, that no single field can be worked with the best advantage, unless it contains at least five hundred acres. If it contain a thousand, it is still better, since the larger the field, the more conveniently can it be worked by steam. Hence the preliminaries for steam-farming are necessarily a work of devastation. Many delightful groups of trees and shrubbery, some that skirted a winding brook, others that bordered the walls and fences, including many standard oaks and maples, are swept to the ground, rooted up by some giant infernal machine, as easily as a farmer pulls up weeds. All abruptly swelling ridges and other eminences—the charm of many a landscape—some of them beautifully crowned with trees and shrubs, and others velvety with green herbage, and forming numerous little valleys, now smiling in sunshine, and then sweetly sleeping under the summer shadows of trees, where the flocks found a comfortable resort in all weathers, are now graded into one vast level.

The brooks are conducted into canals, and carried along in straight courses for the convenience of labor and the purposes of irrigation; for it is necessary that their circuitous should not interfere with the progress of the steam-plow. In fine, that pleasing variety of surface which beautified the landscape, when it was in possession of the original inhabitants; those quiet rustic lanes fringed with wild roses, hawthorns and viburnums, conducting from the dwelling-hous-

es to the adjoining fields and woods; the comfortable enclosures that resounded with the lowing of cattle and the cheerful noise of poultry, and worst fate of all, the old farm-house, where the patriarch of a small estate presided over a happy family, happy, because they were free and healthfully employed—all, all are swept away by this besom of improvement.

And where are the inhabitants? The sturdy yeoman, who, though doomed to hard labor, found this labor sweet, because it was voluntary; the happy and independent swain who called no man master, and who was really a king in his own acres, is now a hired servant of the corporation. The farmers, their wives and their children, have all been reduced to servitude in this grand manufactory of corn and vegetables. The tiller of the soil has become a slave to his crops. Each thousand acres devoted to a single crop is managed by an agent imported from the city, who understands book-keeping, but was never accustomed to labor. He receives a large salary, and pays out their weekly pittance to the farm laborers. In order to facilitate operations, there is a minute division of labor, as in the cotton and woollen factories. Some of the farmers are employed exclusively as shovellers; some are used as drivers of cattle; some ride on the engine; others are employed continually to follow after the cattle and pick up their droppings, which are all nicely economized, and never allowed to lie and waste one minute upon the ground.

The several families, with the exception of those who emigrated to some other place, are tenants of wooden boxes, put up close to the ground, for the economizing of land. All these are in exact uniformity, and are owned by the corporation. I ought to add that the majority of the farmers, flattered with the hope of sudden wealth, invested all their capital—the proceeds of the sales of their estates—in the corporation stock, which they were soon obliged to sell, at an immense sacrifice, because the extravagance and dishonesty of the company's agents, absorbed all the profits, and cut down their dividends. In less than ten years, almost every one of these independent farmers was a poor man; and the village children who lived as free as the birds of the air in their humble rural homes, now work in platoons upon such parts of farm labor as they are able to perform. Before the village was sold, you might see these little children, with their satchels, going regularly to the district schools, clad in neat and various attire, skipping and playing on the route, full of gladness and freedom. Now they are called up in the morning by the ringing of a bell. They rise, they work, they eat, they go to bed and they sleep to the sound of a bell, that tolls dismally in their weary ears, the knell of all their former joys.

In the story of this once happy village and its inhabitants, we may read the fate of the whole country, should the steam-engine ever be introduced into the business of agriculture: and this would inevitably follow, if farming were to be carried on by corporations, involving large amounts of associated capital. Such a class as that of independent laboring farmers—the only *undegenerated* class in any civilized community—

would cease to exist. If it be "progress" or "improvement" to convert all these valuable men into hirelings, under the agents of mammoth corporations—then we must admit the utility of the change. But I am not yet ready to admit any measures to be progressive, which lessen the happiness and liberty of men, how much soever they may increase the productiveness of the arts.

"Ill fares the land, to lurking ills a prey,
Where wealth accumulates and men decay.
Princes and lords may flourish and may fade;
A breath can make them, as a breath has made;
But a bold peasantry—their country's pride—
When once destroyed, can never be supplied."

For the New England Farmer.

ROOT CROPS.

MR. EDITOR:—Your correspondent "E. E.," in the *Farmer* of November 6, inquires if D. Needham can gather a hundred bushels of turnips for three dollars? and if so, he will try and hire him to do it for him; yet in his last paragraph, he says he would not let you (or any one else,) put a hundred bushels into his cellar, if they were given to him.

He then goes on to say, the raising of root crops in his "region" was as fashionable fifteen or twenty years ago, as it is unfashionable now. He does not undertake to say, why others changed, but gives his own reason for so doing. His first trial, was to put some seeds into his hen manure that he intended for corn, which resulted in a great loss to his corn, where there was one or two good turnips in the hill. Now I think that is a new and very novel way of raising rutabagas; and I think it would not be surprising to any one, that "one or two good stout turnips" would take the "starch" out of a hill of corn; and that pretty effectually too; and no wonder that a portion of the stalks had "no maturing ears on them." I can tell "E. E." that the surest and the best way to raise root crops, is to raise them separate from any other. If he would like to know of an easy and expeditious method of raising rutabagas, I can tell him how my experience has taught me.

Select a piece of land that is suitable for corn, that has been planted the last year to corn or potatoes, so that it shall be mellow, and of fine tilth. In the spring, when the ground is sufficiently dry, plow it thoroughly, deep and fine, and then harrow it down level; now prepare a good supply of manure, at the rate of twenty-five to forty cart-loads to the acre; then about the last of June, spread on your manure, and plow it in crosswise. Then harrow it again and brush it perfectly smooth; previous to which, however, the stones and other obstacles should be removed from the field, so as to facilitate the running of the seed-sower. Now sow the seed at the rate of a pound to the acre; have the rows at least thirty inches apart, so that you can use a horse and cultivator; with the aid of a boy to lead, you can do the work of eight men with hoes easily. When the plants are about two or three inches high, thin them to one foot apart, keep the ground clean and free from weeds, and I will warrant a crop of turnips that will be a pleasure to look at, equal to anything upon the farm.

As regards the labor of cutting turnips by

hand, and feeding them out, if it is thought to be too much work about it, purchase a root-cutter that will do the work quickly. I do not think it advisable for any man to have "hired help" about, that takes a man an hour to cut and feed out four bushels of turnips, when one-quarter part of the time is sufficient for the operation. If you do not like them in the cellar of your house, provide a place under your barn, as every good farmer should.

In conclusion, permit me to say to "E. E." that I think it will give more satisfaction to the readers of the *Farmer*, if he and all others will please to give their name and place of residence, that it may be known what "region" they hail from, for then they will not "hide their light," as it were, "under a bushel," but will shine for the good of all around them. J. UNDERWOOD.

Lexington, Nov. 1858.

EXTRACTS AND REPLIES.

PRESERVING SPECIMENS OF BIRDS AND FISHES.

Will you inform me in regard to the best manner of preserving specimens of birds and fishes for the cabinet? QUI.

REMARKS.—In volume 4 of the monthly *Farmer* for 1852, page 349, you may find a specific account of the manner of stuffing birds, which will undoubtedly be just what you desire. It is too long to copy here. It was prepared by our associate, Judge FRENCH, expressly for our columns.

You will find an answer to other portions of your letter in another column.

SHEEP, LAMBS AND WOOL.

In March, 1857, I bought seven French Merino ewes, from which I raised 6 lambs that spring, and sheared 50 pounds of wool. Last spring I received 10 lambs from 6 of the old ewes, and from the 7 original sheep, and the 6 yearlings, I sheared 100 pounds of thoroughly washed wool.

CORN.

My corn, (which is known by the name of the King Phillip) I planted in three separate patches. From one of these pieces, containing $\frac{1}{2}$ an acre, I received 115 bushels of ears. Also from another piece of $\frac{1}{3}$ of an acre, I got 135 bushels. This piece suffered considerably from drought.

POTATOES.

From $\frac{1}{4}$ of an acre planted on the "one eye system," I dug 95 bushels of sorted potatoes. As I did not put in seed enough, I am dissatisfied with this trial, and am confident that I can raise a much larger crop next year on the same plan. These potatoes were raised on greensward land, enriched with only two loads of manure.

Sharon, Vt., 1858.

D. L. STEELE.

EMIGRATION EAST.

Mr. JACOB CROWLEY, West Mansfield, Mass., one of our old subscribers, writes us that he has purchased a large farm in Franklin County, Me., near Lake Moosetumaguntic, where the soil is

excellent, the timber heavy in the forest, with a plenty of good pasture and smooth tillage land, and where farms may be purchased at the rate of *four dollars* per acre. He says hay, oats, wheat, barley and potatoes are raised in abundance, and within 29 hours ride of Boston. He thinks there will be a considerable emigration from Western New England to that portion of Maine next spring.

AUSTRALIAN OATS.

The readers of the *Farmer* will remember the large yield I had of this kind of oats last year. They have done equally well this year, except that they are not quite as heavy, on account of the rust striking them before they were ripe. I had heads over twenty inches long in my front yard; the average length in the field was about twelve inches. Last year there was a great call for them, and I had none to sell, as all I had to spare were sold to those who saw them before they were cut. C. F. LINCOLN.

Woodstock, Vt., Dec., 1858.

KIND OF CARROTS FOR CULTURE.

I wish to inquire which is the most productive variety of field carrots, and which the best for feeding neat cattle and swine?

I have cultivated the Orange carrot on a small scale for two years past with good success.

Clements, N. S., Dec. 1858.

ISRAEL BALCOMB.

REMARKS.—The long *Orange carrot* we consider the sweetest and most nutritious, but perhaps will not produce quite as many pounds per acre, under the same circumstances, as the *Altringham carrot*.

GRASSES—PLAN OF FARM BUILDINGS.

Mr. T. P. BAYLEY, of South Ryegate, Vt., has our thanks for the plan of Farm Buildings sent in a recent letter.

We are not quite clear as to what all the grasses are, about which inquiry is made. The first is undoubtedly the fowl meadow, common to most parts of New England, and an excellent variety. A small book on *The Grasses*, recently published by Charles L. Flint, Secretary of the State Board of Agriculture of Mass., will give you great aid in an investigation of the grasses which grow on your farm.

We think you will find it advantageous to reclaim swamp lands that are convenient to the buildings, by taking it in moderate portions, and thoroughly performing the work as far as you go. You will not probably err in hauling too much muck upon your uplands if they are of a sandy character. Try a piece at the rate of fifty ox loads per acre, and another with half that amount, and let them be treated precisely alike in other respects, and note the result.

A GREAT WHEAT CROP.

"A writer in the *Genesee Farmer* says that he has tried the cultivation of wheat in hills, like corn, having the hills two feet apart each way; and two or three plants to the hill; and he reports obtaining from a small plat of ground, 'a crop so large as to be equal to two hundred bushels to the acre.' The soil is kept stirred and cultivated during the growth of the crop."

REMARKS.—This seems to us impossible—we believe the "writer in the *Genesee Farmer*" must be mistaken. When we look at a field of wheat that produces thirty, or thirty-five bushels per acre, we are puzzled to find room to place the plants to bring ten bushels more. It is the publication of such improbable events, such wild assertions, that throws discredit on the agricultural press.

BOYS' DEPARTMENT.

SIR ISAAC NEWTON'S TASTE FOR FARMING.

When Newton had reached his fifteenth year, he was called from the school at Grantham, to take charge of his mother's farm. He was thus frequently sent to Grantham market, says Timbs, to dispose of grain and other agricultural produce, which, however, he generally left to an old farm servant who accompanied him, and Newton made his way to the garret of the house in which he had lived, to amuse himself with a parcel of old books left there; and afterwards he would entrench himself on the wayside between Woolsthorpe and Grantham, devouring some favorite author till his companion's return from market. And when his mother sent him into the fields to watch the sheep and cattle, he would perch himself under a tree, with a book in his hand, or shape models with his knife, or watch the movements of an undershot water-wheel. One of the earliest scientific experiments which Newton made was in 1658, on the day of the great storm, when Cromwell died, and when he himself had just entered his sixteenth year. Newton's mother was now convinced that her son was not destined to be a farmer; and this, with his uncle finding him under a hedge, occupied in the solution of a mathematical problem, led to his being again sent to Grantham, and then to Trinity College, Cambridge, which thence became the real birth-place of Newton's genius.—*Scientific American*.

AN OBEDIENT CHILD.—No object is more pleasing than a meek and obedient child. It reflects honor upon its parents for their wise management. It enjoys much ease and pleasure to the utmost limit of what is fit. It promises excellence and usefulness, to be, when age has matured the human understanding, a willing subject in all things to the government of God. No object, on the contrary, is more shocking than a child under no management. We pity orphans who have neither father nor mother to care for them; but a child indulged is more to be pitied

—it has no parent; it is its own master—it is peevish, forward, headstrong, blind—born to a double portion of trouble and sorrow above what fallen man is heir to; not only miserable itself, but worthless, and a plague to all who in future will be connected with it.

LADIES' DEPARTMENT.

DOMESTIC RECEIPTS.

PICKLED EGGS.—Boil the eggs until very hard; when cold, shell them, and cut them in halves lengthways. Lay them carefully in large-mouthed jars, and pour over them scalding vinegar, well seasoned with whole pepper, allspice, a few pieces of ginger, and a few cloves of garlic. When cold, tie up closely, and let them stand a month. They are then fit for use. With cold meat, they are a most delicious and delicate pickle.

HOB CAKE.—This cake, so popular in the South, as a breakfast and tea cake, is made in the following way: Scald a quart of Indian meal with a pint of water; stir in two teaspoonsful of salt, and a little butter melted; put it, when properly mixed, into a well-greased tin, and bake it half an hour.

TO RESTORE SOUR MILK OR CREAM.—Milk or cream, when it has turned sour, may be restored to its original sweetness by means of a small quantity of carbonate of magnesia. When the acidity is slight, half a teaspoonful of the powder to a pint of milk.

STALE BREAD.—It is not generally known that stale bread, when immersed in cold water for a moment or two, and re-baked for about an hour, is in every respect equal to newly-baked bread.

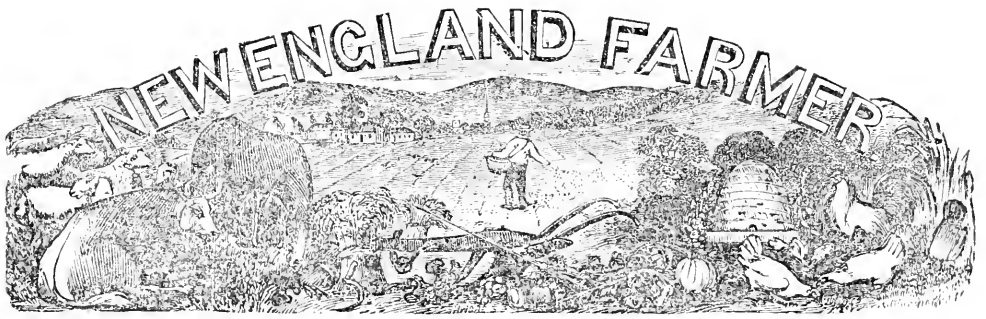
RICE AND APPLE PUDDING.—Boil half a pound of rice in half a pint of milk till it is soft, then fill the dish half full of apples which have been pared and cored; sweeten with sugar or molasses; put the rice over the fruit as a crust, and bake one hour.

COTTAGE PUDDING.—Mix about two pounds of pared, boiled and mashed potatoes with one pint of milk, three eggs well beaten, and two ounces of sugar. Bake three-quarters of an hour.

POTATO APPLE DUMPLINGS.—Boil any quantity of white, mealy potatoes; pare them and mash them with a rolling-pin; then dredge in flour enough to form a dough; roll it out to about the thickness of pie crust, and make up the dumplings by putting an apple pared, cored and quartered to each. Boil them one hour.

BAKED APPLE PUDDING.—Boil one pound and a half of good apples with a gill of water, and half a pound of brown sugar, till reduced to a smooth pulp; stir in one gill of sweet cream, a table spoonful of flour or fine bread crumbs; flavor with a little lemon juice, or grated lemon, and bake forty minutes.

RICE CUSTARD.—Boil two ounces of ground rice in a pint and a half of new milk; add four ounces of sugar, an ounce of grated cocoa-nut, four ounces of sweet cream, and bake in a slow oven.



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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JOEL NOURSE, PROPRIETOR.
OFFICE...13 COMMERCIAL ST.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

CALENDAR FOR FEBRUARY.

"Wide o'er his northern realm stern winter reigns
A conquering tyrant; and his icy chains
Are on the streams that lately danced along
To the glad music of their own sweet song.
The brave old oak, where through the summer days
Sported the birds and carolled forth their lays,
Stripped of its foliage by the northern gale,
Waves its dark arms aloft, and seems to wail
Unto the heedless blast that sweeps the snowy vale."



FEBRUARY once more—the last of the winter months, and a short one, too. The sun is already coming back from its southern tour, and the visibly lengthening days give us a premonition of *Spring*, though till the latter part of the month this is about all the sign of its coming.

It requires a good deal of faith

to look on the snow-covered landscape, and realize what secrets Nature keeps locked up from our sight.—

"Every season," says Beecher, in his "Life Thoughts," "every season forms itself a year in advance. The coming summer lays out her work during the autumn, and buds and roots are fore-spoken. Ten million roots are pumping in the streets; do you hear them? Ten million buds are forming in the axils of the leaves; do you hear the sound of the saw or the hammer? All next summer is at work in the world, but it is unseen by us."

When we think how much of our time and labor are required merely to protect ourselves from

the cold—to warm our houses and provide comfortable clothing, we are almost inclined to envy the inhabitants of a less rigorous climate. But even in this we may see the law of *compensation*. Every one knows that energy, forethought, enterprise, industry, and many kindred virtues, are especially the growth of a cold latitude. Doubtless the direct influence of a bracing atmosphere has much to do with this, but we may find still other causes. When the choice lies between freezing and working, most men will work. When a man knows that for six months of the year he must look out upon a barren world, he will, from necessity, employ the other six months in providing for this emergency. Hence he acquires habits of forethought.

Again, there seems to be a law of nature that by *overcoming obstacles*, we become stronger, morally, intellectually and physically, and that what we gain by hard labor, we value proportionally. It is the son who has a fortune left him who becomes a spendthrift, not the father, who by slow and constant toil, accumulates that fortune. It is the young man, who, by earnest and constant effort, acquires an education, who becomes a Franklin or a Webster, and not, usually, the offspring of wealthy parents, who stand ready to hold him up at every step. The one knows he has the battle to fight for himself, so he puts his armor on. The other is *born* to wealth, position, friends—and there is nothing to call forth his energy—and so he lacks that strength of character which is of more real value than anything he can inherit.

Success is not to be won by proxy. "Serve yourself would you be well served." is an excellent adage. We all remember the fate of Miles Standish in his wooing, because he, for the time, forgot his own motto!

In our cold, hilly, sterile New England, we must "do or die"—but then the home which we found "upon a rock," to stand against storm and

flood, we prize. The wealth we gather out of rough hills and barren swamps, we are not likely to squander; the knowledge we acquire in our intervals of physical labor, we value.

With regard to reading and writing we would remark, for the benefit of our younger readers, that, a great deal is lost by *want of system*. The one, two or three leisure hours of each day, which are, perhaps, spent in reading miscellaneous, if not trifling matter, would suffice in one year to lay a good foundation for the knowledge of almost any language. Think of that, or if inclination or expediency do not point in that direction, a course of history or biography selected with some regard to the nation, era, or character of the hero, will be of much greater use than a mass of indiscriminate, unconnected reading. Not that we would condemn light reading entirely—it is useful in its way—but let it be the *dessert*, and not the main dish. If *summer* is the seed-time of the physical world, *winter* is our intellectual seed-time. Let us use it to garner up treasures for our future.

Whatever may be said of other lands and other climates, we cannot afford to lose our winters and especially our winter evenings. Of these we have spoken before, but they form too characteristic and important a feature of New England life to be forgotten or passed over.

The gathered household—the fireside circle—of how many plans, and hopes, and wishes, is it the centre! Who can compute its influence upon the national character?

"From scenes like these old Scotia's grandeur springs,
That makes her lov'd at home, revered abroad;
Princes and lords are but the breath of kings—
An honest man's the noblest work of God."

But winter has other pleasures peculiar to itself, beside those of the Home circle. There are social gatherings, lyceums, concerts, and last, but not least, in the opinion of the young people, *sleigh-rides*,—though some confess to an involuntary shiver, a sort of "Arctic Expedition" sensation, at the bare mention of such a thing! But such persons must have been among those who went a sleigh-riding, and found "Love's Labor Lost." It ought to kindle one's blood into a delightful glow, even to think of an old-fashioned sleigh-ride. With the roads glassy, the thermometer a little above zero, a pair of spanking steeds, plenty of buffalo robes, and three humans on a seat, the hero in the middle, who would care for Old Boreas, even if he came with all the Arctic Regions on his back!

We suppose it was in a milder climate than ours, that the old song was written,—

"'Twas on the Eve of Valentine,
When birds begin to mate,"

for, as those who have not outlived their romance will remember, *Saint Valentine's* day comes on the 14th of February, when few birds besides the adventurous snow-birds are to be seen in our region, and they, like many of their betters, must be too much engaged "in getting a living," to think of matters of love.

For the farmer, February is not, comparatively, a busy month. He stops to take breath, as it were, before the time for breaking up the earth, and preparing for Spring's work, comes on again. If a systematic farmer, he lays his plans for that work, and has it, as it were a map, constantly before him, so that he knows just at what point to strike to press forward his business to the best advantage. He, also, grows lusty and strong on the leisure he has enjoyed, and on the mental aliment which he has stored up. For such an one the earth unlocks the treasures of her bosom, and welcomes him to the banquet.

Winter affords grand themes for the poet, and and if they are not so gentle and soothing as those of spring or summer, they have a grandeur and sublimity, equally as indispensable in the passage of the seasons. And as the poet opened our pleasant discourse with the reader on this February topic, so may he grace its close.

The Ice-King loves no music save his own,
That, like an organ's deep and solemn tone,
Swells where the midnight tempest wildly sweeps
Through leafless forests and o'er craggy steeps.
And voiceless is my harp; or if its tone
Should mingle with the winds a plaintive moan,
'Tis not my hand the tuneful change that rings,
Nor mine the voice that to its music sings—
'Tis but the wind that sweeps its sounding strings.

GEORGE BLANCHARD.

WALKING AS AN EXERCISE.

It is well understood that the general health of cities is due to the custom of constant walking, which prevails among the residents of crowded towns. This compensates for the want of fresh and free air. It is certain that city ladies walk much more than their country friends. The latter, when they can command a horse, think a mile's walk a great undertaking. Ladies in the country hesitate about venturing abroad on foot; and they remain within doors, or in quiet inaction, while the city dames, who are presumed to be "delicate," and unable to endure fatigue, walk miles over the pavements, without thinking of the exertion. Visitors to the city from the country are worn out by a day's "shopping," while their city guides are apparently as fresh at the close as in the beginning of the day's work.

Walking is the most natural, useful and thorough exercise that can be taken. Infantry, in an army, can outmarch the mounted men. A proof of the superiority of the biped over the quadruped, is given in the result of a recent wager. A man undertook to walk from New York to Cincinnati in eighteen days, and accomplished the task, with nine hours to spare. The person

with whom the bet was made accompanied him in a carriage, and the pedestrian, at the end of the journey, was in better condition than the horse or his driver. This accords with all experience. The human frame becomes inured to wholesome and proper exertion, and the biped gains strength under it, in a greater degree than any quadruped. We have no objection to dumb bells, and other paraphernalia of the gymnasium. But none of these contrivances are half so beneficial as the use of our natural means of locomotion.

The people of this republic have the largest continent in the world to travel over, and are, as a nation, the greatest travellers. But while the rail, the river and the horse carriage are all used to the utmost, we walk less than any civilized people under the sun. A man, no matter how much his leisure, or how great his need of economy, would be thought very poor, or next to insane, who should use his feet for a journey. He would, at the very least, be set down as eccentric or a humorist. Where time is valuable, or strength is to be husbanded for active employment, it is well to take advantage of public conveyances. But if Americans would prescribe to themselves what John Bull calls his "constitutional walk," we should gain in strength of muscle, and banish or diminish the common complaint, dyspepsia. Athletic games are well in their way, but one cannot always get up a cricket or rowing match. The consent of others is required, whereas, to walk briskly and habitually, it needs only that we overcome our own inertia, and diabolise ourselves of the notion that a horse's legs are better than a man's.

No motion calls more of the muscles into healthy play than walking—not gliding like a ghost, with arms motionless, but pushing along, with a hearty, springy swing. Nothing more exhilarates the whole man than a current of air created by his own brisk movements. If this exercise, so conducive to health, and so readily taken, were more in fashion and in favor, we might meet the doctors with an independent air; and as to the nostrum-mongers, starve them into taking up a more useful avocation.—*Philadelphia Gazette.*

For the New England Farmer.

AN EXCELLENT CROP OF ONIONS.

MR. EDITOR:—It may recur to the memory of some of your readers, that in the course of last spring, I furnished for the columns of the *Farmer* the measurement of several huge mounds of manure, which I found standing on the farm of Mr. SETH HATHAWAY, of this town. In that article, I intimated that I should keep an eye on the crops of Mr. Hathaway during the season, with the view of reporting at some future time how such manuring paid. I would, in general, remark on the result of this high manuring, that the returns were proportional to the outlay, the crop of potatoes in particular being remarkably heavy. Of the onion crop, I have now before me the weighed yield of half an acre, which I think will be on all sides conceded to be a credit to his skill and industry. Number of pounds of onions marketed from a measured half-acre of land, 17,575; which, at fifty pounds to the bush-

ck, would make 351½ bushels, or at the rate of 703 bushels to the acre! Who will take the palm from Mr. Hathaway? J. J. H. GREGORY.
Marblehead, Dec. 15, 1858.

ROOTS CANNOT GROW WITHOUT LEAVES.

It is a well-known and well-settled principle in vegetable physiology, that no part of a plant can grow without the assistance derived from the leaf, which decomposes and re-arranges the crude materials of the food of plants, and thus forms new wood.

For this reason, a very simple and easy way to kill a patch of Canada thistles, or any other weed whose roots spread wide and extend deeply into the soil, is by keeping the tops cut off or the leaves smothered, so that no food can be furnished to the roots below. A few months of starvation in summer will destroy the plants.

For the same reason, clover or any other plants, will extend the growth of their roots more rapidly and freely if a larger top is permitted above ground than if closely pastured.

The following statement, not wholly new, from a source that we cannot at this moment give, is a further corroboration. The "curious circumstance" mentioned, exists the same with any other plant, as with clover:

"AGRICULTURAL EXPERIMENT.—A curious circumstance connected with the growth of clover is, that by cutting the clover twice and removing all the hay, a much better wheat crop is obtained than by feeding it off by sheep, even if some artificial food is used. This is owing to the fact that the growth of the roots of clover in the land is in exact proportion to the growth of the leaves in the air. Each leaflet that shoots upward sends a radicle or root downward. If the leaflet be bitten off or destroyed, its radicle ceases to grow. It therefore follows that grazing clover by sheep materially diminishes the amount of vegetable matter accumulated in the soil by the roots, and consequently the produce of the succeeding crop."

The above is sustained by the following:

"A friend of mine in Northamptonshire had a field of clover; it was divided into two portions; both were cut at midsummer, and one part was then fed off with sheep, and the other left to grow till September, when it was again cut, and the hay removed. Equal portions of the several pieces were then compared. Where the clover had been cut once and fed off, he got 35 cwt. of clover roots per acre. Where he cut twice, he got 75 cwt.; there being a difference of two tons of vegetable matter per acre."—*Country Gentleman.*

TABLE FOR MEASURING LAND.—The attention of the reader is called to the *Table for the Measurement of Land*, which we give in another column. We think it will be found, not merely convenient, but exceedingly useful to all classes of farmers. It was prepared at our suggestion, with great care, by one of the clerks of Messrs. *Shedd & Edson*, Civil Engineers, 42 Court Street, Boston, at a cost of not less than twenty-five dollars.

PROPER USE OF PORK AS FOOD.

The *Scientific American* having endorsed the opinion that "A fat hog is the very quintessence of scrofula and carbonic acid gas, and that fat pork was never designed for human food, making no red meat or muscle," etc., Dr. HOLSTON, of Zanesville, who is one of the most intelligent physicians of Ohio, wrote to the *Courier*:

A fat hog is truly the quintessence of scrofula, for scrofa in Greek is *hog*, and the derivative scrofulous means *hoggish*. The disease scrofula was so called when medical science was in its infancy, from its *supposed* resemblance to some diseases of the hog, and then the inference was easy, that eating the hog (scrofa) produced the hog-disease (scrofula.) It is well known, however, that our American Indians and the Hindoos, who never use pork, are liable to this disease; that in Europe it prevails *chiefly* among the ill-fed poor, who hardly taste meat of any kind.

On the other hand, the Chinaman and our own pioneers, who hardly eat any other flesh, are remarkably healthy and exempt from scrofula—a disease we have much more reason to suspect as originating long ago from the hereditary taint of an unmentionable disease favored by irregular living and poor diet.

In the South, from their sleek appearance and exemption from scrofula, you can at once distinguish the bacon-fed negro.

These examples may suffice on that head.

Fat pork is not in any sense carbonic acid, but hydro-carbon, a combination of hydrogen and carbon. It becomes carbonic acid and water by combining with oxygen in the act of being burned or digested, which is much the same thing—giving off during those processes large amounts of heat and ght.

It is true the *fat* of pork does not make blood or red flesh, though the lean, which is always eaten alone, *does*. It is as your article says truly, material for breath. Well, that is a good deal. It is supposed that if the writer's breath had stopped five minutes before he took his pen, we should never have seen his article on fat pork.

But it does more. All the fat that goes into the stomach and thence into the blood does not undergo slow burning, but is deposited in the body as *human fat*. Now a certain amount of fat is so necessary for the proper play of all the parts, muscles included, that without it, the body, like an ungreased engine, wears itself out by its own friction. In consumption, the waste of fat is one alarming and most dangerous symptom, and the far-famed cod liver oil acts perhaps chiefly by supplying the blood with fat.

I am satisfied by experience that fat pork—when the stomach will receive it—does just as well. Moreover, few of those delicate persons that have so great an aversion to pork or other fat, ever live to see forty years. They die young of consumption. Butter, sugar, starch, vegetable oils, act to some extent as animal fat, and in tropical climates are used as substitutes.

But go to the Arctic regions and see the refined Dr. Kane and his men devour raw walrus blubber with a gusto, as we would take a dish of ice-cream, and you will conclude that "fat pork," particularly in our Arctic winters, is not so bad an institution.

We could not live on fat pork *alone*—nor on sugar and starch—though we could on bread. Bread, the *staff of life*, contains the materials both for breathing and making blood and red flesh (muscle) in a supereminent degree, greater even than lean beef or any other single article of food, and this, or some substitute, such as beans, peas, potatoes, etc., is always eaten with fat pork, so that there is a sufficient supply of blood and flesh-making material. However, excess is bad, and the fat pork must not constitute the bulk of a meal.

Chemical analysis is a poor substitute for the observation of facts in the living body, nor can we even base very much on experiments made on Mr. Martin, the man with the hole in his stomach, by which food can be introduced and digestion observed, for that is not nature's way of getting it there, and a stomach with such an unnatural opening is much like a leaky dinner-pot with a hole in the bottom stuffed with a rag. Extended experience alone can settle such a question.

The Greeks and Romans esteem pork as a luxury, and a most wholesome diet; their athletes and gladiators (prize-fighters) were fed on pork. Our own Saxon (Teutonic Scandinavian) ancestors esteem it so highly that they, even in their heaven, provided a great hog with golden bristles, called Gullibortstli, of whose bacon the heroes of Walhalla dined every day, when at night the picked bones again united and became covered with a fresh supply of fat pork. In this estimate of the hog, the mass of mankind, not of the Shemite race, (Jews, Turks, Arabs, etc.,) who follow Moses' law, that had spiritual and representative meaning, have in all ages agreed, and will agree, as long as man has canine teeth, and lives by *drawing his breath*. Whenever the *Scientific American* or Prof. Liebig will discover a new process of living without breathing, we may be guided by their opinion; till then, I opine, "good *corn-fed* (and no other is good) pork" will rule the roast, of which themselves will not be slow to partake.

My remarks are of course only applicable to men, women and children with comparatively healthy stomachs, who have sufficient exercise, with pure air and water.

For the *New England Farmer*.

"USE OF FRESH MANURES."

MR. EDITOR:—I noticed an article in your paper of the 27th of November, under the above caption, from Mr. Mansfield, of West Needham. Is it possible in this enlightened age, and after a man has spent "forty years among the corn crops," that he should be so greatly mistaken or blind in regard to the manufacture and application of manures, or that he should have the "courage" to write such an experience for an agricultural paper? (And I think you, Mr. Editor, must have a large share of moral courage to publish it.)

How many converts does he expect to make to his theory, "that manure composted under cover is a dangerous article as food for plants;" or how many careful farmers will be likely to follow his advice, and "give their manure the ben-

eft of both sun and rain?" Or will he find one individual outside of the walls of a lunatic asylum to subscribe to his doctrine, "that there is no place more suitable for manure in the winter than under the eaves of the south side of the barn, that all the water that falls from the barn, and the snow that accumulates upon it is no more than is needful for the preparation of the manure, to fit it as food for plants," &c., &c. In his "forty years' experience," has it never occurred to him, that he could compost his manure? mix with it soil, mud, peat, &c., and by this process secure all the juices and gases that otherwise would escape by drainage and evaporation?

In his long experience, has he never learned that the caustic qualities of powerful manures, (whether barn manure or guano) if he puts an undue quantity in the hill, will prevent the germination of his corn or other crops? and yet if instead of exposing it to the weather and bleaching it in the rains, he would mix it with the same bulk of soil or mud, he would have twice as much manure, and of a better quality; then his barn cellar will not poison it, and it will not poison his crops or prevent their germination.

Can it be possible that Mr. M. is in earnest in recommending his ruinous theory? or that he would for a moment think of practising it himself? If so, we would suggest that his "forty years' experience in the cornfield" has been in vain, and that he had better have slumbered all that time with Rip Van Winkle.

HORACE COLLAMORE.

North Pembroke, Mass., Dec., 1858.

CARE OF SHEEP---MUTTON.

The opinion is quite prevalent in some sections, that sheep require no water in winter, and that they actually do better without than with it. This, however, is a mistake, and one that has not unfrequently caused considerable losses. When permitted, sheep, although they are, from their particular nature, capable of subsisting a longer time without fluids than any other domestic animal, will generally drink from four to eight times a day, and with evident benefit, particularly during winter, when they are necessarily restricted to dry and unsucculent food, which engenders thirst, and requires much drink to render the economy of digestion and assimilation sufficiently rapid and perfect to insure a continuance of thrift and health. When practicable, there should always be a watering-trough in the shed or yard, to which the animals confined in it can at all times have free access, without mixing with cattle or large stock of any kind, as they are liable to be injured by the latter, especially when young. When there is a pump in the yard, the trouble attending such an arrangement is comparatively slight, even where the sheep and cattle yards are, as they always ought to be, distinct.

From twenty-five to thirty sheep are as many as can well be kept in one enclosure. When the

number exceeds this, unless special care be taken to secure the most perfect ventilation, the animals are likely to contract diseases, and never do so well as when confined in smaller flocks. Pure air is essential to all animals, but especially to the sheep. On taking sheep from their summer ranges, in autumn, the sudden change from green to dry feed often operates detrimentally. This is sufficiently evinced by the sudden loss of appetite, and consequent emaciation exhibited, and which is often attributed, erroneously, to disease. As soon as they are taken from the pastures, a few messes of turnips should be given them, daily, for a week or so, gradually diminishing the quantity as they become accustomed to other food. By adopting this plan, and allowing them a liberal supply of water and salt, their constitutional vigor will remain unimpaired, and the change rendered unavoidable by circumstances, be productive of no unpleasant or deteriorating results.

In Great Britain, where so much use is made of mutton by all classes, from the peer to the laborer, great attention has been accorded, not only to the production of the greatest quantity, but also to the best quality of mutton. After so long a series of efforts and experiments, it is but reasonable to suppose that very many important discoveries have been made in this particular branch of rural economy, and that the business of fattening, in all its details, is there more thoroughly understood and practiced than in any other country. It appears, indeed, to be universally conceded by agricultural writers of England, that sheep of great size and rapid growth, will not give so fine mutton as smaller animals, and those which are longer in coming to maturity. This axiom may, in fact, be regarded as constituting the genuine secret of the success which so markedly attends the efforts of the British herdsmen and flock-masters in fattening their animals for the market. The Leicesters, consequently, are less valuable, being large and of quick growth, than the "South Downs," which are of a more diminutive size, and much longer in coming to maturity.

A late writer, in remarking on this subject, says:—"A sheep to be in high order for the palate of an epicure, should not be killed earlier than when five years old, at which age the mutton will be rich and succulent, of a dark color, and full of the richest gravy; whereas if only two years old, it is flabby, pale and flavorless."

In this country, mutton rarely attains the age of four years, and hence, probably, the reason why the article known by that name is generally so poor compared with the English article. Wethers of good size, and of a breed disposed to take on fat readily, are often marketed at two or three

years old; but it would be for the breeder's interest to keep them at least till they were five years old, as he would then be able to offer a very superior article, and to secure a price accordingly. There is no meat superior to good mutton; it is wholesome, and possesses a flavor equal, if not superior, to the best beef.

For the New England Farmer.

ORNITHOLOGY.

BY S. P. FOWLER.

The annual migration and flight of birds is an interesting subject, and was thought by the ancients to be a matter of real and indispensable study and use to the State. Augury was regularly taught among the Romans, and an officer was appointed, whose duty it was to foretell future events, by the singing and flight of birds, appearances of quadrupeds and celestial phenomena. A college or communion of augurs was established, and it was held in high respect.

The system and practice of agriculture among the ancients was to a considerable degree regulated by the flight of birds in their migration. Whether we shall ever acquire so perfect a knowledge of the habits of our birds, that by the use of a calendar noting their arrival and disappearance, we can, to any considerable degree, improve upon our system of agriculture, is perhaps somewhat doubtful. But the appearances and manifestations of nature, as seen on our farms, to a thoughtful and cultivated mind, are calculated to awaken devout and pleasant emotions, and when accurately observed, denote to us the proper time to commence and close our agricultural labors.

The peeping of the little hyla and the note of the bluebird is the unmistakable voice of spring; the mellow note of the Baltimore bird and the quaint melody of the bobolink remind us that the yellow maize should be lain in the earth, and left to "sleep in the rain and sunshine;" the appearance of the blue jay in autumn, having left the woods for our cultivated fields, proclaims to us by its clamorous note, the harvest near; the call of the wild goose, over our heads, late in autumn, as it pursues its southern flight in long, converging lines, is a sure indication that the northern lakes are frozen, and that the earth is soon to be closed with frost; while the appearance of the shrike, as he descends from his home in the mountainous forest, indicates to us the approach of the snows of winter.

To an ornithologist, the study of the migration of birds is particularly interesting. Many of our land birds probably are guided instinctively in their journeys by the course of our great rivers and mountain ranges, and our water birds by the trending of our coast line. But it is difficult to conceive of the instinct that directs some of our birds, which do not appear to heed the directions supposed to be apparent on the face of the country, but carelessly pass along, intent only in feeding, as they slowly progress in their journey, taking no landmarks, and heedless little creatures as they, do not even so much as take a *bird's-eye* view of the country over which they pass. For instance, there is the little ruby

crowned wren, that little atom of ornithology, not larger than one's thumb, which passes from Hudson's Bay, where in summer it breeds, to Florida in winter, and back again to its northern home in spring. In its migration in autumn, it passes through Massachusetts in October, glean- ing its food, principally consisting of the larvæ of insects. This little timid bird does not for a moment, appear to lose its way, or, as we say, get its head turned round; but uniformly enters an orchard or garden on its northern side, and passing through it, from tree to tree, leaves it from its southern border, and thus pursues its journey silently and quietly along for months, until it at last reaches the most southern portion of the Union. In February, it leaves Florida in its journey north, and arrives around Hudson's Bay by the first of June, and after rearing its young, leaves these northern regions for the south about the middle or last of August.

Although most of our small birds migrate to the south in winter, the swallow tribe, under peculiar circumstances, do not always conform to the great migratory law of their nature, but provide themselves with winter quarters in hollow trees, sand banks and the bottom of ponds. The proclaiming of this singular fact, I am sorry to say, disturbs some of my ornithological friends. Well, the exhibition of unbelief upon this subject is nothing new or strange, more especially, with those who hold that nature never contravenes her own laws. The parts visited by our birds in autumn and winter are Mexico and the southern portions of the Union. Mr. Nuttall, who has given considerable attention to the migration of our birds, remarks that the greater number of birds travel in the night; some species, however, proceed only by day, as the diurnal birds of prey, crows, pies, wrens, creepers, cross-bills, larks, blue-birds, swallows and some others. Those which travel wholly in the night are owls, butcher-birds, kingfishers, thrushes, fly-catchers, night-hawks, whip-poor-wills, and also a great number of aquatic birds, whose motions are often principally nocturnal, except in the cold and desolate northern regions, where they usually retire to breed. Other birds are so powerfully impelled by this governing motive to migration, that they stop neither day nor night; such as the herons, plovers, swans, cranes, wild geese, storks, &c. When untoward circumstances render haste necessary, certain kinds of birds, which ordinarily travel only in the night, continue their route during the day, and scarcely allow themselves time to eat; yet the singing birds, properly so called, never migrate by day, whatever may happen to them. And it may be here inquired with astonishment, how these feeble but enthusiastic animals are able to pass the time, thus engaged, without the aid of recruiting sleep?

The migration of birds is a subject on which comparatively few observations have yet been made. Even the precise periods of their appearance and disappearance in different parts of this continent have not been noted with the necessary degree of attention; and until persons properly qualified shall undertake the task, we must remain contented without being able to answer the rather difficult question, "What causes birds to migrate?"

Danvers-port, Nov. 24, 1853.

VALUE OF HAY-CAPS.

MESSERS. EDITORS:—One of the principal uses of our agricultural papers is to promote an exchange of views and experiments among farmers. If a man has convinced himself, as Mr. Halsey has, that a doing any kind of work is useless or unprofitable, he cannot do a greater service to his brother farmers than to warn them how to avoid a foolish and useless expenditure; but being now fully convinced that my experiments have been fairly made and supported by the testimony of many who have tried them, I must adhere to my hay-caps. Mr. Halsey says he never expects to save hay uninjured through a two days' rain. I have done it, and hope, not to have the rain, but to do it again, if it unfortunately comes. In July, 1855, I had ten tons of hay cut on four acres, by mowing machines. It was put up, and the second day covered with 200 covers. I weighed several of the cocks, and they averaged 100 pounds. It rained nearly two days, and the quantity of water was two inches and four-tenths. On the third day, at 10 o'clock, I began to draw it in, only the bottom being a little wet. This saved me one day opening and spreading, and, in my opinion, saved one-third of the value of the hay. My hay-caps to cover a ton cost \$6, and the hay sold for \$12 a ton, and this saving was for three days' use of the hay-caps. I have heard them so frequently commended, that Mr. Halsey's condemnation of them astounds me very much. How much hay is injured by being wet is a matter I cannot speak of with entire certainty, but I had rather keep even the dew off of mine.—WM. H. DENNING, in *Country Gentleman*.

For the New England Farmer.

FOUR YEARS EXPERIENCE WITH A MOWING MACHINE.

MR. EDITOR:—In the use of labor-saving machines, perhaps there is no question among farmers that engrosses more attention and discussion than the expediency of employing a mowing machine. This is a question which every sensible farmer will, of course, settle for himself, taking into consideration the quantity of grass to be cut, the amount of labor to be hired, and the adaptation of his farm to a mower; still I think a little practical experience may be necessary to lead him to a just and positive conclusion. It is the weakness of some men to believe that animal and mechanical labor is much cheaper than manual, and your subscriber happens to be of that class. Under the influence of this infirmity, I purchased a Ketchum machine four years since of the firm of *Ruggles, Nourse, Mason & Co.*, and whatever I have to say relates wholly to that patent. I was among the first to employ a mower in this part of the country, and likewise a horse-rake, having used the latter nineteen years. I have never seen any other machine in operation, and am not qualified to judge of their relative merits. I think, however, that the firm who now manufacture the Ketchum machine, (*Nourse, Mason & Co.*) have been very ambitious to discover, and to add improvements as fast as they could be discovered, in order to perfect the machine. On my part, I have been equally ambi-

tious to avail myself of those improvements, so that what I say *now*, will not apply to the machine I purchased four years since.

With the first machine, it required one and a half hour to cut an acre, and it was hard work at that for man or beast. Yet I was pleased with that machine, because it was so much in advance of scythes in the hands of Irishmen.

My mowing forces had hitherto consisted of three or four Irishmen and one Yankee, and they were usually cutting grass until about ten or eleven o'clock in the morning. About five dollars per year was required for scythes, snaths, and whetstones. This was just about the state of things under the old hand-scythe administration. Now we will commence with the new machine, which I procured last season, (1857, when I had cut about half of my grass with the old one,) and this has been the result, alluding to this season only. With one Irishman to trim out the borders after the machine was done, occupying perhaps one-fourth as much time as the machine, we have cut sixty-eight acres. This statement does not include a meadow of ten acres where the machine would not work. The whole has been done by an Irishman, and I think he has not worked more hours than he has cut acres. I have kept the machine in order with *less* time than it would have cost me to keep the other Irishman in trim with his scythe, providing he had worked as much time. I have had occasion to grind but once during the whole season, and the breakage has amounted to only one blade, costing twenty cents. In fact, the cost of repairs for the past four years has not amounted to one dollar and fifty cents for both machines.

The matter of grinding needs a little explanation. When I say that I have ground but once, I allude to a general grinding of all the blades in the finger bar. With the exception of grinding a single knife after it had come in contact with a stone or a bone, the whole has been done with the English burr whetstone, costing twenty-five cents, and consuming less time than it takes to grind the scythe for an Irishman after he has whet the same a dozen times. My horses have seldom sweat during the operation of mowing, and I do not think it harder work for a pair of horses than the splitting of corn hills.

The machine can be put in order for work in less than five minutes after reaching the lot to be cut, and proceed forthwith to cut the double swath. It makes very little difference with horses or machines whether the grass is thick or thin, lodged or standing up, wet or dry. In the matter of drying, however, it is better to wait until the dew is off, if the grass is heavy. The finger bar not being encumbered with any thing, we run it up under a low apple tree, round a stone, in fact, any place where it does not require a short corner to the left. Being on a line with the driving wheel, it shaves the convex and concave surfaces beautifully. I have this season cut a surface, so uneven that we could not cart a load of hay over it. It is nearly all iron, not subject to decay, except the pole and driver's seat. Take off the finger bar and pole, and it is as compact as a wheelbarrow, and may be run and stored by one man in like manner. Every part appears to be of the required relative strength, and it is difficult to say which part is most likely to fail.

Now, Mr. Editor, if I have not wearied you with my "four years' experience with a mower," I should like to tell you what I consider to be the advantages of a mowing machine.

1. It gives all the hands about three hours every morning to pitch off hay carted the day before—keep clear of weeds the hoed crops, and throw up muck and compost manure for fall seeding. The importance of the two last items farmers have not yet begun to appreciate.

2. It gives an opportunity of cutting all we wish to cut for the day after the dew is off, and the reputation of the day for a haymaker established.

3. It spreads the swaths better than is done by hand.

4. The facilities for cutting are such that they enable us to cut our grass at the precise time it ought to be cut, thereby saving a loss by being cut too early or too late.

5. The cheapness of the operation makes it advisable to take from grain fields the stubble and weeds which remain after the reapers or cradlers and doing which cleanses the future crop and affords bedding for stock.

6. In cutting the after swath, you can cut at the rate of an acre an hour, and cut to "suit your taste," whether close to the ground, or take off the heads of clover for seed.

Finally, the mowing machine imparts to the whole process and operation of haying, the pleasing aspect of relief and comfort, instead of labor and anxiety.

CHAS. HUMPHREYS.

Launceston, Nov. 24, 1858.

For the New England Farmer.

ROOT CROPS.

I noticed in a recent *Farmer* the article of "E. E.," on "Root Crops." He seems so much to undervalue turnips, that I feel constrained to bring in my testimony in favor of them. Having had an opportunity of testing their worth, I am desirous that others should be informed on the subject.

Last year I raised sixty or seventy bushels of French and rutabaga turnips among my corn. I had a first rate crop of corn notwithstanding. Now I do feel confident that turnips are good not only for cattle, but for hogs also. I began to feed my shoats last fall on boiled turnips, and continued so to do, until the next June, and think them as good, if not better, than potatoes for hogs. Your correspondent objects very much to the smell of turnips; for my part I wish I had five hundred bushels of them, for the smell would be no more offensive to me than the sweet odor of a confectioner's shop.

L. CHASE.

Hampstead, N. H.

PORK AND SCROFULA.—There has long existed a strong prejudice against the use of pork as food for human beings—how it gained such strength, we cannot tell, but have always believed the prejudice to be without any good reason. We have known persons with comparatively feeble powers of digestion, to eat pork in various forms with as much comfort as they did

any other meat, and we believe it may be used in moderate quantities by most persons with as much benefit as is derived from any other meat. When well cooked, it is so palatable and delicious that we are apt to partake of it too freely, and this is probably the reason why pork has got so bad a name.

We refer the reader to an interesting article on the subject of *pork as food*, in another column, and thank Dr. HOLSTON for his lucid exposition of the question.

INSCRIPTION FOR A WATCH.

Could but our tempers move like this machine,
Nor urged by passion nor delayed by spleen;
And true to Nature's regulating power,
By virtuous acts distinguish every hour:
Then health and joy would follow, as they ought,
The laws of motion and the laws of thought;
Sweet health to pass the present moments o'er,
And everlasting joy when time shall be no more.

DR. J. BYRON.

For the New England Farmer.

POTATOES--ROOTS AND STOCK.

MR. EDITOR:—I have made an accidental experiment this year, that may be worth adding to your collection of facts in respect to the potato culture. I plowed an acre of green sward in April, and planted it with Carter potatoes, cut into one eye pieces, and without any manure. It was plowed deep, and a handful of ashes was applied to each hill, at first hoeing. For some time the potatoes looked small; but they yielded a hundred bushels of very good sized, excellent potatoes, quite free from disease.

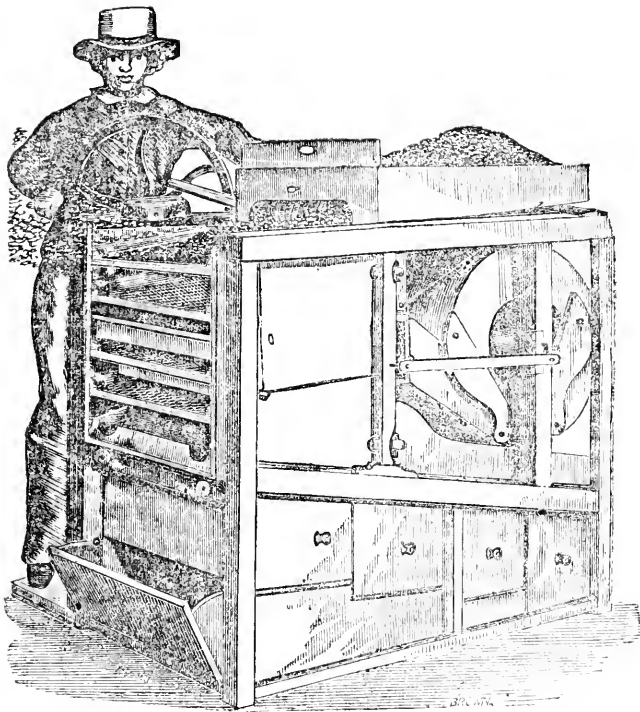
In the middle of the field, however, there was a large heap of barn-yard manure, that had been drawn out in the fall and left there till planting time. The manure was carried away and the spot it had covered planted exactly like the rest of the land. The result was a much larger yield of larger potatoes on this spot than on any other part of the field. But all of them were so much diseased as to be almost entirely worthless.

I may also add my experience to that of several of your correspondents, in favor of roots for cattle. A year ago my stock of cows and yearlings were kept entirely on turnips, straw and corn fodder till March. They were then in good condition and never wintered so well.

C. B. HADDOCK.

West Lebanon, N. H., Dec. 6, 1858.

ORIGIN OF THE CARTER POTATO.—About thirty years ago, more or less, John Carter, a resident of Savoy, in the county of Berkshire, experimented for the purpose of the improvement of potatoes by planting potato balls, and at harvesting the first year he found that he had advanced one step towards bringing out a new potato. He, therefore, the next year planted the seed raised the first, and so on for several years, till he produced the potato now distinguished as the Carter. Mr. Carter died soon after, and therefore did not enjoy the full glory of his discovery.—*Springfield Republican.*



FANNING AND ASSORTING MACHINE.

We speak of this machine after a personal inspection of it, and after witnessing repeated operations of its work. We saw a variety of seeds as thoroughly mixed in a box as they could be, turned into the hopper of the Assorting Machine, and in a few minutes returned, thoroughly clean, and each kind of seed, as well as all imperfect seeds, in a box by itself! You may mingle grain and grass seeds, garden and flower seeds, beans, peas, coffee, rice, and they will be rapidly returned to you, clean, and each by itself! Peas and beans may be assorted according to their size, and thus give them a uniform appearance, which increases their market value. The machine is simple in construction, not liable to get out of order, and is so easily operated that a boy a dozen years of age, can comfortably do it. It was invented by Mr. RUFUS NUTTING, of Randolph, Vt., who may be addressed by those interested.

A SIMPLE REMEDY FOR BRONCHITIS.—A writer in the *Baltimore Sun* who has been afflicted severely in his family by that appalling disease, bronchitis, has found relief from the following remedy:—"Take honey in the comb, squeeze

it out and dilute with a little water, and wet the lips and mouth occasionally with it." It had never been known to fail, in cases where children had throats so swollen as to be unable to swallow. It is certainly a simple remedy, and may be a very efficacious one.

DELAYS OF THE LAW.—In one of Judge FRENCH's letters from London, published in the *Farmer* in August, 1857, in speaking of the administration of justice, he said, "England had made many advances, while we in New England have stood quietly still, awe-stricken and uncovered in our veneration for old legal fictions and forms, which are really entitled to no more respect or reverence, than are the old horse-hair gray wigs, which in England every judge and every barrister is compelled to wear in the courts." "Of these matters," he added, "I may have something to say at some proper time and place, when further observation shall have assisted my knowledge."

It appears that this sort of a half-promise was gladly received by some persons, and they have been waiting patiently for its fulfilment. Upon

suggesting this to the Judge, he writes—"I have already twice delivered a charge to the Grand Jury on the *Delays of the Law*, in which I suggest the improvements made in Old England, especially in the system of County Courts. I have been requested by the Grand Jury of Carroll County to furnish it for publication, which I may do at some future time. It is not a subject adapted to an agricultural paper, but rather to a law magazine."

For the New England Farmer.

RAISING AND FEEDING ROOTS.

MR. EDITOR:—In the discussion of this subject there is one important point which, if I recollect rightly, has not been made sufficiently prominent by your correspondents; that is, the great advantage to be derived from root crops, in lengthening out a proper rotation, and in affording a change or variety of feed. I am not yet a believer in turnips, or any other root, as an exclusive feed, nor do I think it best to feed them to any great extent, in severe cold weather, unless warm shelter is afforded for the stock to which they are fed. But I have, for several years, fed a few turnips to young stock in the spring, and I am fully confident, that, not only did it make them more healthy, improving their coats and affording a *gradual change from hay to grass*, but that the nutriment supplied was amply sufficient to pay all expense of raising the turnips.

No one doubts the advantage of a little corn meal, or oil meal, or oats, in addition to the usual feed of hay, yet no sane man would think of attempting to keep neat cattle entirely on either. Why, then, do they expect any better results from roots fed in like manner? Perhaps no one would think of carrying it quite to this extent, yet I think Mr. Emerson went nearly as far in some respects, and I would respectfully suggest to him to read an article in the November *Agriculturist*, by "Diogenes Redivivus," entitled "A Desponding Farmer."

I think highly of turnips, also, as a feed for swine, to which I have been feeding them for a few weeks in the following manner. I fill a barrel kettle with one-fifth turnips and the rest potatoes, and boil with water enough to wet a half bushel of meal, which I add when cooked soft. I have not the means of weighing, to ascertain the precise result, but they appear to be thriving much better than I ever saw any when fed on clear meal, and the way they take hold of it, certainly indicates that it suits their taste exactly. I ought, perhaps, to add that I tried the potatoes and meal without the turnips, and allowing piggy to be a judge, the addition of the turnips is a decided benefit. I have seen the experiment tried of raising swine on corn meal, and on corn and oat meal, repeatedly, and although either may answer well for fattening swine previously grown on other feed, or when mixed with a good supply of skimmed milk, it has invariably proved a complete failure when fed to young animals, unless with the addition of a large amount of milk.

My own experience, as well as the directions of nearly all agricultural writers, indicates that,

as a general rule, no one cultivated crop ought to be taken from the same land two years in succession; and in the cultivation of young orchards especially, which is an absolute annual necessity, and where grain crops are considered injurious, the turnip is indispensable, and farther, as far as my experience goes, it can be profitably grown; in proof of which, I will give the result of a small patch which I raised the past season:

EXPENSE OF CROP.

Use 16 rods land.....	\$1.00
Preparing land and sowing.....	1.00
Hoeing.....	2.00
Harvesting.....	2.00
Manure.....	1.00
Total.....	\$7.00
Amount of crop, 103 bushels, at 12½ cts.....	\$12.87
Cost.....	7.00
Profit.....	\$5.87

It is true the land was in good condition; an acre of such land would, with an addition of 30 loads hog manure in the hill, have produced 80 bu. corn, (60 pounds to the bushel,) and this leads me to another point, viz., without this same hog manure I could not raise over half that amount of corn per acre, and I believe more than half the farmers of the northern part of New England are in the same predicament, unless they substitute some of the concentrated fertilizers, a plan which I consider to be of more than doubtful expediency.

I have had plenty of evidence that we cannot keep swine without roots or milk, the last of which, after deducting for raising calves, &c., is in many cases a minus quantity; therefore I come to this conclusion—no roots, no swine—no swine, no corn.

I should have stated that in harvesting turnips, I cut off all the roots close to the bulb, which, although adding one-quarter to the cost of getting in, makes them much neater to feed.

WILLIAM F. BASSETT.

Ashfield, Mass., Dec. 13, 1858.

For the New England Farmer.

WILL BARLEY TURN TO OATS?

In the *Farmer* of Dec. 11, "E. B." inquires if barley cut down by frost or eaten down by cattle will turn to oats. Some sixty years ago an opinion prevailed extensively in the lower or seaboard towns in this county (York, Me.,) that barley, under such circumstances, would turn to oats. When a small boy, I heard farmers talk about the matter, and my brothers made some experiments to test the accuracy of this opinion, but could not produce the effect. The first experiments I ever made in farming was when a small boy, may be less than ten years old. In going to school, to save travel I crossed a field in a footpath through a piece of growing barley, and as I passed, I cropped it off in several places just before the heads appeared, so as to touch the top of the coming head. The mutilated barley, in due time, made its appearance, or was destroyed entirely, but no oats. Where I have lived the last forty years no barley of any consequence is raised, and I have heard nothing of such an improbable suggestion, but a similar notion has prevailed here that winter wheat will, when injured in the winter, turn

to rye—so at the South and West many contend that winter wheat in such circumstances will turn to ches or cheat.

In 1826 or 1827, being in the north-western part of Maine, I brought home winter wheat, and the next year sowed it in my garden, to test the correctness of this notion, not that I believed it, but to convince my neighbors of the error. I continued to sow that from year to year for many years, and nearly every year since have sowed that or some other winter wheat, and though often partially or wholly winter-killed, it never turned to ches or rye.

My impression is, that winter wheat being a tender plant, gets injured and killed, and gives way to rye or ches, which ever kind there may be of stray kernels in the ground. There being no ches here, rye is the only chance seed to supply the place of the killed wheat. My father used to raise barley and sell considerable quantities for seed, because he kept his grain clean and free from oats, and he was never troubled with its turning to oats.

He used to sow some barley mixed with wheat, under the impression that then prevailed that wheat with barley would not rust or blast as when sown alone. I know not if there was anything in that impression, but it was curious to see the operation of the practice. Sometimes for a series of years the wheat part of the mixture would dwindle and nearly all disappear, and then for another series of years the wheat would gain on the barley, and nearly exterminate it. This practice of mixing wheat and barley sometimes, so far as I recollect, operated well, and generally produced good crops, and it made good bread, but I believe he used to make the experiment on his best land. Barley was easily raised and was a sure crop on my father's farm formerly, but for the last twenty or thirty years it is almost an entire failure. The fact is difficult to amount for, as it was why the wheat should give way to barley and at other times the reverse.

RUFUS MCINTIRE.

Parsonsfield, Me., Dec., 1858.

THE SUNLIGHT.

In Lewes' "Seaside Studies," is the following fine passage: "And now, reader, as you ramble through the corn-fields, and see the shadows running over them, remember that every wandering cloud which floats in the blue deep retards the vital activity of every plant on which its shadows fall. Look on all flowers, fruits and leaves, as air-woven children of the light. Learn to look at the sun with other eyes, and not to think of it as remote in space, but nearly and momentarily connected with us and all living things. Astronomy may measure the mighty distance which separates us from that blazing pivot of life; but biology throws a luminous arch which spans those millions upon millions of miles, and brings us and the sun together. Far away blazes that great centre of force, from which issues the mystic influence, 'Striking the electric chain wherewith we're darkly bound.' For myriads and myriads of years has this radiation of force gone on; and now stored up force lies quiescent in corn-fields of vast extent, once all pure sunlight hurrying through the silent air, passing into primeval for-

ests, before man was made, and now lying black, quiet, slumbering, but ready to awaken into blazing activity at the bidding of human skill. From light the corn-fields came, to light return. From light came the prairies and meadow lands, the heathery moors, the reedy swamps, the solemn forests and the smiling corn-fields, orchards, gardens—all are air-woven children of light." Yet, after all, it is but an amplification of Stevenson's well-known reply to Buckland, on the power that was drawing the railway train.

For the New England Farmer

ON THE USE OF FRESH MANURE.

MR. EDITOR:—I saw a piece in the *Farmer* of Nov. 27th, signed "R. Mansfield," on "The use of fresh manure." He thinks that manure made and kept in a barn cellar is not as good as that thrown outside, where it receives the rains, snow, frost, &c. He says, "I believe it is good policy to have our yards for manure outside the barn, where swine can have free access to them during the daytime; and fifty per cent. more manure in value may be made than in the more modern way of keeping both manure and swine in a cellar."

Now I wish to give you some of my experience and practice in making manure in a barn cellar, and you may make such use of it as you think proper. My barn is seventy feet long by thirty-six wide, with a cellar under the whole of it. I keep from thirteen to fifteen cows, one yoke of oxen, one horse; sometimes two. I made from sixty to seventy loads of manure a year before I dug the cellar, which was six years ago; but since then I have made from 150 to 175 loads in the same time. My cellar is made so warm that the manure or loam does not freeze in the winter, and it is a fine place to keep my roots to feed to my stock in the winter. I commence tying up my cows nights, the first of Sept. I make from them, by the middle of November, from twenty-five to thirty loads of manure, which I cart out and put it in a heap where I intend planting the coming year, and cover it up well with loam. I then put in thirty-five to forty loads of loam for the winter; I put my loam under the barn floor, except eight or ten loads under the stable. I make a pen for my shoats under the bay, where I keep six through the winter. The horse manure is thrown into the pig-pen, and every few days a little loam, and in this way I make thirty loads first-rate manure. The middle of the cellar being the lowest, the water from the cow stable settles between the loam and manure, and is absorbed by the loam and thrown upon the manure heap once or twice a week through the winter. In this way, I save all the water and mix it well with the manure, which is carted out in the spring, on my corn ground. It is not uncommon to have the manure so saturated with the urine that it will drip from the cart, which I think is much better for the land than to be filled with the water from the eaves of the barn, snow, &c. I put no corn stubs or orts, from the cows' manger, into the manure, unless it is run through a cutting-machine.

You will see from the above that I increase my manure more than one hundred per cent. in quantity, and I believe more than twenty-five per

cent. in value, to every load, as you will see, by the increase of my crops. Previous to having my cellar, I raised from thirty to forty bushels of corn to the acre, and since, I have raised from fifty to seventy-five bushels per acre. I bought \$100 worth of hay a year, but since I have had the cellar I have kept more stock and had several tons of hay left, notwithstanding I have turned out four acres of mowing to pasturing. I have not only got my mowing in good condition, but I plowed last spring four acres of an old pasture that produced but very little feed, manured it well, and raised fifty-five bushels corn to the acre.

Barre, Mass., Dec. 11, 1858. R. HAYNES.

REMARKS.—Isn't that a practical report from a practical man? It is such a report as we should expect from such an operation.

KING AND QUEEN.

BY L. E. ADAMS.

I am a king in my own domain,
And my little wife is queen,
And jointly over our realm we reign,
A royal couple, I ween.

Beauty and grace are the robes that flow
From her lily shoulders down,
The gems of truth on her bosom glow,
And love is her golden crown.

But her dainty hands are brown with toil—
Her cheeks with the breezes kiss,
And she works for a tiller of the soil
As if toil for him were bliss.

I am the king and the tiller too,
My farm is my proud domain,
And the will to dare and the strength to do
Are the scepters of my reign.

At my touch the teeming earth yields up
Her wealth for my feast and store,
The nectar of health brims high my cup,
My measure of bliss runs o'er.

O, ne'er was a happier realm, I ween,
Than ours, 'neath the arching sky,
And never a happier king and queen
Than my little wife and I.—*Michigan Farmer.*

HOW TO INCREASE THE VALUE OF A COW.

Every one who owns a cow can see at a glance that it would be profitable to increase the value of her, but every one cannot tell how to do it. We can, and we think that we can make it equally palpable to our readers. If a cow is kept for butter, it certainly would add to her value if the butter-making properties of her milk should be improved. In summer or winter this can be improved just as the yield of a cultivated crop can be improved by what is fed to each, and it is simply a question of will it pay, in manuring the one or feeding the other. Indian corn will add to the quantity and quality of the butter to a very sensible degree, and it is simply a question of easy solution, by experiment, whether it will add to the profit of the butter-maker to buy corn at one or two cents a pound, and convert a portion of it into butter at twenty-five cents a pound, or whatever the market price of corn and butter may be, and another portion of it into fat,

and another portion of it into manure, for that is the natural result of the chemical change produced in the laboratory of the cow's stomach. The same result will follow any other kind of feeding. Good pasture will produce an abundance of milk, often as much as the cow can carry: but does it follow that even then it will not be profitable to feed her with some more oleaginous food to increase the quantity of butter just as it sometimes proves profitable to feed bees to enable them to store more honey. It certainly does appear to us that the value of a cow, feeding upon ordinary winter food, may be almost double by making that food suitable for the purpose of increasing the quantity of milk, if that is the purpose for which the cow is kept. Farmers generally understand that they can convert corn into beef, pork and lard, and some of them know exactly at what price per bushel it will pay to convert it into these substances: but does any one know at what rate it will pay to convert corn or any other grain into butter, or any other kind of feed into the dairy products? Is the whole business a hap-hazard one? We fear so. Some persons know that they can increase the saleable value of butter by adding the coloring matter of carrots to it. Does any person know the value of a bushel of carrots fed to a cow to increase her value as a butter-producing laboratory? Experimental proof upon this point would be far more worthy of agricultural prizes than it is to see who can show the largest sized roots; for by a few carefully conducted experiments we should be able to increase the value of a cow almost at pleasure.—*N. Y. Tribune.*

For the New England Farmer.

"VALUE OF SHEEP TO THE FARMER."

A selection entitled as above, (monthly *Farmer*, Sept., '58, p. 399,) has called forth some "Hints on Keeping Sheep," (*Farmer* for Nov., p. 499,) from J. WHITNEY, of East Sullivan, N. H. His communication contains many ideas of value, but seems to me not in all respects applicable to the text upon which he comments. There can be no doubt, as Mr. W. says, that "sheep are profitable to the farmer who has a broken and uneven farm, and his pastures have been suffered to grow up to bushes, or where the soil has become exhausted by excessive feeding, and will produce none (not more, as printed) of the grasses, except June grass or white-top. Land that has thus been reduced will keep sheep better than any other stock." This is claimed by the writer in question, and also, that sheep will give such pastures a smoother appearance, by eradicating the wild plants, so that good grasses may take their place. Whether white clover would come in, if continually cropped by sheep, I have my doubts, and agree with Mr. W. that a good pasture, producing clover, red-top and timothy, would, if fed by sheep alone for fifteen or twenty years, give, in the end, very little clover or timothy. The same would be true if fed constantly and closely by horses and cattle.

The proportion of sheep to other stock, should depend "on the character of the pasturage, and the proportion of the same fitted and desirable for tillage," if one would keep sheep "without in-

jury to the farm for other purposes." So says the first writer. On a fully improved farm, there ought to be little rubbish to consume. But we must take into account also, the value of the manure furnished, as well as the food consumed—nor forget that a starved sheep is no more profitable than any other half-fed animal. His statement may be considered entirely true only under peculiar circumstances, partly true under others, and that sheep may be more profitable than additional neat stock in other cases, while it may be entirely false in regard to some farms and circumstances.

In wintering sheep, it would be the poorest policy in the world to keep them entirely "on rubbish left by other animals." As Mr. W. says, "they may survive, but not flourish, without extra feed." I would rather feed my sheep first, and give what they refuse to other animals, than to pursue the contrary course. "Attention to their wants, the eye and thought of the owner," alone can make sheep profitable. "Division of the flock (according to age and condition) good shelter, with (bean and oat) straw and a little grain, will bring them to spring pastures in better order, than if kept together, with double rations of hay, one-half of which is wanted by the stronger animals, while the weak of the flock pick up but a scanty living, and oftentimes fail in that, before winter comes to an end."

I have taken up this subject, more because it is one that needs "stirring up," among us, and to commend to every one Mr. WHITNEY'S closing remarks, than in any spirit of controversy or fault-finding with his article. There are other points in regard to sheep-culture on which I may present views, hereafter, in their proper season.

Royalton, N. Y., 1858.

J. H. B.

For the New England Farmer.

A TUMOR ON A COW'S BRAIN.

A very valuable cow belonging to Mr. Nathaniel Johnson, of Sturbridge, was killed recently, to put an end to her sufferings, and on opening her head there was found a hard tumor on the brain, but no disease in any other part. It appeared that the vitiated humors of the animal had settled on the brain, forming a hard excrescence, which must have caused the intense pain that gave rise to the singular symptoms of disease which were perceptible for some six or eight weeks. When first taken, she would turn her head towards one side, and sometimes turn her jaws slightly upwards, continuing in this position, at times, for several minutes. To use the common phrase, she acted strangely. When the spasms were not on, she would eat, chew her cud and give milk as usual, but would occasionally push with her head against one side of the stable, knocking off the boards; and although her flesh wasted away till she became mere skin and bones, yet, the night before she was killed, she burst open the barn-door, (requiring surprising strength in one so poor and sick) and was found lying on the ground in the morning. The latter part of the time she could neither eat nor drink, except what was put into her mouth by means of a bottle and the hand. Her tongue seemed to be paralyzed, and she could not suck in water.

As the difficulty gradually increased in severity, Mr. J. feeling concerned for her safety, consulted those who are reported to be skilful in treating the diseases of animals, but no one could tell what the matter was; some pronounced it horn-ail; others thought she had been hurt on the head or neck, or both, but there was no external sign of badly injury. Mr. J. employed every kind of rational treatment he could think or hear of, with but little relief to the cow. In short, he spared no pains to cure her.

This case is considered to be so singular that Mr. J. is desirous of having it published in the *Farmer*, to elicit statements of similar cases, with their remedies, if any such be known. But to dissolve a tumor on the brain of a living animal is probably beyond the power of the healing art. Had the disease been known on its first appearance, it would have been an act of mercy to kill her, for she must have suffered for nearly two months a degree of acute pain which would, in the end, have caused her death.

In consideration of the loss, trouble and sickness of Mr. J., his neighbors have promptly made him a liberal donation, for which he feels exceedingly grateful. c.

Sturbridge, Mass., Dec., 1858.

PROGRESSIVE AGRICULTURE.

The N. Y. *Observer* says of progressive agriculture:—"Under its influence, spring up tasty and convenient dwellings, adorned with shrubs and flowers, and beautiful within with the smiles of happy wives, tidy children in the lap of thoughtful age—broad hearts, and acts as well as words of welcome. Progressive agriculture builds barns and puts gutters on them, builds stables for cattle and raises roots to feed them. It grafts wild apple trees by the meadow with pippins or greenings,—it sets out new orchards and takes care of the old ones.

It drains low lands, cuts down bushes, buys a mower, houses tools and wagons, keeps good fences and practices soiling. It makes hens lay, chickens live, and prevents swine from rooting up meadows. Progressive agriculture keeps on hand plenty of dry fuel, and brings in the oven-wood for the women. It plows deeply, sows plentifully, harrows evenly, and prays for the blessings of Heaven. Finally, it subscribes for good religious, agricultural and family journals, and pays for them in advance, advocates free schools, and always takes something besides the family to the county fair.

LEAKS SIMPLY STOPPED.—The *Lynn News* says:—"Some years ago I had a leaking 'L.' Every northeast storm drove its waters in. I made a composition of four pounds of resin, one pint linseed oil, and one ounce red lead, applied it hot with a brush to the part where the 'L' was joined to the main house. It has never leaked since. I then recommended the composition to my neighbor, who had a dormer window which leaked badly. He applied it, and the leak stopped. I made my water-cask tight by this composition, and have recommended it for chimneys, windows, etc., and it has always proved a cure for a leak."

COOKED FOOD FOR FATTENING CATTLE.

Mr. Samuel H. Clay, of Kentucky, has been experimenting in feeding several lots of hogs, changing them from raw to cooked and from cooked to raw food, ground and unground. The *Valley Farmer* furnishes us with the following results:

Mr. Clay's experiments show, that to make pork on dry corn, one bushel gave, in one instance, a gain of five pounds and ten ounces. In changing the food, on the same animals, to boiled corn, one bushel produced a gain of fourteen pounds and seven ounces, and a bushel of corn ground and cooked, gave a gain of sixteen pounds and seven ounces; while in another instance, after a change from dry corn to cooked meal, the gain upon one bushel was but a fraction short of eighteen pounds.

These experiments, then, show an average gain of about three pounds, when the animals were fed on cooked food, to a gain of one pound when fed on dry corn. Or, to reduce the comparative cost of the gain per pound, estimating the corn at 28 cents per bushel, the following are the results: When the hogs were fed on dry corn, the average gain cost a fraction over $4\frac{1}{2}$ cents per pound. The same animals, when fed on cooked meal, the gain cost a fraction over $1\frac{1}{2}$ cents a pound, or when fed on cooked corn, unground, the gain cost 1 cent and 9 mills per pound, leaving but four mills, or less than half a cent, per pound in favor of cooked unground, or allowing but four mills per pound for grinding, exclusive of the greater time required to cook whole corn, over that which is ground. But to come to the point more definitely, we will reduce the price of the corn to 25 cents per bushel, (which is as low as may now ever be expected, except, perhaps, in some remote quarter,) and reduce the gain from two-thirds to one-half, for the difference between cooked and uncooked food, which will be equal to twelve and a half cents on each bushel of corn fed out, and see how the question will stand.

With a properly constructed apparatus and suitable feeding arrangements, one man can cook and feed out 100 bushels of meal in a day. To do this, his meal must be placed in bins so as to be conducted into the steam-vat without handling, and his feed-troughs so arranged that the slop will flow into them in the same manner, without handling. But if corn is cooked without shelling or grinding, two men would be required to manage the same quantity. In the first instance, then, there would be a saving of 50 bushels of corn, which, at 25 cents per bushel, is \$12,50, to be offset by the labor of one man, one day, which, at \$1,25 per day, leaves a profit of \$11,25 in favor of cooking. But, if the corn be cooked whole, and requires to be fed out by hand, allowing two hands, at the same cost per day, there will still be a gain of \$10.

But to simplify the question still further: Is it not cheaper to cook 100 bushels of corn than it is to raise 50 bushels? But besides a saving of one-half of the corn, by the process of cooking, there are numerous other advantages to be taken into account. The same weight is attained, according to the experiment above quoted, in one-third of the time, or we will reduce this also

to one-half, avoiding the risk of accidents to animals on the time gained, the care and attendance in feeding, the advantages of weather in the earlier and more favorable season for feeding, together with other incidental matters not enumerated.

The conclusions, which are generally arrived at, are predicated upon the idea that prevails in regard to the cost of cooking food, according to the primitive methods employed in the East in a single kettle, or Mott's agricultural boiler. These are adapted only to small operations, and, of course, to depend on them, would incur considerable cost for labor, fuel, &c. But we should not forget that this is a progressive age, and the inventive powers of our countrymen are adequate to any emergency of the times, or demands of the age. Every one who is acquainted with distilling, knows that many hundred of bushels of corn go through the destructive process, in one of these establishments, in a single day; and if the same quantity was only to be prepared as food for swine, with boilers constructed alone for that purpose, the same work could be performed with greater facility, and less labor. To provide a boiler and steam-vat of a capacity suited to extensive feeding, with the necessary fixtures, would cost several hundred, or perhaps a thousand dollars, but like many other branches of business, we are convinced that the larger the establishment, the more profitably it may be conducted, and that, not only may the cost of the fixtures soon be saved, but a large per centage of the corn usually fed.

We are perfectly satisfied from our own repeated experiments, which have been fully sustained by those conducted by others, that with a suitable establishment of capacity adapted to the end in view, a great saving may be secured by this method of preparing food for swine, and we believe with scarcely less profit for beef cattle. We wish some philanthropic, enterprising farmer would take the matter in hand, and make an experiment on a dozen or more bullocks, through a full course of fattening on steamed food, both grain and hay, with an equal number fed in the ordinary way.

If grain is not to be cooked, we still contend, as we ever have, that it should be well ground, whether fed to hogs, cattle or horses, and to cattle and horses it should always be given in combination with the coarser food.

For the New England Farmer.

WORCESTER COUNTY.

TRANSACTIONS OF THE WORCESTER AGRICULTURAL SOCIETY FOR THE YEAR 1858.

By the kindness of a friend, I have the favor of this interesting annual. Accustomed as I have been for *forty years* to look to the heart of the Commonwealth for instruction in agriculture. I always glance my eye over the pages of their Transactions with deep interest. The present pamphlet contains much that is instructive and interesting. Several reports are elaborate and sensible, particularly on Milch Cows and Working Cattle—objects for which the county has long been famous. The number of fine milch cows exhibited at the show was much less than I should have expected. There was awarded for

cows, \$46; oxen and steers, \$108; horses, \$285. What could have induced the discerning farmers of Worcester to apply so large a portion of their funds to the horse, is beyond my power to conjecture. I admire a good horse, but I can see no reason why he should be entitled to a larger award than a fine pair of working oxen, or a fine herd of milch cows. This *horse mania* is running away with our judgments and our money also. I am sorry that it is spreading so wide and so deep among the substantial yeomanry of Massachusetts. It should be corrected. ESSEX.

December 13, 1858.

SPIRIT OF THE AGRICULTURAL PRESS.

LONG WHITE FRENCH TURNIP.—A writer in the *Germantown Telegraph* has given this turnip a fair trial, and concludes that the common yellow ruta-baga is far preferable to grow, either for stock or for culinary purposes.

FALL MANURING FOR CORN.—Another writer in the *Telegraph* states that he has long been in the practice of hauling out manure early in the spring for corn, directly from the barn-yard, and in its unfermented state, and plowing it under deeply and thoroughly. He calls *ten* inches deep plowing. He says—"I have tried hauling out and spreading manure in the fall for corn; but if I can trust my own observation, never with the beneficial results as to the crop or to the land which were obtained by the former practice." It is his opinion that decomposed manure placed near the surface *will give an early growth to corn* by its more immediate action, but that unfermented manure properly plowed under, *will finish a crop with a heavier yield, and leave the land in higher fertility, than the former method.*

This is an important matter, and ought to be settled by numerous well-attested experiments in various localities.

AGRICULTURAL EDUCATION.—The *New Jersey Farmer*, published at Trenton, in introducing to its readers a recent letter of Gov. Wright, of Indiana, describing an agricultural school in Germany, says—"Every profession has its school—why agriculture should be left to glean its learning as best it may, we cannot understand. If schools are necessary to train the clergyman, the lawyer, the doctor, the merchant and the artist, is it not eminently proper that agriculture, which depends so entirely for its complete success upon a knowledge of the natural sciences, should also have its schools?"

Certainly it is, and it passes our comprehension to know why, among farmers themselves, such prejudices exist against everything that is to qualify the young farmer for his profession, except the mere act of his working upon the land with his own hands. It is breath spent in vain to talk about managing a farm well theoretically.

Well might as well expect the body to grow and flourish without its vitalizing breath; theory and practice must go together, and it is well if the *practice* is quite thorough before we pause to theorize much. That proper schools for instruction will afford the young farmer important aid in the pursuit of his business, will not admit of a doubt, it seems to us, in any unprejudiced mind. What such schools shall embrace, and how they shall be managed, are questions not yet settled among us.

COWS FOR MILK.—Mr. C. N. BEMENT, in speaking of Devonshire cows, in *Emery's Journal of Agriculture and Prairie Farmer*, published at Chicago, says, incidentally, that he "has found great difference existing in all breeds of cattle; some cows run to fat and are spare milkers; the lean and well-formed are apt to be good ones. Some digest their food better than others, and these do better on the same pasture or quantity of food; some feed faster and more constantly, and these are apt to be the best milkers. * * *

There appears to be as much diversity among cattle in these particulars as among men and women who may daily sit together around the same table. No error can be greater than that of believing a cow can give rich milk upon poor, lean, spare diet. There must be in the food that which will supply the materials of which milk is composed, or else it must be impossible for the cow to produce it. The better the food, the better and the richer the milk."

That is the true doctrine, plainly expressed. It is just as impossible to get large quantities of rich milk from a cow that is meanly fed, upon in-nutritious food, as to "make a good whistle from a pig's tail."

SOUTH DEVON SHEEP.—Col. L. F. ALLEN, editor of the American Herd Book, of Black Rock, N. Y., writes as follows to Mr. Wentworth, of Chicago:—"I hope your Illinois people will appreciate the magnificent *South Downs* you have introduced among them. It is the only kind of mutton for a good table. * * Half and three-quarter sheep revolutionize the article altogether in quality and flavor. I speak from years of trial. A *really good* saddle of mutton is scarcely excelled by any other meat."

THE APPLE CROP IN WALTHAM, MASS.—The *Waltham Sentinel* gives an account of the apple crop in that town this season, but only speaks of *winter* apples of the first and second quality. The cider apples and others not marketable must considerably swell the amount. The name of the person, and quantity raised by each, is given. We find that one person had 850 barrels, and two others 700 and upwards. The total number of barrels of winter apples is put down at *twelve*

thousand, the average wholesale price of which has been \$2,00 making the round sum of \$24,000, for this town, for one item of agricultural products in a single season.

The population of Waltham is, to a considerable extent, engaged in manufactures of one kind or another; yet we doubt whether, among them all, any investment of capital of an equal amount has produced results so favorable as the investment in the apple trees.

For the New England Farmer.

GOLDEN EAGLE.

AQUILA CHRYSÆOTOS.

The most hilly and mountainous parts of the country are chosen by this bird for his residence, particularly where there are over-hanging precipices; there, in the dizzy height, on some bold rock, he takes his stand, motionless and erect, with his stern, penetrating eye glancing over the boundless expanse of forests and fields; upon such high precipices, or on some blighted tree of the wooded-mountain, a pair of these birds will sit for hours, and not infrequently the whole day, especially when they have gorged themselves with food. After such times of inactivity, they will launch into the air, and rise in a spiral flight above these stupendous heights, until they appear like mere specks, or are wholly lost to sight; having attained to the desired height, they sail in an obliquely downward course with the velocity of the wind, until within one or two hundred feet of the earth, when they again change their mode of flight and sweep in circles over hills and valleys in search of food.

These eagles usually hunt in pairs. There is a peculiarity in their mode of hunting which is not resorted to by other birds of prey. Like the lion, who lies in ambush for his coming victim, so he hovers over the form of the hare, or the bed of other animals, waiting for their appearance. I once saw a pair hunting in company, and while sailing over a hill, one of them, on discovering a burrow of the common grey rabbit, immediately suspended himself in the air without the least perceivable motion of his body or vibration of his wings, which he kept widely extended, and on which he floated with the same ease that he would rest upon his perch; in this position he remained a great length of time until the animal, unconscious of any harm, ventured from his cover; at first, but a part of him appeared; the eagle, still poised, would stretch down his claws, then draw them up again, still floating silently; the animal now hopped quite out of his hole, stood upon his hind legs, scanning every object with his large eyes, and moving in every direction his large ears, to detect an enemy if one was around him; at last, feeling assured, none lurked about him, he hopped again which brought him to full view, and farther from his burrow. Hark! *Whush-ush-ush*, down from his height, like the whizzing sound of a rocket, shot the eagle upon the unwary victim, pressing him down with his strong feet and driving his talons deep in his quivering flesh. The scream of despair, as the blood oozed through his soft fur, was soon

drowned by the eagle's scream of success which was answered by his mate; then rising with him, still struggling in his grasp, he carried him to some convenient place, where both he and his mate might devour him at their leisure.

Danvers, Mass., Dec. 1, 1858. A. FOWLER.

REMARKS.—We are obliged to our correspondent for the brief and graphic descriptions which he has occasionally sent us of our native birds, and hope he will find leisure and inclination to continue them. We wish we could lay before all lovers of natural history the splendid paintings of birds, their nests and eggs, which have been produced by his own hands, scarcely equalled, in our opinion, by any thing yet done by the most accomplished artists of this or the old countries.

CHARITIES THAT SWEETEN LIFE.

"It is not much the world can give,
With all its subtle art,
And gold and gems are not the things
To satisfy the heart.
But O, if those who cluster round
The altar and the hearth,
Have gentle words and loving smiles,
How beautiful is earth!"

For the New England Farmer.

CUTTING CORN STALKS.

Your correspondent "Essex," recently, after a quotation in favor of leaving the stalks on the corn, asks the question, "Has there been any well conducted experiments to determine the fact?" I do not know what he would consider a well-conducted experiment. I have tried it several times. I cut the stalks on eight rows through the field as soon as the tassel was dry, and the next eight rows I left with the stalks on. I gathered each separately, and husked it out. In both cases I had the most good sound corn—both by measure and weight—on the rows where the stalks were cut, and the most soft corn on the rows that were not cut!

This year I had one field of about four acres of corn. I had cut the stalks on about one acre before the storm which beat the corn down so badly. On the other three acres the stalks were not cut. The part where the stalks were cut was not injured, while that part of the field where the stalks were not cut, was laid almost as flat as though it had been rolled down. I think the loss on the part blown down, of good sound corn, was at least ten per cent.

I would cut the stalks from heavy corn to save it from being blown about and broken down by the wind, if for nothing else.

Hollis, Oct. 13, 1858.

E. EMERSON.

SCHOOL OF VETERINARY MEDICINE AND SURGERY. GEORGE H. DADD, Principal.—This school was established in Boston, in 1849, and is attracting more and more of the public attention, as its objects are better understood. The tickets for a course are \$100. The school is established at No. 55 Salem Street, Boston, Mass.

For the New England Farmer.

SYSTEM IN FARM MANAGEMENT.

MESSRS. EDITORS:—Order is a necessary element in the success of every man, but with no class is its strict observance more requisite than with the farmer. The profits of farming, like other business, depend almost entirely upon the system that is pursued, and the order maintained. No business will ordinarily prosper under bad management. If a merchant persist, for any length of time, in a poor system of management, he is almost sure of a failure. If a mechanic pursues the business of his trade without taking the care necessary to perform every thing in a systematic manner, success will never crown his efforts, and in fact, in whatever business a man may be engaged, unless he is governed by some system in the labor he performs, he may as well conclude that his business will not be a paying one, however prosperous it might be under good management. But as I have said before, with no class of persons is the strict observance of system more requisite than with the farmer. If he be an idle and shiftless man, or if he does every thing in a wrong time and in an improper manner, if he allows his buildings to go without the repairs necessary, and decay for want of a few dollars expended by way of repairs, if his walls are left to tumble down and his fences are neglected until his cattle easily gain access to and destroy his crops, or if he suffers the weeds to overrun his farm, and in this allows his soils to be exhausted without himself receiving any remuneration for the same, or if he pursues the skinning system, and suffers his farm to deteriorate, he will undoubtedly have to complain that farming is a dull and profitless business. But if he has a system about all his labor, seeing that it is done when required, and in an unexceptionable manner, you will find him undoubtedly an intelligent, successful, prosperous and happy man.

A systematic farmer will look through all the operations of the year from the beginning; his calculations are made before hand; hence he can take advantage of the labor to be performed; he can tell you how much labor it will be necessary for him to expend in order to raise and secure a crop, and the probable advantages to be derived from raising the same.

No systematic farmer will allow his manure to be wasted by allowing his cattle to roam about the street, and leave the very main-spring of the farm to waste its strength without receiving any benefit from it,—but on the contrary, he will conduct his business with direct reference to the manure-making advantages connected therewith, and his compost heap will compose a prominent place among his farming operations.

Lebanon, Ct., 1858.

H. G. PALMER.

CIVIL ENGINEERING, by Messrs. SHEDD & EDSON, Iron Buildings 42 Court Street, Boston.—These gentlemen are well qualified to discharge the various duties of their profession, and are prompt in their execution. They are ready to attend to the laying out and to superintend the construction of railroads, common roads, bridges, wharves, &c., or to the designing and laying out

cemeteries, and grounds for country residences. They also make surveys and maps of farms, house-lots and land in any form. They have had large experience in underdraining, including laying out and constructing. Drafting of all descriptions they do with great accuracy and facility, and also prepare plans for the Patent Office.

HEADWORK IN FARMING.

It is surprising how much muscular labor is wasted every year, which might be saved, or better directed. This is true of all kinds of business, and not the least in farming. For instance: how many farmers toil on, year after year, with scanty or imperfect implements of husbandry. The modern improvements, which save much labor and do the work cheaper and better, they will have nothing to do with. Improved varieties of seed, they hold to be, almost without exception, humbugs. Draining and subsoil plowing are ranked in the same catalogue: *they* are labor lost; but manuring cold, wet lands, and plowing them late in summer a few inches deep, and gathering scanty crops—*this is not labor lost!* Rotation of crops, and manuring lands with reference to the grains or roots to be grown on them, they consider something like book-farming—a very dangerous thing!

We never could see why farmers should not think for themselves, and be able to give a satisfactory reason for every process they undertake. We never could see why they should not endeavor to improve in all farming operations, to learn the very best way of doing everything, and then do it so. It is told of a certain backwood's farmer, who had not yet found time to clear the stumps from his fields, that his boys complained bitterly of their troubles in plowing and harrowing—the old-fashioned “drag” especially troubled them by its frequent overturnings while plunging among the stumps, and needing to be set right side up at every few rods. “Boys!” said the enraged farmer, one day, “take that harrow over to the blacksmith, and tell him to make all the teeth twice their present length, and sharp at both ends, and we’ll see what that’ll do!” The thing was done: the teeth now pointed both ways, like those of a revolving rake. “Gee up, Bill; now go along.” “But, father, it has upset again, as bad as before.” “Never mind, boy; go right ahead; it will work well either side up. See, now, what comes from a little thinking!” And sure enough, it did work, and the field was harrowed in spite of the stumps. We might have selected a more dignified example of the use of head-work, but this homely story will answer our purpose.

In the matter of rotation of crops, there is need of forethought and management. Some farmers neglect to manure largely, because of its expensiveness; they would like to underdrain more extensively, and to subsoil plow their lands, if these things did not cost more time, labor and money than they think they can spare. But it costs no more to follow a good system of rotation of crops, than it does to carry on a farm without any such plan. Yet such a system may bring the farmer three-fold greater and better crops. Nor

in devising such a plan, has he got to depend entirely on his own experience or sagacity. Books and agricultural journals are at hand, containing the results of other men's experience, and all he has to do is to adapt such information to the wants of his own case. A very little head-work of this sort would pay well. It would pay in clean cultivation. Chess, red-root, quack-grass, Canada thistles, butter-cups, daisies, and what not, would hide their heads; and grubs, wire-worms, and all manner of insects, would rapidly diminish, if not wholly disappear. It would pay in the increased and prolonged fertility of the land, and in more bountiful crops.—*Am. Agriculturist.*

For the New England Farmer.

"AGRICULTURAL PROGRESS."

MR. EDITOR:—Where can your correspondent have been the last fifty years—asleep with Dr. Franklin's fly? I should suppose he had just waked out of a half-century nap, from the arguments he uses against the application of steam to agriculture. They are precisely the same arguments made use of fifty years ago, against the use of steam and water power in the manufacture of cotton and wool, and subsequently, to the application of steam to locomotion.

It was said, "people would be collected into manufacturing villages, and become slaves to the loom-lords. Our daughters, not finding employment at home, would assemble in these villages, and would lose their health and innocence. That those who now live by spinning and weaving, would be thrown out of employment, and become beggars." When it was proposed to apply steam to the moving of rail-cars, it was said that "stage-coaches and baggage wagons were to be thrown out of business, and there would be no demand for horses, and the farmers would have to give up the raising of them, and that the tendency of the use of steam was to lower the rate of wages." But have the results confirmed the forebodings of the fogies of those days? Have our daughters lost their innocence in the cotton mills, and become slaves to their proprietors? Have the spinners and weavers in the family found any want of employment? Has the rate of wages been reduced? The truth is, there are more horses employed in transporting passengers and freight to and from the railroads, than were formerly employed in running stage coaches and baggage wagons, and horses are worth much more, and pay much better for raising, than they did before the iron horse was invented.

The population of Massachusetts has more than doubled in forty years, and yet the rate of wages has more than doubled in that time. So far from people having been thrown out of employment, they have imported thousands of male and female laborers, and pay them, especially females, more than twice as much as they did forty years ago, and the comforts and conveniences of life enjoyed by the laboring classes have increased in at least an equal ratio.

Almost every labor-saving machine has had to encounter the same objections. The first saw-mill erected in England was burned down, because, it was said, it would deprive the hand-sawyers of employment. The farm-laborers in that

country, for years, steadily opposed the introduction of farm machinery of all sorts, notwithstanding their wages and their comforts were as steadily increasing.

Now that a long experience has proved that all this croaking about the injury done to the laborer and the small proprietor, by machinery, is without any foundation, I was surprised that a man of the intelligence of your correspondent should lift his warning voice against the application of steam to agriculture. Why does he not object to its use in driving the printing press, and in manufacturing paper? It would take twenty men to turn the cranks of the presses that are moved by one small engine. Twenty families are thus deprived of bread! The gentleman need not borrow trouble lest the hills and valleys of New England should be swept of their varied beauty, and reduced to broad levels, for the manufacture of corn and potatoes by steam.

If capitalists, associated or single, can profitably cultivate the earth by steam, it must be where the surface is adapted to such culture. If it can succeed on such portions of the earth's surface, why, let it. I have only to say, "God speed the plow," whether moved by the power of steam or muscles. In either case, bread will be increased, and food for the laborer and his family will be cheaper. If steam can be made to work the soil, and gather the crops, and turn the mills and the presses, on the broad plantations of the South, more economically than negro power, why, I say again, "God speed the plow," even if it be a steam plow; and who knows, Mr. Editor, but this is to be the great engine by which slavery is to be ended? When the steam plow is perfected, will not some Yankee capitalists fire it up on the pampas of Texas, and raise sugar at a cheaper rate than it can be done by human muscles? Who can tell but we shall yet *do our abolition by steam*? Seriously, I think the sugar-growers of Louisiana have quite as much to apprehend from the steam plow, as have the small farmers of New England. STEAMER.

Dec. 18, 1858.

For the New England Farmer.

UNDERDRAINING---"IT WILL PAY!"

MR. EDITOR:—Last fall I wrote you under the title, "Underdraining—will it pay?"—that I intended to underdrain a piece of wet, cold, unproductive land, and asked your advice in the matter. It was kindly given, for which I would return many thanks.

At that time I had a presentiment that it would not be a paying operation, but as the land was nearly worthless, as it was, I resolved to underdrain it; which I did with stone, sinking the ditches about three and one-half feet deep. The bottom of the drains was constructed like an ordinary culvert, then filled with cobble stones to one foot of the surface; upon these stones, shavings or evergreen boughs were placed, to prevent the dirt from filling the interstices, then covered with dirt, reserving the sod for the barn-yard.

The result, I will briefly state. The piece drained contained a little less than four acres. Last year it was mowed, and produced but two

loads of poor, sour hay and brakes, hardly worth cutting, but it was an average crop for the land. This spring the land was dry, and we were enabled to work it early in the season. We plowed under about twenty-five ox-cart loads of barnyard manure to the acre, and planted with corn the 15th day of May. The ground was dry and in good condition for receiving the seed, while many pieces considered "dry land" were much too wet. The corn was planted three and a half feet apart each way, hoed twice, and received a top-dressing of plaster and ashes. It was cut up the 10th and 11th of September, when it was found ripe and sound. We husked from the piece 440 bushels of ears, all merchantable corn.

My neighbors concur with me in opinion that this crop is worth more than the aggregate crops that the land has produced for the last fifteen years. It is now in a condition to produce abundantly for a series of years without any extra outlay. This crop has paid me the whole expense of underdraining, and I am so well pleased with the experiment, that I have had a number of ditches dug upon another piece adjoining, and intend to use drain tile instead of stone. The tile drain is cheaper, and from what information I can obtain, I think it much more durable.

Drain tile of a superior quality are now manufactured by Lucius G. Spencer, of this town, and sold at Albany prices. The farmers of Windsor county are waking up on the subject. I am informed of one man who intends to lay four hundred rods from the first kiln.

JAMES R. WALKER.

Springfield, Vt., Nov. 5, 1858.

THE REASON WHY.

It was a perplexing and infelicitous circumstance which happened to discomfort and discomfit the good housewife, who had fattened a fine young turkey for her husband's delectation, boiled, as was his "weakness," with the accompaniment of a savory sauce. Two or three days before his death, (the turkey's,) a box of household pills fell by accident into the yard, where the bird performed his daily perambulations and gobbling. He picked up the kernels of anti-bilious corn and survived their effects until his decease, when he was committed to the pot as the *piece de resistance* of a sumptuous dinner. But he would not boil tender: hour after hour the hot bubbles burst around him, but all to no purpose; the harder and the longer he was boiled, the tougher and more uncarvable he became. At length, however, he was served up, and a doctor, a next door neighbor, who was a guest, was requested to solve the mystery. "We biled that turkey six long hours, doctor, by the clock," said the down-east hostess, "and yeou see how awfully tough he is neow. Could it be the pills, d' yeou think, doctor, that I was tellin' you about his eatin'?" "Undoubtedly, madam," replied the doctor; "it would not have made the slightest difference if you had biled him two days; there was no 'bile' in him, madam!" An explanation equally professional and satisfactory.—*Knickerbocker*.

NEW HAMPSHIRE JOURNAL OF AGRICULTURE.

—We have before us the second number of a

new paper with the above title, published at Manchester, N. H., by Messrs. GILMORE & MARTIN. It is issued weekly, in folio form, the agricultural department edited by E. BREED, and the educational and miscellaneous by MOSES A. CARLANDS. We have looked over the two numbers published with some care, and find them filled with useful and substantial articles on a great variety of subjects. The editors seem to have ability, industry and energy, and if their efforts are encouraged, the *Journal of Agriculture* will not fail to exert a salutary influence both upon the Soil and the Mind.

A CURIOUS QUESTION.

It is a singular illustration of the inexactness of agricultural knowledge, that the question how many seeds there are in the pound of our commonly cultivated field plants, should still remain to be answered. It is plain that the answer will not necessarily affect farm practice—for the quantity of seed which it is proper to sow per acre, is a matter to be determined by experience, not by argument apart from trial; and yet surely it is most desirable to compare the number of the seeds we ordinarily sow with that of the plants we raise. If in ordinary practice, 1,200,000 seeds of wheat are sown on every 40,000 superficial feet, or what is more extraordinary, fifteen to eighteen million seeds are scattered on the same extent, about three to every inch of land, it is surely well to let the farmer know it. He knows very well he does not raise so many plants as this—and struck, as he must be, by the enormous disproportion between the means he uses and the result he gets, he will inquire into its causes.

The turnip seed employed per acre, numbers from 600,000 to 1,000,000, according to the kind and quantity adopted; this, if the rows are two feet apart, is two or three dozen seeds per foot of row, where a single plant alone is to be grown. No doubt nothing like so many generally come up, but then there is a great destruction by the hoe, which will explain much of the discrepancy in this case. What, however, becomes of the 18,000,000 seeds of flax which are commonly—of the 6,000,000 seeds of oats which are sometimes sown per acre? There is no destruction by the hoe in either instance here. A single ear of oats may contain 100 grains—a single plant will generally include half a dozen ears, but if 6,000,000 plants should yield as much as this implies, they would produce 100 loads of grain. Instead of 600 seeds apiece, they yield but half a dozen each to produce an ordinary crop of oats. It is plain that five-sixths of the seed, or of the plants that they produce, are killed in the cultivation of the crop; and the proportion is vastly greater than this in the case of other plants. What is the ordinary seeding of the clover crop? Eight pounds of red clover, four of white clover, and four of trefoil may be sown—that is at least 6,000,000 seeds per acre—a seed on every inch of land—but instead of 144 are there generally half a dozen plants on every square foot of the clover field?

There are about 25,000 seeds of sainfoin in a

pound of "rough" seed, as it is called, and it weighs some 20 lbs. per bushel; four bushels is an ordinary seeding, and they contain 2,000,000 seeds, or 50 per square foot of land. This is the number, too, of seeds in an ordinary seeding of vetches. It is manifest that in both these cases there is an enormous destruction either of young plants or seed; and these are the two great divisions under which the causes of this anomaly must be classed: faults of seed and sowing, and faults of cultivation. We are enabled, by the assistance of Messrs. Rendle, of Plymouth, to lay before them the following answers to the question—how many seeds to the pound?

Name.	No. of seeds per lb.	No. of lbs. per bush.
Wheat.....	10,500	58 to 64
Barley.....	15,400	48 to 56
Oats.....	20,000	38 to 42
Rye.....	23,000	56 to 60
Canary Grass.....	54,000	
Buckwheat.....	25,000	48 to 50
Turnip (Rendle's Swede).....	155,000	50 to 56
Turnip (Cornish Holdfast).....	233,000	"
Turnip (Orange Jelley).....	233,000	"
Cabbage (Scotch Drumhead).....	124,000	56
Cabbage (Drumhead Savoy).....	117,000	50 to 56
Clover (Red).....	249,600	60
Clover (White).....	686,400	50 to 62
Rye Grass (Perennial).....	314,000	20 to 23
Rye Grass (Italian).....	272,000	19 to 18
Sweet Vernal Grass.....	923,200	8

Scotch Paper.

For the New England Farmer.

BEE HIVES.

MR. EDITOR:—I have a suggestion to make respecting bee hives on Mr. Quinby's plan. I like the leading idea of his plan, but not the application of it. In his hives, the bees are obliged to store all their surplus honey in boxes placed on the top of the hive, and they must climb up through the hive, when heavily laden with honey, to get to the boxes. This must involve an immense amount of labor for them; at any rate, it seems to me that it must be as difficult for them to climb, as it is for a man who is carrying a heavy load, and I think it is rather worse for them to have to store honey on the top of the hive, than it would be for us to have to store the products of our land on the tops of our houses, for they are collecting and storing all the season, whereas we are only a part of it.

Instead of placing boxes on the top, why not have a small hive, or large box, to set by the side of the hive, and when it is full, open a communication between the two, and allow the bees to store their surplus honey in it just as Mr. Quinby has his stored in boxes on the top?

In an article published in the *Farmer* not long since by "Amicus," he remarks that he has a very simple contrivance to aid the bees in supporting themselves in the hive until they can commence building their comb. Will not "Amicus" please to let the readers of the *Farmer* know what this contrivance is?

Leominster, Dec., 1858.

PROGRESS.

THE VIRGINIA FARMERS' JOURNAL. Richmond, Va., M. S. CROCKETT, Editor and Proprietor.—This is a new journal, handsomely printed, on fine paper, issued once a week, and is devoted to agriculture, news and miscellaneous reading.

We like the editor's "Salutatory," as he seems to appreciate the responsibilities of the position he assumes, and also the wants of the people of his State. From the ability manifested in the articles in this first number, we cannot doubt but the *Farmer's Journal* will become an important help in the Homes of the Old Dominion.

THE MEADOW LANDS OF THE CONCORD RIVER VALLEY.

MEETING OF THE PROPRIETORS AT CONCORD.

It is not generally known throughout the State that thousands of acres of meadow land on the Concord river, from Billerica to Framingham, have been flooded by means of a dam at the former place, so as to seriously damage those lands. The law granting the right of the water power at Billerica was such that the proprietors have ever been unable to obtain redress through the courts. Several cases, growing out of this state of things, have been in litigation for years. The amount of land damaged by these overflows is from ten to fifteen thousand acres, all the way up the river as far as Framingham. The mill proprietors brought a suit against the city of Boston for diverting a part of the Concord river from its natural course, and reservoirs were built above from which water was sent down when needed. This usually happens in the haying season, and is another great source of damage to the owners of the meadows.

Recently an attempt to unite all the interests upon some plan for redress has been made. A preliminary meeting was held some weeks ago, and a committee was then appointed to consider the matter and report something definite.

A meeting was held December 27th, at the Town Hall, in Concord. About two hundred farmers were present, though this is but a small part of the number interested in the lands. The mill privilege at Billerica is now owned by Mr. Talbot, and he was present, accompanied by his counsel, but took no part in the meeting.

The meeting was called to order at one o'clock by Simon Brown, Esq., of Concord, and, on motion of Samuel H. Rhoades, Esq., of Concord, a committee was appointed to report a list of officers for permanent organization. Simon Brown was chosen President, Col. David Heard, of Wayland, and seven others, Vice-Presidents, and Mr. R. F. Fuller, of Wayland, and Dr. Joseph Reynolds, of Concord, Secretaries.

Mr. Brown opened the question with a clear statement of the position of the proprietors of those meadow lands. He said the first settlers in this town and vicinity had been attracted by its beautiful river and the fine meadows skirting it, which were a yearly source of wealth to the inhabitants. He said they came here to devise some means of obtaining redress. All they wanted was justice, and they came together with the kindest feelings towards every man. He urged those who had an interest in this matter to organize—to take a stand, and raise their colors and nail them to the mast. (Applause.)

Col. David Heard, of Wayland, said he was glad to see so many interested in a question in which he had been working for forty years. Some

young men, he said, had run into the idea that these meadow lands were never valuable, but he knew better. He found in an old Assessors' book of the town of Wayland that that town assessed taxes on 1200 acres of meadow. Some of these lands had come into *his* possession at the rate of \$75 an acre. These lands, he said, had been stolen inch by inch, under the law, if it could be called law, which had kept them out of their just dues. He said he had been entrusted with much responsibility in the law suits that had been carried on, and he had no doubt but he might have raised a company at any time to have torn down the dam, and allowed the owner to sue for damages. But the people had forborne continually through their defeat. He said he was determined to continue the suit as long as he had the means. Besides this, the Cochituate reservoirs were let loose in haying time, when the water was low, and this did serious damage. In fact, he said, they had a dam at both ends, and a curse between them.

Mr. Brown, the chairman, added a few remarks, in regard to the damage done to lands owned by him. Rich and fertile bottom lands were rendered nearly valueless.

The committee, appointed at a previous meeting, reported the following series of resolutions, upon which remarks were invited :

Whereas, it is believed by many owners of land upon the Concord River and its tributaries, that their lands have been of late much more injured than formerly by inundations caused by obstructions, by dams or otherwise, and by retaining the waters in *reservoirs* and suddenly releasing them in the warm season ;

And, whereas, in various other parts of the Commonwealth, as well as in this county, great destruction of crops, and great injury to health, is produced by interference with the natural flow of our streams and rivers, whereby the drainage and cultivation of vast tracts of most valuable lands are prevented ;

And, whereas, the maintenance of dams and other obstructions is a fruitful source of litigation, and so an occasion of great expense, both to land-owners and mill-owners ;

And, whereas, it is believed that the peace of the community, and the security of land and mill owners, and the interests of agriculture, would be promoted by carefully ascertaining and defining, and by publishing by record or otherwise, the legal height of all dams, or other obstructions, on all our streams and rivers, and of all privileges, limitations and restrictions incident thereto ; therefore,

Resolved, That a Committee be raised to investigate and report at a future meeting what dams or other obstructions are maintained on the Concord River or its tributaries, and whether any of said obstructions are illegal, giving such information as may be obtained of the claims, legal and illegal, of mill owners and others who maintain them.

2. That it is expedient that an act of the Legislature be passed, to provide for defining and recording the height of all dams and other obstructions on all streams and rivers in the Commonwealth, and of all privileges, limitations and restrictions incident thereto.

3. That the interests of agriculture require that provision be made by law, so that in proper cases dams and other obstructions to the natural flow of the water may be removed or lowered, or restricted in their use as to the season of the year or otherwise, upon just compensation to be paid by the parties benefited to those injured by such proceedings.

4. That this meeting are determined fully to investigate the complaints of land-owners on the Concord River and its tributaries, and to persevere by all lawful means to protect the rights of land owners, the health of the community, and the interests of agriculture, against all illegal encroachments of those who control the dams and other obstructions thereon ; and further, to procure such legislation as may be necessary to relieve our most valuable lands of the curse of a second deluge, whether caused by legal or illegal obstructions.

The following resolution was afterwards added, on motion of Mr. R. F. Fuller, of Wayland :

Whereas, The special remedy prescribed by the statute for the flowage of lands on the Concord River by the proprietors of the Middlesex Canal has been in such a form and so limited in point of time, under the construction which has been given to it by the Supreme Judicial Court, as practically to furnish no remedy whatever ; therefore,

Resolved, That adequate remedies should be provided by the

Legislature for injuries to land-owner on the Concord River and its tributaries for the damage annually done by the flowage of their lands, and furnishing, as the general mill acts do, compensation year by year for the annual injury to the land and the crops.

Mr. R. F. Fuller, of Wayland, said he was one of the meadow proprietors, and he sympathized entirely in the spirit of the resolutions, as he presumed every man who owned any of the meadow land would. He believed that the only redress to be had was from the General Court. The courts could not award justice unless the law allowed it, and in this case the law-makers had been at fault. The act giving leave to build the canal provided that any one receiving damage thereby should sue within one year and in the Court of Sessions. That court was abolished about the time the act was passed, and the Supreme Court had held that in the above provision the damage referred to the "source of the damage," which in this case was the building of the dam. Under the present laws no redress could be had.

Dr. Joseph Reynolds, of Concord, read from a work descriptive of Middlesex county, as it was when first settled, and for years afterwards, showing the wealth of meadow land then existing. He presumed that the meadows on the river now were not worth more than half as much as they were forty years ago, or possibly twenty-five years ago. He said thousands were suffering from this evil, which was continually increasing, and it was only to favor a very few.

Col. Heard said there was one consideration not yet touched upon. The stagnant waters had already shown their pernicious effects upon the atmosphere ; and farms finely situated in Wayland had been sold at one-third their former price, on this account. These, he declared, were by no means rare cases.

Mr. Barker, of Weston, corroborated the remarks of preceding speakers. He owned a meadow which was uncommonly high, and he had thought that it could never be damaged by water. But for the last few years his meadow had been worse than worthless. He had paid taxes and received no income.

Mr. Heard, of Wayland, said he did not own an acre of meadow land, but he was interested, and so was every person who lived on the banks of the Concord river. If the evil should be allowed to continue, the inhabitants would be driven back from the river banks. The stench from the river was sometimes very bad. He looked upon it as a nuisance ; and he hoped it would be removed one way or another. He would advocate the manner sanctioned by Judge Shaw of removing a nuisance. (Applause.)

The Chairman said if this was anything but a meeting of farmers, there would be fifty present charged full to bursting with speeches. Here were men who had suffered damages for half a century, and they would not be heard from. He would introduce a gentleman and a lawyer, from another State, who, he said, had probably tried more eases of flowage than any other man in New England. He introduced Judge French, of New Hampshire.

Judge French said he was not present to take any part in this local question, but he stated some valuable facts from his experience. He said he believed, and he had said so many times

before, that the amount of meadow land overflowed by the dams of manufacturing companies would raise wood enough ten times over to carry those mills by steam. He advised the proprietors of these meadow lands to ask the Legislature to give them a law, if they had none adequate, under which this dam may be lowered, or, if necessary, entirely removed, and a compensation made to the proprietors of the dam. He had no doubt that the Massachusetts General Court would give such a law, when the circumstances were known. Massachusetts had, in 1855, passed the best drainage law in the world; by which a man was given power to drain through any adjacent lands. He believed this was, in spirit, fully up to such an act as was wanted. In England, where a large territory had been overflowed, the evil had been removed by an act of Parliament, by which the proprietors had been compensated in a degree sufficient to support a steam power equal to the water power taken from them, and the streams were allowed to go free as God had intended they should.

Mr. Abel Gleason, of Wayland, made some remarks, mostly corroborative of the other speakers. He spoke of the inconvenience and damage from the waters sent down from the Cochituate reservoirs above, during the haying season.

Col. Heard said he knew that the whole fall of the river from Wayland to Billerica, twenty-two miles, was only two feet; but he believed, in common with several other speakers, that the water in the river at this point was several feet higher than it was at the dam in Billerica.

Deacon Heard, from Wayland, made some remarks upon the effects of the dam.

Judge French, being requested, explained that, by the law that made water run down hill, the surface of the water must be somewhat descending; and that it was very natural that the water should be piled up higher twenty miles back than at the dam.

The resolutions were then passed without any opposition.

Mr. Samuel H. Rhoades moved that the officers of this meeting, and such persons as the meeting might add, be appointed an Executive Committee to strengthen, perfect and continue this organization, and to raise such funds as may be necessary to secure its objects. The committee was raised as follows:

Simon Brown, of Concord, President; Col. David Heard, of Wayland, Elijah Wood, Jr., of Concord, John Eaton, of Sudbury, Jonas Smith, of Lincoln, Jonathan Hill, of Billerica, Nathan O. Reed, of Bedford, Thomas Page, of Carlisle, Charles Fisk, of Framingham, Vice Presidents; R. F. Fuller, of Wayland, Dr. Joseph Reynolds, of Concord, Secretaries, and Samuel H. Rhoades, of Concord, Treasurer. To whom were added Nathan Barker, of Weston, and Thomas J. Damon, of Wayland.

After some further remarks, in which no new facts were elicited, the meeting dissolved.

It was estimated by several of the speakers that the amount of property damaged—much of it rendered valueless—was as much as a million dollars.—*Boston Journal*.

THE COMPARATIVE DISTANCE OF THE NEAREST FIXED STAR.—A correspondent of one of

the London papers says—As the comet is parting company with us, I think the following statement will afford the public whose minds are not familiar with astronomical distances, a pretty good idea thereof. If the earth's distance from the sun, 95 millions of miles, is represented by a space of 1 inch; Jupiter's, 490 millions of miles, by 5 inches; Saturn's, 706 millions of miles, by 9 inches; Uranus's, 1800 millions of miles, by 81 inches; and Neptune's, 2900 million of miles by 29 inches; the diameter of the longest ellipse of the orbit of Donati's comet, whose period is said to be 2495 years, and distant 35,100 millions of miles, will be represented by a space of 368 inches. Then the distance of the nearest fixed star, which is at least 33 billions of miles distant, will be represented by a space of 348,000 inches, or 57-9th miles; which is 1000 times that of the comet when farthest off, or 12,689 times the distance of the planet Neptune from the sun, the most distant yet discovered belonging to the solar system, and which occupies 16½ years in its orbit.

For the New England Farmer.

GRADUAL IMPROVEMENT OF LAND.

MR. EDITOR:—In a recent number of the *Farmer* there is an article upon thorough draining, in which the writer says that the thorough draining of our old farms in New England is simply an impossibility. I do not write because I think I have done more than hundreds of others who are too modest to tell what they have done, but for the encouragement of young men of small means and poor prospects, to stay on the old farm. I think it is the duty of all of us who have remained with our parents, and have obtained sufficient property to support us in our old age, to give our experience to the public.

I will give you some of mine, which you may lay before your readers, if you think proper. I was the youngest of seven boys; the others all went off as soon as they were large enough. I felt it to be a duty which I owed to my parents to stay upon the farm, which was poor and had but little income. I made up my mind to make it better, if labor, patience and perseverance would accomplish it. There was a swamp upon the farm containing about seven acres, covered with bushes and brambles, except about one acre, which was too wet to bear them. My first labor was to dig a ditch through the centre, and then I began to cut bushes and plow a small piece at a time as fast as I could attend to it, and lay it into beds about two rods wide, to take off the surface water. I followed this process until it was all plowed. I found it necessary to plow as often as once in four or five years, to keep out the swamp grasses. I also found it very difficult to keep the beds in their right form and the drains clear. I knew nothing about underdraining, but thought I would try the experiment of using up the small stones that plowed out of the other fields, and found them to improve the land so much, I made use of all my small stones, and then commenced draining with slabs, which I expect will fail in a few years.

I did not know that drain tile was manufactured so near me until I saw the advertisement in your paper. I purchased a few of them this

fall, and am so well pleased with them that I think if I should live another year, I shall make use of more of them; for I think them to be much cheaper and better than stone or slabs. I now have this piece about one-fourth under-drained, and if those who succeed me for fifty years will do as much as I have done, I think it will be thoroughly drained and in a high state of cultivation. I hope no persons will think it impossible to improve their lands till they have made more than one experiment.

I think it quite possible for most of the land in New England to be improved, if every one who owns it will labor with his own hands, and spend all of his surplus money in improvements, rather than to buy more, till he has got it all under a high state of cultivation.

THOMAS HASKELL.

Gloucester, Nov. 25, 1858.

For the New England Farmer.

ROOTS FOR STOCK---CROPS---ADULTERATED MILK.

I have read with a great deal of interest the discussion in your paper relative to the value of turnips for feeding to cattle and hogs. I have raised rutabaga and English turnips, and fed them to cows, and my opinion is, if a man keeps cows to make butter from, that turnips are poor provender, except to give perhaps two messes per week for a change. If he sells the milk, and his customers do not know the difference between good milk and thin, he might, instead of adding water to thin the milk, feed with turnips. Last year I wintered ten swine. I sold one-half of my turnips and bought corn. I fed part with the corn, and they fatted well; those that were fed on cooked turnips lived, and this fall, after having been fed on corn, are no larger than the others were last spring.


I have found beets the best root for cattle and swine, but those I think should be given in moderate quantities. Corn meal suits me better, with beets enough to give a relish, and with this feed the cattle come out in the spring in a thriving condition.

On a lot of land, 50 by 100 feet, (ten feet square being deducted for a hog pen,) I planted a new kind of beans to me, and between the hills, eight feet asunder, squash seeds. The yield was 250 squashes which average six pounds each; 1,500 pounds. I sold ten dollars worth of green beans, and this same kind of squashes I sold in April this year for three cents per pound, the purchaser saving the seed for me. At this time, Dec. 11, there is but one specked squash in the lot.

Is there an instrument to detect the adulteration of milk in this country? s. c.

Cape Elizabeth, Dec. 11, 1858.

REMARKS.—J. S. F. Huddleston, 96 Washington Street, Boston, will furnish you with an article for detecting adulterated milk.

 The *Ohio Valley Farmer*, published at Cincinnati, B. F. SANDFORD, Editor and Proprietor, is one of the neatest and best conducted agricultural papers THAT WE SEE.

"NOTHING TO DO."

What a swelling chorus of that constant cry comes on every gale, reaches our ear at every turn, whether on the public highway or in private conversation. Such a young man has nothing to do. Poor soul, we pity him. In this great, bustling, active world, he stands for a cypher; has no aims, no ambition, no desires. He has nothing to do. The town has been hastily looked over, no work presents itself, and so one able-bodied man sinks into the slough of idleness, convinced that the world is all money.—How many such pictures we have, and yet how needless that we have any. There is work enough for the whole creation. While one young man is spending his days in idleness, the merchant is looking for a clerk, the lawyer for somebody to assist him in his writing, and if nothing else turns up, there is at least an opportunity everywhere to saw wood. There is no necessity for an idle man on the face of the earth. Industry is one of heaven's best blessings. It endows a man with his manhood, and calls into action his tact, reason and judgment. We say to young men, never be idle. If nothing better turns up, saw wood. Anything is better than spending your days in idleness. A youth so wasted begets habits that a life will not cure. Crime, the twin sister of idleness, will next be on hand and claim you for her own. The sparkling bowl will present its allurements, and then down, down you go into degradation, and one mind is lost to the world, one star in the great human constellation is gone.

Habits of industry in early life follow a man to the grave, and whatever one's occupation may be now, such habits are a mine of wealth when one is engaged in business on his own account. Success, says Gov. Banks, is a duty, and however exacting or sweeping the remark may seem at first glance, an examination proves its truthfulness in every particular. Success is the result of industry, attention to business and steady habits, all of which are duties society imposes upon man, and the result of such causes is a duty equal with each of them. Let us have no more talk about young men who have nothing to do. If nothing comes, make or find something. How many bright names in the pages of our country's history left home for their journey through the world with their raiment tied in a handkerchief and their capital comprised in a few dollars. Yet there was determination, perseverance and energy there, which were worth more than the wardrobe of clothing or mines of wealth, and those names now fill honored places, and live and will live in beating hearts to the end of time. With such examples before us why should young men be idle. What has been done, can be done again, and any young man can do it, if he will. At all events, go to work, be a man among men; you are then on the road to wealth, distinction and honor, and how far you get depends entirely on how hard you work. Depend upon it, nothing ever came of idleness, nor never will. An idle man is a cypher in the world, and one of the most unhappy, miserable beings in existence.—*Hunterdon Republican.*

Common salt adds to the weight of grain.
Bones tend to fill the ear.

TABLE OF MEASURES OF LAND.

1st.	10	16.5	20	30	33	40	50	60	70	80	90	100	110	120	130	140	150
10	.3673 .0023	.6061 .0038	.7346 .0046	1.101 .0069	1.212 .0076	1.469 .0092	1.836 .0115	2.204 .0138	2.571 .0161	2.938 .0184	3.306 .0207	3.673 .0230	4.040 .0253	4.408 .0276	4.775 .0299	5.142 .0321	5.509 .0344
	16.5	1.000 .0063	1.212 .0076	1.818 .0114	2.000 .0125	2.600 .0152	3.030 .0189	3.630 .0227	4.242 .0265	4.848 .0303	5.455 .0341	6.060 .0378	6.666 .0416	7.272 .0454	7.878 .0492	8.484 .0530	9.090 .0568
		20	1.469 .0138	2.203 .0152	2.938 .0184	3.673 .0215	4.407 .0255	5.142 .0295	5.879 .0335	6.611 .0375	7.346 .0415	8.080 .0455	8.815 .0495	9.550 .0535	10.285 .0575	11.020 .0615	11.755 .0655
2d.	150		3.306 .0207	3.636 .0227	4.047 .0276	5.510 .0344	6.612 .0413	7.713 .0482	8.815 .0551	9.911 .0620	11.02 .0689	12.12 .0758	13.22 .0827	14.33 .0896	15.43 .0965	16.53 .1034	17.63 .1103
150	82.64 .5165		33	4.000 .0250	4.848 .0303	5.696 .0357	6.544 .0411	7.392 .0464	8.240 .0518	9.088 .0572	9.936 .0626	10.784 .0680	11.632 .0734	12.480 .0788	13.328 .0842	14.176 .0896	15.024 .0950
160	88.15 .5309	94.63 .5876	170	40	5.877 .0367	7.346 .0459	8.815 .0551	10.284 .0643	11.753 .0734	13.222 .0826	14.691 .0918	16.160 .1010	17.629 .1102	19.098 .1194	20.567 .1286	22.036 .1378	23.505 .1470
170	93.66 .5854	99.91 .6214	166.54 .6634	180	50	9.182 .0574	11.02 .0689	12.85 .0803	14.69 .0918	16.53 .1033	18.37 .1148	20.20 .1263	22.04 .1378	23.88 .1492	25.72 .1607	27.56 .1722	29.40 .1837
180	99.17 .6198	105.78 .6611	119.39 .7025	190	60	13.22 .0826	15.45 .0964	17.68 .1102	19.91 .1240	22.14 .1378	24.37 .1516	26.60 .1654	28.83 .1792	31.06 .1930	33.29 .2068	35.52 .2206	37.75 .2344
190	104.68 .6542	111.66 .6979	118.64 .7415	200	70	18.32 .1125	20.57 .1266	22.82 .1406	25.07 .1547	27.32 .1688	29.57 .1829	31.82 .1970	34.07 .2111	36.32 .2252	38.57 .2393	40.82 .2534	43.07 .2675
200	110.19 .6887	117.54 .7316	124.88 .7765	210	80	23.51 .1469	26.75 .1633	29.99 .1797	33.23 .1961	36.47 .2125	39.71 .2289	42.95 .2453	46.19 .2617	49.43 .2781	52.67 .2945	55.91 .3109	59.15 .3273
210	115.70 .7231	123.41 .7713	131.12 .8195	220	90	28.70 .1860	32.96 .2066	37.22 .2272	41.48 .2478	45.74 .2684	50.00 .2890	54.26 .3096	58.52 .3302	62.78 .3508	67.04 .3714	71.30 .3920	75.56 .4126
220	121.21 .7575	129.29 .8081	137.37 .8596	230	100	33.89 .2111	39.18 .2339	44.47 .2567	49.76 .2795	55.05 .3023	60.34 .3251	65.63 .3479	70.92 .3707	76.21 .3935	81.50 .4163	86.79 .4391	92.08 .4619
230	126.72 .7920	135.17 .8448	143.61 .8976	240	110	39.08 .2406	45.47 .2666	51.86 .2926	58.25 .3186	64.64 .3446	71.03 .3706	77.42 .3966	83.81 .4226	90.20 .4486	96.59 .4706	102.98 .4926	109.37 .5146
240	132.23 .8225	141.04 .8806	149.86 .9366	250	120	44.27 .2701	51.76 .2981	59.25 .3261	66.74 .3541	74.23 .3821	81.72 .4101	89.21 .4381	96.70 .4661	104.19 .4941	111.68 .5221	119.17 .5501	126.66 .5781
250	137.74 .8609	146.92 .9182	156.10 .9756	260	130	49.46 .3006	58.05 .3306	66.64 .3606	75.23 .3906	83.82 .4206	92.41 .4506	101.00 .4806	109.59 .5106	118.18 .5406	126.77 .5706	135.36 .6006	143.95 .6306
260	143.25 .8953	152.80 .9545	162.35 .1015	270	140	54.65 .3311	63.44 .3631	72.23 .3951	81.02 .4271	89.81 .4591	98.60 .4911	107.39 .5231	116.18 .5551	124.97 .5871	133.76 .6191	142.55 .6511	151.34 .6831
270	148.76 .9297	158.68 .9917	168.59 .1054	280	150	59.84 .3626	69.03 .3966	78.22 .4306	87.41 .4646	96.60 .4986	105.79 .5326	114.98 .5666	124.17 .6006	133.36 .6346	142.55 .6686	151.74 .7026	160.93 .7366
280	154.27 .9641	164.55 .1028	174.84 .1093	290	160	65.03 .3941	74.42 .4306	83.81 .4666	93.20 .5026	102.59 .5386	111.98 .5746	121.37 .6106	130.76 .6466	140.15 .6826	149.54 .7186	158.93 .7546	168.32 .7906
290	159.78 .9985	170.43 .1065	181.08 .1132	300	170	70.22 .4256	79.91 .4646	89.60 .5036	99.29 .5426	108.98 .5816	118.67 .6206	128.36 .6596	138.05 .6986	147.74 .7376	157.43 .7766	167.12 .8156	176.81 .8546
300	165.29 .1033	176.31 .1102	187.32 .1171	310	180	75.41 .4571	85.30 .5006	95.19 .5441	105.08 .5876	114.97 .6311	124.86 .6746	134.75 .7181	144.64 .7616	154.53 .8051	164.42 .8486	174.31 .8921	184.20 .9356
310	170.80 .1067	182.18 .1139	193.56 .1210	320	190	80.60 .4886	90.79 .5356	100.98 .5826	111.17 .6296	121.36 .6766	131.55 .7236	141.74 .7706	151.93 .8176	162.12 .8646	172.31 .9116	182.50 .9586	192.69 .10056

For the New England Farmer.

TABLE OF MEASURES OF LAND.

The rapid advances now being made in the science of agriculture, are very much aided by the spirit of experiment, and by the rivalry induced by competition for the premiums offered at our yearly shows. The results of different experiments cannot be compared without a knowledge of the area of the land on which each crop was grown, and as it is not always convenient to plant just an acre, or half or quarter of an acre, it becomes desirable to have at hand such a table as is given above, for reference. It will enable a person to use such a piece of land as he may happen to have, fit for the purpose, of any width or length given in the table, with the means to readily ascertain the area in square rods or square acres, in whole numbers and decimals.

The table is used in about the same manner as an ordinary multiplication table, and though it occupies but about half the space usually given

to those tables, yet it contains as much information as though made up in the square form. The multiplication of any number in the diagonal rows, into another number less than itself, is a mere repetition of work that has been done before, and therefore this table is made up so that the square of a number in the diagonal rows, is the first result given in the table opposite or below that number. The darker figures represent the measurements in feet as taken on the ground. The area given in lighter figures is expressed in square rods by the upper number, and in square acres by the lower number.

There are two tables given above, having no connection with each other, except that the darker figures in the lower are in continuation of those in the upper at corresponding intervals. In the first table, the *width* of the piece of land, expressed in feet, must be looked for in the diagonal row of darker figures, the *length* in the horizontal row of darker figures at the top. In the second table the *width* must be looked for in the diagonal row of darker figures, and the *length*

in the vertical column of darker figures at the left. The area will be found below the one and opposite the other.

Having ascertained the area of the piece of ground, and the quantity of the crop grown, the quantity per acre may be found as follows: Suppose the piece to measure 80 feet in width by 140 feet in length, the crop to be barley, and the quantity grown 288 quarts,—annex as many cyphers to the number of quarts as there are decimal numbers in the area as given, and divide by the area. The result will be the number of quarts per acre; divide by 32 and the result will be bushels. In this case the quantity being expressed by 288, annexing four cyphers we have 2,880,000; dividing by 2571, we have 1120 quarts per acre; divide by 32 and the result is 35 bushels per acre. As by example:

Area of a piece 80 x 140 = .2571, as taken from the table.
Quantity 288 quarts. Annex four cyphers, and divide by

$$.2571 \overline{) 2880000} \left(\begin{array}{l} 1120 \text{ quarts.} \\ \hline 3090 \\ 2571 \\ \hline 5190 \\ 5142 \\ \hline 480 \end{array} \right.$$

Divide that result by 32 $\overline{) 1120} \left(\begin{array}{l} 35 \text{ bushels.} \\ \hline 96 \\ 160 \\ 160 \\ \hline \end{array} \right.$

The process would be the same if the quantity of the crop were expressed in bushels, pounds or tons. If the quantity per square rod is sought, the same figures must be used, except that the quantity must be divided by the area in rods as expressed by the upper number in the table, instead of the area in acres, as expressed by the lower number.

The quantity of the experimental crop should be measured in the smallest denomination that is practicable, to insure accuracy in the result per acre. If by dry measure, the crop may be measured in quarts, if by weight, in pounds.

The calculations required in making up this table have been performed by our assistant, Mr. Wm. H. Foss, and to facilitate the work, he constructed a small table, which can be used to reduce any number of square feet, small or large, to a corresponding value in rods or acres, with but little labor.

The table will be given in a future number of the *Farmer*, and cannot fail to be of value to any one who is in the habit of making such reductions.

J. HERBERT SHEDD.

Boston, Dec., 1858.

THE HORTICULTURIST.—The number before us for *December* is an attractive one. Editor, contributors and publisher, have served up a good dish in good taste. The Editor's "*Chat, Country Life, Men in Cold and Tropical Climates,*" we found exceedingly interesting, perhaps because we have given considerable thought and investigation to the *influences of climate upon character*. The article upon "*Manure for Fruit Trees—Where to Feed Fruit Trees,*" by

our citizen, Wm. BACON, of Richmond, is of that practical and valuable character which always give his articles interest. The one that follows, by E. NORTON, Farmington, Conn., upon the subject of "*Pears on the Quince Stock,*" gives a pretty accurate history of a good many experiences that did not take place in the good old State of Connecticut. While the fact that a great many have been abundantly successful in the culture of the pear on quince stocks, it cannot be controverted that a still larger number have failed to meet with that success which their expense and care would seem to justify. The article will unquestionably turn attention to the subject, and lead to a more careful investigation of its merits.

The whole number is a valuable one.

EXTRACTS AND REPLIES.

MILK BEFORE THE CALF.

Mr. J. S. Marston, of North Hampton, N. H., has a heifer that, after giving a fair quantity of milk for five and a half months, has calved for the first time, the calf being fat and rugged. Is not this a rare circumstance? S. D. B.

Portsmouth, N. H., Dec., 1858.

REMARKS.—It is a rare circumstance. We have a fine three-year old heifer that we turned to pasture early in May last. She had never had a calf or given milk, to our knowledge, and we had owned her from the time she was six months old. On visiting her in one week from the time she was turned to pasture, we found her bag much distended, and milked upon the ground what we supposed to be four quarts of milk. There was no appearance in the animal, or in the milk, of her having dropt a calf. She was returned to the home pasture, and milked regularly until the middle of September, when she dropt a sprightly, but small calf, at noon, having given her usual quantity of milk, on the morning of the same day!

We have *heard* of such cases, but this is the only one that ever came under our own observation.

COUNTY AGRICULTURAL SOCIETIES AND THE STATE BOUNTY.

If I am correctly informed, there are now four agricultural societies within the limits of what was the original Worcester County Society, and three within the limits of the original Middlesex Society, each of which receives from the treasury of the commonwealth \$600 annually, being \$2400 in Worcester and \$1800 in Middlesex—while the county of Essex pays as much as either of these counties, and receives only \$690. This is unequal and unjust—and if this plan of subdividing societies is continued, it will undermine and overturn the whole. I have been astonished that close calculating legislators have not noticed the bearing

of these discrepancies. I am friendly to the present agricultural organizations—and hope they will be sustained fairly and honorably—but no such inequalities should exist.

Dec. 15, 1858.

FOUR YEARS' OBSERVATION OF MOWING MACHINES IN THE OLD COUNTY OF ESSEX.

Mr. Humphrey, of Lancaster, one of the most beautiful towns of the county of Worcester, has given us his experience in the use of mowing machines, chiefly of the Ketchum stamp. He begins by saying that it took him one hour and a half to cut an acre of grass. Such has not been the experience of good laborers in the county of Essex. I can show you several, who with a medium-sized span of horses, weighing only 1000 lbs. each—have cut their acre an hour, yielding one ton and a half to the acre. This has been only their ordinary operation. If Mr. H. uses up an hour and a half in doing the same work, he is not fit to be a file leader in the use of mowing machines. I am too old and clumsy to do much myself, but I will name Levi A. Merrill, of Salem, and Horace Ware, of Marblehead,—and guarantee that either of them will do with their machines and their horses, twice as much as he has done. I have repeatedly seen them operate, and know whereof I speak. P.

Essex Co., Dec. 20, 1858.

REMARKS.—If our correspondent will look at Dea. Humphrey's letter again, he will find that when it required an hour and a half to cut an acre of grass, it was in his *first essay* with the machine. Of the last season he says—"With one Irishman to trim out the borders after the machine was done, occupying perhaps about one-fourth as much time as the machine, we have cut *sixty-eight* acres, and I think he *has not worked more hours than he has cut acres.*" Indeed, Dea. Humphrey informed us that he had frequently cut an acre, and cut it well, in *forty minutes.*

ELECTRICITY AND VENTILATION.

I noticed some few weeks since, in your paper, a communication signed by "Electricity," in regard to "Lightning not striking buildings that were well ventilated." Will "Electricity," or any one else, explain through the *Farmer* why it is? What difference is there on the outside of a building that is well ventilated, and one that is not, or why the building that is ventilated will not be struck by the bolt.

Richmond, Me., 1858. NON-ELECTRICITY.

AFRICAN BALD BARLEY.

The sample of Bald Barley I send you is said to have come from seed brought from the gulches in the Himmaleh mountains, by a gentleman in Virginia engaged in the African trade. I procured *three* heads of him, which gave me 72 kernels; these I planted 10 inches apart, and obtained 1300 heads. The grain grows rapidly, has a broad leaf, and beautiful blossom, and ripens early. I have never known the fly, rust or smut to trouble it. I think there will be no difficulty in raising 40, 50, or even 60 bushels per acre, on

land that will produce 20 bushels of wheat or 40 of oats. When the wheat crop fails, the next best thing is good barley, and this, I feel confident, must make flour nearly equal to wheat.

HENRY R. HOSFORD.

Pawlet, Rutland Co., Vt., 1858.

REMARKS.—A warm barley cake, of rather coarse meal, in a June morning, with butter only an hour out of the churn, is not bad to take.

THE STATE HOUSE.

As there are no strictly *winter* trees, or evergreens, upon Boston Common, and probably will not be, through fear of their mutilation, I think that many persons would agree with me that two Norway Spruce, planted in the enclosures front of the State House, would add much to the beauty of its grounds in the summer, and more particularly in the winter, when nothing green in inanimate nature is to be seen. D. W. L.

FINE HOGS.

Mr. F. Keith, of this place, slaughtered two pigs on the 3d inst. aged 13 mos. 26 days, whose weight was as follows:—male, 610 lbs. (including loose fat:); female, 494 lbs. (including loose fat.) Mrs. K. has had entire charge of the animals, and we think that they reflect great credit upon her management. F. G.

North Easton, Ms., Dec. 13, 1858.

PEAR TREE SEEDS.

Can you give me information where the seeds of pear trees can be obtained?

Middleton, Vt., 1858. ELERIDGE SCHOLAR.

REMARKS.—Nourse & Co., 13 Commercial Street, Boston, will supply you with pear tree seeds.

SALT LEY.

Will some of your correspondents inform me what is the value and the best mode of using salt ley, so called by the soap manufacturers?

Harwich, 1858.

N. U.

WILL SULPHURIC ACID DISSOLVE BONE?

In view of the many thousands of tons of superphosphate of lime manufactured and rendered soluble through the agency of sulphuric acid, and of the deserved honors conferred on the distinguished Giessen Professor of Chemistry, who first suggested the use of oil of vitriol for dissolving bones, it is almost startling to see the value of this acid for such purposes called in question from a chemical "laboratory," and by a teacher of the science. Prof. Gilham deserves the thanks of the public for giving his experience in this matter, for it is evident that the preparation of bone manure is not so well understood as it ought to be. A practical Scotch farmer of large experience, Mr. Tenant, thus describes his process:

"I put 25 bushels of bones into three old boilers, and next pour in two bottles of acid of about 170 pounds each, and 36 Scotch pints (18 impe-

rial gallons) of boiling water into each boiler. It boils away at a great rate for some time, and in a day or two we empty the boilers into two cart loads of light mould, and turn the mixture over. At this stage the bones are only partially dissolved, but they heat and decompose in the heap after being turned over three or four times; and in the course of seven or eight weeks the compost becomes dry and breaks down with a shovel."

Doubtless Prof. Norton saw many operations of this kind while a chemical student with Prof. Johnston.

That the grinding of bones promotes the ready action of sulphuric acid in abstracting lime from phosphoric acid, no one doubts; but the stronger affinity of sulphuric acid for lime than phosphoric acid has, is dependent in no degree on the crushing of bones. The oil of vitriol, used by Prof. Gilham, may have been a weak and a poor article. The writer has often seen the common sulphuric acid of the shops behave precisely as is described by him under similar circumstances. He appears to have omitted the use of *boiling* water, as recommended by Prof. J. F. W. Johnston, an excellent practical chemist. His recipe is, to 100 pounds of bones, add an equal weight of boiling water, and immediately thereafter, 100 pounds of strong acid. The high heat evolved from the union of the acid and hot water, so expands the fatty matter that surrounds the particles of lime in the bones, as to permit the acid to reach them and effect new chemical combinations. The elevated temperature of an acidified bone compost for days and weeks, was entirely wanting in the small laboratory experiments of Prof. G. They disprove nothing as against the chemical action of the oil of vitriol under widely different circumstances.

The error of Mr. Browne was hardly worth correcting, unless other greater misstatements of his relating to phosphates are also set right before the public.

As phosphates are important constituents in all home-made manures, and enter largely into the composition of most commercial fertilizers, I will say a few words more on the subject.—*Country Gentlemen.*

DEEP TILLAGE.

A deep and thorough tillage is conducive to fruitfulness in crops; yet it is never safe to turn up too large a portion of the subsoil at once. The work of deepening the vegetable stratum of soils should be consummated gradually; a little of the substratum only being brought up at a time,—say from half to a third of an inch at each successive plowing, and so on till the soil has been stirred and improved to the depth required. Manure should be applied liberally, and lime sowed every time a fresh layer is brought to the surface. The fall is, perhaps, the most favorable season for this operation, as the soil will then experience the greatest benefit from the neutralizing effect of the calcareous matter applied, and from the pulverulent and disintegrating influence of the winter's frost.

The quantity of lime required in this process of amelioration will be best determined by a chemical examination of the subsoil in connection with that of the surface earth. If of a calcareous nature, very little lime will be required, and perhaps none; but if this principle (lime) be present in only small quantities, it should be supplied, and caustic lime is the best article that can be used, though wood-ashes, in liberal quantities, produce very salutary effects.

For the New England Farmer.

EXHAUSTED SANDY LANDS.

Much has been said on the subject of improving worn-out sandy land, or old fields. Much of that land was originally good rich soil, and the wood was cut off by the first owners, and for one hundred years or more it has been constantly under cultivation, and being warm and fine land, it has been totally exhausted by abuse. The custom has been to plow it about four inches deep, and not manure it at all, take off such a crop of corn as they can get, and sow it down with rye, and perhaps, if convenient, throw in some hay chaff, and the surface is left to blow away during the winter and spring. After the rye is harvested it is suffered to lay three or four years, and then to go through the same process, and so on. Now, any one may see, that in time all of the alkaline and vegetable substances are taken up in the stalks of corn and rye, and nothing is left to reproduce them, and, of course, nothing will grow in such exhausted land, not even weeds. The only thing than can now be done, is, either to put on muck and manure, and plow deep to restore it to its primitive state, or to suffer it to grow up into a pine forest.

The first can easily be done; for in most places where sandy lands abound, peat swamps are at hand, and in the fall, large quantities of muck could easily be carted out, and in most cases it would benefit the swamp meadows to make wider drains through them, and in such case obtain two objects at once. If this course of manuring and deep plowing is pursued, in a short time any kind of a crop could be obtained from the old fields; large crops of grass, corn, rye, potatoes, turnips, melons, &c., could be produced—also a good orchard of apples, pears, peaches and cherries. I have seen such land as the above-named perfectly restored, and at the same time, more than doubly pay the expense while undergoing this renovating process.

If it is desirable to let it go to wood, the best way is to plow the ground, and in the fall collect leaves and acorns or elm seed, and scatter them in the field and brush them over. If it is desirable, walnuts, chestnuts, beech or maple seeds could be sown. The ash, maple, or English sycamore, and lime trees, make wood fast on low grounds; the Scotch larch makes trees rapidly. I have trees of most of the above-named varieties only fifteen years old, that are from twenty to fifty feet high.

To prevent the sand and soil from blowing off, it would be advisable to cut and put on brush over the surface, and by doing this, matter will collect instead of being blown away. When I

came to Brookline I purchased a gravel hill that produced neither grass nor weeds; I put on mud all over it and plowed it in about a foot deep, and then cross-plowed it, and put on manure, about two cords to an acre, and plowed it again, and then harrowed it, and then planted it with corn and potatoes and obtained good crops, more than enough to pay all the expense and trouble, and laid it down to grass, and have had a good crop of hay every year since. It does not dry up, as it formerly did; the deep plowing prevented that trouble. Fifteen years since it was broken up, and it produces good crops now. It does not get heavy and cold as land does where muck has not been plowed in; the value of muck is much greater in gravelly or sandy land, than it is on clayey land. Sand and gravel are worth more than manure on clayey ground and meadows, especially if it is intended to cultivate cranberries.

S. A. SHURTLEFF.

Spring Grove, Dec., 1858.

For the New England Farmer.

CLIMATE AND SOIL OF ORLEANS COUNTY, VT.

MR. BROWN:—Though you have a considerable number of readers in this (Orleans county, Vt.) I perceive there are not a large number of writers for your pages. Having resided in this county nearly twenty years, and having, during that period, been several years engaged in the geological survey of the State, I have had a better opportunity to compare the soil in this with other portions of New England, and especially, other portions of Vermont, than, perhaps, any other person. I think it is of some importance, that the readers of the *Farmer* should be made acquainted with some facts in regard to our climate and soil, of which many are probably ignorant.

This entire county lies north of forty-four degrees of latitude, but we are not, on that account, so "buried up in snow" as the citizens of Massachusetts and southern New England might suppose. It is, indeed, a very rare thing, that we are incommoded with snow or drifts, so as to impede travel or prevent business during any part of the winter. Frosts have been later, usually, in autumn than they have in Worcester county. You mention frost that injured cranberries, &c., last fall, a month earlier, near Boston, than we had in this county. Tomatoes were green in my garden, both last year and the year before, till about the first of October. This is not uncommon.

The soil of a large portion of Orleans and Caledonia counties is made by the decomposition of the calcareous mica slates which constitute the rock in place. These slates are an interstratification of clay-slate, lime-slate and hornblend. The rock is very friable, and decomposes so rapidly that there is a good deep soil now, where the ledges appeared on the surface twenty years ago. The lime, clay, silex and mica are so well mixed that they furnish in great abundance the elements required by vegetation, especially wheat, barley, grass, corn and oats. Should the soil ever deteriorate, we have immense quantities of the richest variety sphagnous muck, much of which lies above shell marl, in the beds of an-

cient ponds and beaver meadows. This marl, when converted to lime and mixed with the muck, makes a manure worth from fifteen to twenty per cent. more than cow-dung. I have taken pains to survey most of the muck-beds in one town, and ascertained that there were more than 730 cords for every acre of land in the town. Many other towns are equally well supplied. This will, in future ages, therefore, be a rich farming territory, when the "German Flats" and Western prairies have become impoverished. There are found few resources for supplying what is transported from those regions by the export of wheat, beef, pork, &c. There is a constant drain of the richest elements of the soil, which in time must produce the same effect now experienced in Virginia and some portions of New England. In this portion of Vermont are resources adequate to prevent any impoverishing of the soil for scores of centuries.

If you foot up the number of cattle and sheep from Vermont, taken to Brighton and Cambridge, as reported in the *Farmer*, for a year, you will find that the little State of Vermont furnishes more at those markets than all the rest of New England. This, to many, has been surprising. The question is often asked, "How is this possible?" Perhaps a few facts obtained from the president of the County Agricultural Society, a few years since, may aid in answering that question, and also show the productiveness of our soil.

"I have in grass thirty-five acres, from which I wintered last winter four large oxen, ten cows and ten two-year olds, two horses, three colts, one, two and three year olds and twelve sheep, and sold two or three tons of hay. I raised 300 bushels of oats, 125 bushels of corn and eighteen bushels of wheat." The stock was fully equal to forty cows! The amount of straw, &c., fed out, was only what is common on a farm of 100 acres.

S. R. HALL.

Brownington, Vt., 1859.

For the New England Farmer.

APPLICATION OF MANURE.

MR. EDITOR:—In the first place, should not every farmer consider what the crop is to which he can apply his manure to the best profit, whether it will be to increase his hay, or corn, or the small grains. If his farm is one better adapted to hay than grain, that is, if he has a large proportion of low land or swale hay, then it would seem best for him to apply his manure for raising grain; but if otherwise, he should have a greater proportion of upland hay, which needs the manure to keep that crop good, then it appears that here is the crop needing the most stimulant. Now let us consider what per cent. each crop gets, in the common way of applying our manures. If we spread and plow in all our manure for the first crop, say for corn, which is generally allowed to take fifty per cent. the first year, and then sow down to grain and grass the second year, which is allowed to take twenty-five per cent. of the remainder of the strength of the manure,—then we have only twenty-five per cent. left of all our manures for the succeeding grass crops, which, if there be four of those

crops, as is commonly the case, then we have only six and a quarter per cent. yearly, of all our manures, for four crops of hay.

According to these calculations, is it any wonder that we have light crops of hay, when we consider that some of our old fields have thus been managed for the last half-century or more?

If this theory be correct, it is certain that we are spending a larger portion of our manures on the grain than on the grass crops. This may be the best course to pursue, but will depend on circumstances; if the amount of grain we produce can be converted by the least expense into that which will re-produce the most from the farm, then it is best to cultivate the land for those crops; but for some farmers, no doubt hay will be the crop for them in preference to any other.

T. G. HOLBROOK.

Bedford, N. H., Dec., 1858.

For the New England Farmer.

THE CORN HARVEST.

O, saw you the golden-eared corn,
As the husbandman gathered it in,
When he rose in the purpling morn
To garner his treasures of grain?

The seed which his generous hand
Had strown in the spring o'er the plain,
Had grown upon his furrowed land,
'Mid the sun and the dew and the rain;

'Till the autumn had chilled with its cold,
The insect that bathed in sun-light,
And robed in gay beauties untold,
The wind-waved forests so bright

O, heard you that mellow-toned song,
Gushing up from the husbandman's breast,
As it echoed the hill-side along,
And waked them all smiling from rest?

The West may boast her rich gold,
And the East her wines and her oil,
But the husbandman's treasures untold
When he coaxes his corn from the soil.

New Ipswich, Dec. 21, 1858.

W. D. L.

For the New England Farmer.

THE MASCOMMA VALLEY.

MR. EDITOR:—It may not be uninteresting to a portion of your readers to hear something of this beautiful valley, situated, as it is, in the mountainous region of Grafton county, N. H., and lying in the towns of Lebanon and Enfield; it is only some 14 miles in length, not very wide at any point; but it is rich and productive, and the farmers in this valley are independent; they stand upon their own acres, and can boast of as good farms, as good crops and as good stock as the farmers of any other valley in the State of New Hampshire. In the month of August last, I passed through that portion of this beautiful region lying between Lebanon Centre and George Hill in Enfield, and was filled with admiration at the rich gifts of Nature which were displayed to the traveller. Beautifully undulating lands, clad with all the varieties of majestic trees, shooting into the air, while here and there meandering crystal streams were seen gliding onward to the bosom of Lake Mascommma and the Connecticut river: I thought it the most beautiful inland

country I ever beheld. At some points on either side of the valley, mountains throw up their granite peaks high into the air, descending abruptly or gracefully towards the Little Mascommma river. At other points, the land rises in long undulations, affording occasional and delightful views of the scenery—the bright river runs like a natural mirror, now meandering through the plain, and now peeping forth from the delightful shade of a thick grove—the white farm-houses with the neat-looking out-houses, the sheep basking on the distant hills, the lowing of the herd in the adjacent field, the merry song of the farmer as he gaily plied the rake or bound in sheaves the rich reward of the husbandman's toil, formed a view, which, to my eye, was truly delightful.

There are thriving and beautiful little villages in this valley that are deserving of note; the first in order, as we pass from the Connecticut eastward, is Lebanon Centre. This is a business place, traversed by the Northern Railroad, surrounded with a good farming country, pleasantly situated, tastefully laid out, and has become a place of considerable wealth.

About three and a half miles from this place, at the north-western extremity of Lake Mascommma, is situated the village of East Lebanon, a brisk little place of business, with its complement of farmers, merchants and mechanics requisite to make it what it really is, a smart New England village.

The next place worthy of note, as I passed along the western shore of this beautiful lake, (after passing the submerged bridge which crosses the lake at a point near its centre,) is the village of the Enfield Shakers; here are elegance, neatness and convenience combined. I certainly never saw a place where such perfect order and neatness prevailed. The grounds are laid out with the utmost exactness, the buildings and fences of the best materials, built in the most thorough manner, and kept in the best repair. The whole appearance manifests the watchful care of the prudent and experienced managers.

Next in order come the three little villages of Enfield, called North-End, Centre and Fish Market. These three villages united, would make one large village. The centre village presents quite a lively appearance, containing one meeting-house, two stores, and all the various mechanical trades necessary to make a flourishing place.

The view from the south-eastern extremity of the valley is magnificent, and especially from the residence of T. J. Colby, Esq., on George Hill, an elevation of several hundred feet, and overlooking the valley on the north-west, presenting a scene of wood-land and meadow, lofty summits, gentle slopes, cottage and farm-houses, church spires, with the lofty old elms, and the more symmetrical sugar maple, groves of hemlock and small pines, spruce and fir, shading the distant and nearer landscapes, and forming a scene fit for the hand of an experienced writer. In the distance stretches the beautiful Mascommma Lake, elevated more than one thousand feet above the level of the sea, in the towns of Lebanon and Enfield, and is one of the loveliest and most romantic lakes in New England, for the beauty of its situation, its irregular shores, indented with

numerous coves, creeks and inlets, and imbedded in the midst of magnificent hills and lofty mountains. It may justly vie in beauty and grandeur with Winnipissogee or Lake George, or with the more celebrated and far famed Scottish lakes Katrine and Lomond.

There is much more that might be written about this region, and its industrious inhabitants. Perhaps at some future time I may have something to say about my own Sugar River Valley.

W. C. A. CLINTON.

Claremont, N. H., Dec., 1858.

AMMONIA.

This substance, which performs a very important part in the economy of vegetable development and growth, is always found in rain-water, dew and snow, particularly in the vicinage of cities and densely populated districts, where ammonia is profusely generated by decomposing matters. It is a volatile substance, and unless absorbed and fixed by some article capable of attracting and retaining it, passes into the atmosphere, and is lost. That it actually abounds in rain water as it descends from the heavens, and in no inconsiderable quantity, may be demonstrated by simply distilling a few gallons, and mixing the first two or three pounds distilled with a little muriatic acid. A very distinct and beautiful crystallization of *muriate of ammonia*, or *sal ammonia*, will thus be formed, the crystals having a dark or brownish color.

If a small quantity of muriatic acid be added to a quantity of rain water, and the mixture evaporated to dryness over a hot fire, the ammonia will remain as a residuum, in combination with the sulphuric acid. It may be detected by adding a little pulverized lime, which will combine with the acid, and the ammonia will be set free. In this state, it is easily detected by its pungent smell.

As to fixers, a recent writer on agricultural chemistry remarks:—"For this purpose charcoal is probably one of the most efficient and valuable articles known, as it is capable, under ordinary circumstance, of absorbing ninety times its weight of ammoniacal gas, which it retains until it is freed and washed into the soil by rain. Here, partly, no doubt, by the voltaic action of the spongioles, it is conveyed into the vegetable system and circulation, and becomes the principal source of nitrogen, so indispensable to vegetable health and growth. Gypsum, another valuable article, is also a powerful fixer, and is highly valuable as an application, on all soils, especially those that are dressed with animal substances, which in the process of decomposition evolve considerable quantities of ammonia, and which, like charcoal, it serves to fix and retain for the benefit of the growing crop."

Urate is evolved or given out by putrid urine, and by stable dung in a state of fermentation. It is always a colorless product, and distinguished by a peculiarly pungent odor. When dissolved in water, it is known as "*hartshorn*." It is volatile in a very remarkable degree, possesses the common properties of soda and potash, and combines readily, as we have already shown, with acids. Its effects upon vegetation, are very marked. For fixing and economizing this volatile and highly important product of decomposition, gypsum, or plaster of paris, as it is more commonly denominated, possesses a very high degree of value. It was formerly supposed that gypsum operated merely as a stimulant when applied to vegetables; but in his very elegant and elaborate work, Professor LIEBIG has presented a solution of its action, which experience, we have no doubt, will demonstrate to be correct.

According to his views, carbonate of ammonia, which is known to be present in rain-water, and in itself a most energetic and salutary agent in the production of vegetable phenomena, is attracted and *decomposed* by gypsum, and soluble sulphate of ammonia and carbonate of lime formed. As this salt of ammonia possesses no volatility, it is, of course, retained in the soil, and effectually economized for the use of plants. Both the above salts, however, have a decidedly beneficial influence upon the *humus* of the soil, and, by a specific action, tend to advance its preparation as a soluble food of plants.

For the New England Farmer.

MANURES---COMPOSTING AND EXPOSING.

MR. EDITOR:—I was pleased with the communication from Mr. Collamore, in the *Farmer* of December 18th. He quotes from my communication of November 27, as follows:—"forty years among the corn crops." I wrote it as follows, "forty years' labor among corn crops."

There is a great difference in spending forty years among crops of corn, and laboring forty years among corn crops. The laborer has greatly the advantage over a mere proprietor, in noticing failures among the different crops.

Mr. C. asks some eight questions, two or more of them being double ones. These questions partake somewhat of the process of dodging responsibility. When Mr. C. says I am "mistaken," and "blind," he should produce some experimental argument to convince me that I was in error, and could not see. I had not the most distant thought about "converts," when I wrote my experience, and I venture to prophecy that in less than twenty years very many farmers will be ready to give just such "advice," and "give their manure the benefit of both sun and rain."

Mr. C. asks, "has it never occurred to him, that he could compost his manure?" I wrote about composted manure, and supposed it was so un-

derstood all through my communication; and this I fully believe can be done better out of the cellar than in. Mr. C. is informed in this, as well as my former communication, that I have "learned that the caustic qualities of powerful manures will prevent the germination of seeds." He inquires if I am in earnest in recommending this theory; if he will take away the word "ruinous," I answer I am in earnest, and have practiced it for forty years. I think my labor has not been wholly vain in the corn-field, and should I be permitted to slumber, as did Van Winkle, I fully believe that when I awake, I shall find the barn cellars occupied for a different purpose than the composting of manures.

What surprises me the most, is his first parenthesis, "And I think you, Mr. Editor, must have a large share of moral courage to publish it." Was Mr. C. serious, when he penned that? Did he think an editor had no other attribute than courage? and if he has other attributes, does he think that the reason of his publishing my article was to try his courage? If farmers acted from a sense of duty, I believe we should often record our failures, for the benefit of others. I hope we shall have both sides of this subject discussed in the *Farmer*, as the sooner we know the truth, the better. ROBERT MANSFIELD.

West Needham, Mass., Dec., 1858.

For the New England Farmer.

CUTTING STALKS OF CORN.

MR. EDITOR:—I am pleased to have my remarks on the "cutting of corn-stalks" noticed by a man so sensible as Mr. Emerson, of Hollis, appears to be. Without the honor of his personal acquaintance, I judge him to be a man of good sense, from his style of writing. In years gone by I have known many reliable men of Hollis, and among others I presume I knew the father of Mr. Emerson, when he attended market at Salem, as many of the inhabitants of that town were accustomed to, with their loads of barrels; and when these loads came together, we were accustomed to look upon it as a sign of rain.

His experiment of cutting eight rows of stalks, and leaving other eight rows similarly situated uncut, is a perfectly fair one. And if he found, as he says he did, more soft, unripe corn where the stalks were not cut than where they were cut, this would go far to show that it is best to cut them. Another reason why it is better to cut them than not, is, the stalks themselves are more valuable. But the chief reason is, that the corn ripens better; the ear being the object for which it is grown, and not the stalk. I have heard it said if the stalks were left on, the juice of it would settle into the kernel and increase the weight of it; but this is theory only; I have no confidence in the fact. ESSEX.

December 25, 1858.

GRINDING FEED.—"If a machine was invented to grind hay," says the *London Farmers' Magazine*, "the ground article would approximate in value to *unground* oats in producing fat and muscle." Chopping hay and stalks is the process that comes nearest to grinding, and relieves the animal of just so much labor as it takes to do

it. Twenty-five pounds of dry hay a day is a good deal of work for the muscles of one pair of jaws, if they have the whole burden of its reduction to small bits and powder; this labor affects the whole system, like other labor, retarding the animal's growth and rendering more food necessary to supply the waste of its tissues. The same reasoning applies to grinding other food for stock.—*Country Gentleman.*

For the New England Farmer.

AGRICULTURAL PROGRESS—MAMMOTH FARM COMPANY.

MESSRS. EDITORS:—In the *N. E. Farmer* of the 18th Dec. is a communication with the above caption by Wilson Flagg. Notwithstanding Mr. Flagg's able and well-written article, he does not convince me that there is danger to the small, independent farmer, growing from the formation of the "Mammoth Farm Company," in Western New York. How that operating with steam implements on the prairies at the West, can prove "destructive to the prosperity of individual farmers" at the East, or any where else, I have not the sagacity to see. The productions of the West are generally the very articles which New England does not produce in sufficient quantities for her own consumption. From the West and South very few articles are transported to New England which are produced in it as surplus. The more grain, pork, cotton, sugar, molasses, rice, sweet potatoes and other articles of warm climates, and the cheaper they come to us, the better, if the raisers are remunerated. And for me, I am under the least apprehension that this "Mammoth Company" can monopolize the farming business, in the least degree to the injury of the small, independent farming interest in the Eastern and Northern States, however it may operate upon them on the prairies at the West.

The plow is the only "mammoth implement" to which steam could be advantageously applied; that being the case, other farm operations must be conducted in the usual way, as on small farms, with horses, oxen and hand laborers. I hope, for the benefit of the farmers at the West, and all the consumers at the East, West, North and South, that the steam plow will prove successful in capsizing the surface of the indurated prairies, and fully realize the expectation and confirm the hopes of the "Mammoth Farm Company," in plowing those stubborn prairies which require so much animal power to perform. The fear of injury to the small, independent farmer in the Eastern and Northern States, that creates such apprehensions in the mind of Mr. Flagg, I think must subside, when he takes into consideration the difficulty and expense of purchasing the small farms, leveling the ground, clearing away the rocks, straightening the brooks, draining the swamps, and above all, of procuring manure to enrich this chaos of gravel, clay, sand, mud and other mineral matter, to make it productive. For one, I would as soon invest my capital in Vermont Central Railroad bonds, or go into a South Sea speculation, as invest money as a stockholder in a "mammoth farm" in any part of the Union. SILAS BROWN.

North Wilmington, Dec., 1858.

For the New England Farmer.

MATERIALS FOR ROOFING.

I notice in the *Farmer* of Oct. 16th a well-written article on this subject; also, another in the number dated Dec. 11th, in which are set forth some facts, and in my opinion some errors; and as but few, comparatively, are well acquainted with the article of roofing slate, the public mind might be led astray, from some remarks that have been made in previous articles on this subject, and more especially those in the October number, from the pen of Rusticus. I deem it my duty to at least give my opinion, and the reasons for the same, and let the people judge for themselves.

That slate is the best material for roofing, there is no doubt in my mind, reasons for which were given by my brother Rusticus.

In regard to the strength of slates, Rusticus sets forth that a slate to have strength must necessarily be composed of such properties as will fade, which theory must be carried out, if we admit that the Glen Lake and the Eagle slate are the best. I admit, as Rusticus says, that there are slate that are soft, brittle, and do not fade, which cannot be split thin on account of their tenderness. I mean more particularly those he mentions, or the Western Vermont. There are also hard slate, so brittle that they cannot be split thin. A slate need not necessarily be hard or soft to split well. I am more or less acquainted with the slate from more than twenty quarries in the vicinity of Hydeville and Fairhaven, and this fact I have observed among these slate, that both the hard and soft have their good and bad qualities for splitting. Slate, to split well, must not be soft, like clay, or chalk, nor hard and brittle, like cast iron, or glass, but be of pure, fine quality, solid and elastic. Good splitting slate, both hard and soft, will bend apart in splitting some of the largest sizes, some six inches or more.

As to the question whether the color has any thing to do with the strength of slate, I am willing to take Rusticus on his own ground. He says the Welsh slates are a standard, and the Glen Lake are equal to them except in color. Why must the Vermont slates fade in order to give them strength, any more than the standard Welsh slates? Slates fade in consequence of the metallic properties of which they are composed. Those composed of iron will fade and rust, while those composed of lead or copper will remain for ages unchanged.

A good splitting slate that fades is better than a tender slate that will not fade, but a slate that is both strong and never fades is better than either. Such as these are made at a quarry within two miles of Hydeville and Fairhaven depots, and within one mile of the quarries of the Eagle and Forest Slate Co., owned by William L. Farnam & Son. This quarry yields a variety of colors, the top layers are beautiful, light variegated colors, while those below are dark variegated or clouded purple, and still farther down are a fine purple, capable of being split sixty or seventy to the foot.

As another instance of the splitting properties of this stone, blocks from six to ten feet long by two or more in width, can easily be split the

thickness of one-fourth of an inch or less. These are softer than those of Glen Lake, the Eagle or the Forest Slate Co.'s, equal in strength and superior in fineness of texture, evenness of surface and duration of color, and in no respect inferior to any Welsh slate. ANOTHER SUBSCRIBER.
December, 1858.

MILK STAND AND BUTTER-WORKER.

We are permitted again to copy from FLINT'S admirable work on "Milch Cows and Dairy Farming," and place before the dairyman or woman a representation of an excellent mode of setting away milk, and also a convenient form of a butter worker.

Milk should never be set on the bottom of a cellar, if the object is to raise the cream. The cream will rise in time, but rarely or never so quickly as on shelves from five to eight feet from the bottom around which a free circulation of pure air can be had from the latticed windows. It is, perhaps, safe to say that as great an amount of better cream will rise from the same milk in twelve hours on suitable shelves, six feet from the bottom, as would be obtained directly on the bottom of the same cellar in twenty-four hours.

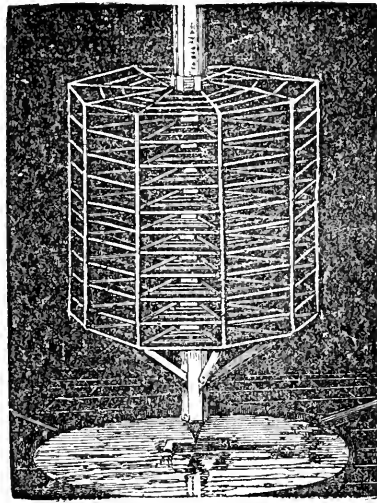


FIG. 1.—MILK STAND.

One of the most convenient forms for shelves in a dairy-room designed for butter-making is represented in Fig. 1, made of light and seasoned wood, in an octagonal form, and capable of holding one hundred and seventy-six pans of the ordinary form and size. It is so simple and easily constructed, and so economizes space, that it may readily be adapted to other and smaller rooms for a similar purpose. If the dairy-house is near a spring of pure and running water, a small stream can be led in by one channel and taken out by another, and thus keep a constant circulation under the milk-stand, which may be so constructed as to turn easily on the central post, so as often to save many footsteps.

The pans designed for milk are generally made of tin. That is found after the following manner to

be, on the whole, the best and most economical, and subject to fewer objections than most other materials. Glazed earthen ware is often used, the chief objection to it being its liability to break, and its weight. It is easily kept clean, however, and is next in value to tin, if not, indeed, equal to it. A tin skimmer is commonly used, somewhat in the form of the bowl of a spoon, and pierced with holes, to remove the cream. In some sections of the country, a large white clam-shell is very commonly used instead of a skimmer made for the purpose. The chief objection to it being that the cream is not quite so carefully separated from the milk.

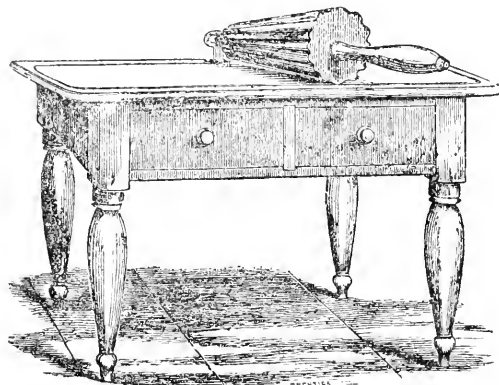


FIG. 2.—BUTTER-WORNER.

The butter-worner with a marble top, is an important addition to the implements of the dairy. It effects the complete removal of the buttermilk, without the necessity of bringing the hands in contact with it.

APPLE GROVE FAMILY SCHOOL, Sandwich, Mass.—We feel quite confident that parents who place their children under the charge of Mrs. E. GOULD WING, the Principal of this School, will find every advantage for them in the way of acquiring an education for them that they desire.

EXTRACTS AND REPLIES.

BARNs—CLAPBOARDS OR BATTENS—TIE-UPS.

I am about building a barn, and am puzzled to know whether to clapboard it, to have my boards *matched* or *battened* with strips some three or four inches wide. Those who have buildings covered with matched boards complain that the *tongues* shrink from the *grooves*. I am inclined to try the *battens*, but am assured that, being applied to the sappy edges of the boards, they prevent them from drying when wet, and thus cause them to rot. What advice have you, or any of your correspondents, for me?

Furthermore, shall I locate my cattle tie-up upon the north side of my barn, from whence the manure will fall into the back part of the cellar, or shall I place it in the south side, where the animals it would seem might be more comfortable, but the manure more exposed to the weather?

Upon examining several barns in a part of the

country where greater care is manifested in the selection of good models than in this vicinity, I find that a great diversity of opinion prevails upon these points.

I notice, however, that when any particular plan is adopted, it having cost the projector no little *head work*, he is very reluctant to admit that the child of his adoption is not pretty near perfection, at least as good as any of his neighbors.

A SUBSCRIBER.

Danvers, Dec. 28, 1858.

REMARKS.—We should use the battens, but not upon “wavy-edged” boards. We have never known the edges of boards to decay under the batten to make such a course objectionable.

Tie the cattle on the *north side*, by all means; otherwise you so obstruct the barn cellar as to make it almost valueless for any purpose but that of keeping the manure.

There is no settled opinion yet, *as to what the best arrangement for a barn is.*

INJURED HORSES.

Will you or any of your subscribers inform me whether a horse receiving a cut by a dull instrument, like the step of a wagon, one of the cords being cut off, will recover so as to be fit for future use; and also, whether a horse, with sprung forward ankles, will recover and if any of you know of any thing to assist nature in the recovery of each.

Taunton, 1859.

REMARKS.—We do not think a horse so injured will recover so as to be of any service. A horse with “sprung ankles” or knees, is able to perform a good deal of slow work.

SULPHUR FOR CATTLE.

I was gratified to see an article in your paper of Nov. 13th, on the use of *sulphur for stock*, taken from the *Ohio Valley Farmer*, which I consider worth to a common farmer what he pays for the paper, (if properly used.) There are many things rendered valueless by misapplication. I use quite a quantity of sulphur every season among my stock. My way of using sulphur among my cattle is as follows: I melt lard with a little sulphur, double a piece of candle wicking a few times, draw it through the melted lard and tie it round my calves' necks, and let them wear it. I give my cattle sulphur once a day for three days, then omit three days, so continue to do until I give it nine days, then omit two weeks. One teaspoonful a dose for a calf, a large spoonful for a full-grown animal. I give it at night on their provender, and keep my stock housed, that it may better operate on the surface of the animal. I find by giving it a little more freely for a few weeks, before turning to pasture, it supersedes the necessity of bleeding, and makes the cattle more healthy during the season.

Deerfield, Mass., 1858. APOLLOS CLARY.

REMARKS.—The reference which our correspondent makes to the old practice of *bleeding cattle in the spring*, and of *cutting off their tails*,

at any time when fancy suggests it, affords us the opportunity of asking again, what this *blood-letting* and *mutilation* are for? It is said the end of the animals' tail is *soft*, and therefore, unhealthy. Is it so? We are inclined to think it will be found diseased when it is as *hard* as a rake tail and as unbending as a hoe handle. It was made soft and flexible, or it would not have answered the purpose for which it was intended. It is just as sensible to cut off a teat, or an ear, as the tail. If the animal is sick, administer proper remedies, but do not deprive it of those parts of its body which its Creator intended should be used as one of its means of protection, as well as give it those fair proportions which make it pleasant to the eye of man.

So of the barbarous custom of *bleeding cattle in the spring*. What is it for? Cattle are not usually sick in the spring, that have been well fed and tended during the winter, and if they have not received this treatment, and are thin and lousy and weak, do not deprive them of what little vitality they have by *bleeding them!* but rather administer in liberal doses, good red-top hay, a few sliced roots daily sprinkled with a quart of sweet corn meal, and let the patient partake freely of good cold water, and bathe frequently in the warm beams of the sun, and out of the wind. Then apply gentle friction frequently with a soft card and brush, and you will soon become sensible of a rapid improvement. That gallon of blood *which you did not take away*, has been stimulated to action by your generous diet, so that the hair has become sleek, the skin soft and eyes bright, and every part of the animal would say to you if it had a tongue—"I thank you, sir; I thank you, sir; I had no blood to spare, I merely wanted something to eat."

BUCKWHEAT AND CLOVER ON SANDY LAND.

I have a piece of plain land that I wish to break up next spring, as it is infested with that plague, the ox eye daisy. I should like to sow buckwheat. Will it do to sow clover with the buckwheat, harvest the buckwheat, and plow the clover in another year, and repeat? Will it exterminate the daisy?

Spencer, Mass., 1858.

R. BUTLER.

REMARKS.—The operation you describe will probably keep the daisy down, so long as you continue to cultivate—but would not exterminate the seed. If you get a good crop of clover, it will be much better to cut it and let it wilt before plowing it under. The principal value which the clover contains, is in its sugar and starch. When it is plowed under in its green state, it goes into rapid fermentation and decomposition, and the sugar and starch are thrown off in the form of gas. But if wilted, the process will be slow, and all that is valuable in it secured to the soil.

FATAL DISEASE AMONG CATTLE.

As I have a disease amongst my stock, I would like some information, what it is, and the cure for it. I have lost four cows since they came up to hay; the ones that have died all ran together in the fall feed, in which there was some swamp. Those that did not run in the same mowing, are now well. In the first place, their bags are hot and their milk dries up; they are dumpish, run at the eyes and nose a corrupted matter of a yellowish color; their eyes turn white when they are first taken, but before they die they are blood-shotten. They live three or four days, and sometimes a week, from the time they are taken, and then die. The same disease is amongst other stock in the neighborhood; there has been fifteen head of cattle that have died near by me within a short time of this disease.

Windham, Dec., 1858. BENJAMIN S. BEMIS.

REMARKS.—We cannot tell from the symptoms described, what the disease is that is taking off the cattle at such a rate. Perhaps some of our readers may recognize it, and be able to recommend a remedy.

SOUTH DOWN SHEEP.

Mr. E. K. DANFORTH, of South Newberry, Vt., wants to purchase some pure South Down Sheep.

FLOORS OF HORSE STABLES.

Will you, Mr. Editor, or some of your correspondents, inform me whether the floor of a horse stable should be level or incline? If incline, how much?

W. D. L.

For the New England Farmer.

THE WORLD OF THOUGHT.

The intelligence of man, which forms his crowning excellence, is an emanation from the Divine Mind, and thus of characteristic elements and always active. Ever during his conscious existence are its powers employed in thought; thought succeeding thought without perceivable connection, yet each suggested by its relation to the one preceding. The trains of ideas or thought depend much on the culture and development of mind, with its habits and peculiarities, and circumstances in life. The thoughts of the ignorant man are grovelling; tending to animalism. Nature, in all her glorious forms, he admires only as ministering to sensual wants. Thought is limited to the narrow circuit which forms his sphere in life. But the educated mind, on thought's airy wings, finds throughout Nature's limitless domain, beauty and happiness.

No two minds are alike constituted, nor therefore of the same thoughts. But this difference, with the degrees of mental culture, the influence of various occupations and circumstances in life, forms a world-wide diversity. A case of murder presented to a lawyer, physician, and clergyman, would suggest to each a train of thought in harmony with his profession. And any subject, presented to a number of persons, will be viewed by each from his own stand-point, appearing in different form and arrayed in different colors. To this

fact may be traced the cause of many contentions.

The mind being ever occupied, considers an infinite number of subjects, flowing incessantly through its avenues of communication with the external world. It may detain, and concentrate its powers on one, or allow all to float on, finding its pleasures in novelty. Looking inward it may gaze on memory's stores, or on wings of imagination soar out in the boundless future. Youth lives in the future, old age in the past, and all in both.

Turning our eyes toward that untried world, we are dazzled by visions of beauty and happiness. The gentle breeze wafts to us pleasing odors. The star of hope sheds kindly beams on our pathway, and we fondly dream it winds only through flowery meads, shady groves, and by murmuring rivulets. Perchance memory comes, gently takes us by the hand and leads us along down the past. We review the scenes of childhood, visit our early home, the favorite haunts of youth, and gaze once more on the happy faces of those we loved. Our first great grief comes fresh before us, as she leads us to the silent room, and we gaze on a loved one struggling in death. We again see the cold form shrouded for the grave—take the last fond look—and follow with breaking heart to its last resting-place.

Though the mind meditates on the past and present; speculates on the future; considers the evil and the good; things earthly and things heavenly; is absorbed in its own passions or emotions; or dwells much in the world without; yet man has the power of subjecting his thoughts to his will. Let him, then, beware! For, "as a man thinketh, so is he."

Wayland, Dec. 20.

L. H. SHERMAN.

NET WEIGHT OF HOGS.

At this season the following table for determining the net by the gross weight of hogs, may be useful to dealers in pork. It is based upon the Kentucky rule, that is, for 200 lbs. gross nett deduct 26 lbs.; for the second 100 lbs. subtract 12½ lbs., and for the third 100 lbs. deduct 6½ lbs. All over 300 lbs. is calculated as net:

100 gross will net.....	75	200.....	162
105.....	79	205.....	167
110.....	83	210.....	174
115.....	88	215.....	178
120.....	92	220.....	181
125.....	96	225.....	184
130.....	101	230.....	189
135.....	105	235.....	195
140.....	110	240.....	200
145.....	114	245.....	204
150.....	118	250.....	214
155.....	122	255.....	218
160.....	127	260.....	223
165.....	131	265.....	228
170.....	136	270.....	232
175.....	140	275.....	237
180.....	143	280.....	242
185.....	149	285.....	246
190.....	153	290.....	251
195.....	158	295.....	256

Dr. E. Holmes, Editor of the *Maine Farmer*, has been elected President of the Maine Pomological and Horticultural Society, and D. A. Fairbanks, Augusta, Secretary; and Russell Eaton, Publisher of the *Farmer*, Augusta, Treasurer and Librarian.

TO MAKE GOOD WINTER BUTTER.

At the annual meeting of the Jefferson County Agricultural Society, at Watertown, on the 14th of January, a tub of superior winter-made butter was exhibited by Mr. Daniel Parker, of that town, for which a premium was awarded by the discretionary committee. "The butter," says the *Northern Journal*, "was quite as yellow as much of the fall-made sent to market, and the flavor so fine that we obtained of Mr. Parker the mode of manufacture. He states that as soon as he has finished milking, the pails of milk are set into kettles of boiling water, where they are allowed to remain thirty minutes, then the milk is strained into pans and allowed to stand until the cream is ready to be taken off, which will depend upon the temperature of the room in which it is set. Before churning, the cream must be kept in a warm room at least twelve hours; then it will require churning less than an hour. He washes his butter immediately after taking it out of the churn, and at the same time salts it. His cows had been fed on clover hay, without grain or roots, for six weeks previous to the time of making this sample. Butter made in this way is perfectly sweet, of a good color, and will bring from two to four cents per pound more in market, than that manufactured in the ordinary way. It is worthy the attention of farmers."

COMPARATIVE VALUE OF ROOTS.

MR. EDITOR:—Will you, or some of your readers, inform me what is the comparative value of roots for cattle and hogs?

There are many farmers that practice feeding roots that have never made any accurate estimate of their value, compared with different kinds of grain, hay, &c.

In conversation with a gentleman upon this subject he said, that he had practiced feeding his horse with eight quarts of oats and eight quarts of carrots a day, and that he performed more labor and was in better condition than when fed sixteen quarts of oats a day. In this case a bushel of carrots is equal in value to a bushel of oats.

What is the value of ruta bagas, carrots, beets, parsnips and potatoes, compared with rye, oats, peas, barley, buckwheat, corn and hay, when fed to cattle and hogs?

I want to investigate this subject, and take this course, hoping to receive information from those who have made accurate experiments; and any such information will be gratefully received by a

SUBSCRIBER.

Fort Fairfield, June 23, 1858.

NOTE.—We have several times given statements of chemists and others, of their experiments to ascertain the comparative value of the different roots and other substances used for fodder—good hay being the standard.

In No. 21, Vol. 24, we published the following editorial upon this subject, which may give some light to our friend by way of an answer to his queries:

It is a great object to the farmers of Maine to raise a supply of the best kinds of fodder for their stock during the winter. Hay, we all know,

is the great dependence—the staple material for this purpose, but there are many other crops which can be raised to advantage among us, and which are very valuable for furnishing food to stock, and thereby saving hay.

In order to ascertain the real value of these crops for the purpose above named, it will be necessary to compare the nutritive properties of the several articles with good hay as the standard.

Experiments, and close and careful comparison of the results of many trials, have given the following as the comparative difference between the articles mentioned and good hay. We have published these results before, but we now put them in tabular form, so as to give the reader an easier mode of comparing them.

100 pounds of hay are equal to
275 pounds of green Indian corn,
442 pounds of rye straw,
164 pounds of oat straw,
153 pounds of pea straw,
201 pounds of raw potatoes,
175 pounds of boiled potatoes,
339 pounds of mangol wurtzel,
504 pounds of turnips,
54 pounds of rye,
46 pounds of wheat,
59 pounds of oats,
45 pounds of peas or beans,
64 pounds of buckwheat,
57 pounds of Indian corn,
68 pounds of acorns,
105 pounds of wheat bran,
103 pounds of rye bran,
167 pounds of wheat, pea, and oat chaff,
179 pounds of rye and barley.

From this "bird's-eye view," it will be easy to calculate the *fadder* value of any of the above articles which you may raise. For instance, if you have 504 lbs. of turnips, they will give as much nutrition to your cattle as 100 lbs. of good hay, or in other words, it will take 5 lbs. of turnips to be equal to 1 lb. of hay.

An ox, it is said, requires 2 per cent. of hay per day if he does not work, and 2½ per cent. if he works. Suppose, therefore, you have an ox that weighs 1500 lbs., he will require 30 lbs. of hay per day if he does not work. But you wish to feed him in part with turnips. If you give him 15 lbs. of hay, how many pounds of turnips must you give him to make up the supply? Ans. 75 lbs., which, at 60 lbs. to the bushel, will be 5 pecks.

Again, according to the table, a little more than half a pound of Indian corn is equal to a pound of hay. If, therefore, you give the same ox but 15 lbs. of hay, how much Indian corn must he have to supply the 15 lbs.? Ans. A little over 8½ lbs. Allowing corn to weigh 50 lbs. per bushel, it will take 5 quarts and a third.

Allowing the estimates in the table to be correct, they will be a convenient guide to farmers in feeding cattle, &c., on other articles, in order to save their hay.

A milch cow is said to require 3 per cent. of her weight per day. A sheep, full grown, 3½ per cent.—*Maine Farmer*.

A LUXURY FOR ANIMALS.—It is related of Rev. Sidney Smith, that when on his farm, each cow and calf, and horse and pig, were in turn visited, and fed and patted, and all seemed to welcome him; he cared for the comforts of every living being around him. He used to say,—

"I am all for cheap luxuries, even for animals; now all animals have a passion for scratching their back bones; they break down your gates and palings to effect this. Look! there is my universal scratching, a sharp-edged pole, resting on a high and low post, adapted to every height, from a horse to a lamb. Even the Edinburgh Reviewer can take his turn; you have no idea how popular it is. I have not had a gate broken since I put it up. I have it in all my fields."

LEGISLATION—LAND DRAINAGE COMPANIES.

BY HENRY F. FRENCH.

[There are few subjects in which a large number of farmers can be more interested, in all parts of New England, at least, than in that of *Drainage*. There are comparatively few farms but need it in one place or another, and there are few other things that have led to so much misunderstanding and litigation, and that have destroyed the pleasant social relations in neighborhoods, as flowages and drains.

We have been permitted to read some chapters of a work on the subject designated in the title of this article, in advance of its publication, and do not believe we can better meet the wants of the general reader, than by transferring some portions of the chapter on "Legislation" in relation to drainage and flowages, and of "Land Draining Companies," to our columns.

We understand the work is to be published in the course of two or three months, by the enterprising Agricultural book publishers, A. O. MOORE & Co., of New York.]

Nothing more clearly shows the universal interest and confidence of the people of Great Britain in the operation of land drainage, than the Acts of Parliament in relation to the subject. The conservatism of England, in the view of an American, is striking. She never takes a step till she is sure she is right. Justly proud of her position among the nations, she deems charge an unsafe experiment, and what has been, much safer than what might be. Vested rights are sacred in England, and especially rights in lands, which are emphatically real estate there.

Such are the sentiments of the people, and such the sentiments of their representatives and exponents, the Lords and Commons. Yet England has been so impressed with the importance of improving the condition of the people, of increasing the wealth of the nation, of enriching both tenant and landlord by draining the land, that the history of her legislation in aid of such operations, affords a lesson of progress even to fast young America. Powers have been granted, by which encumbered estates may be charged with the expenses of drainage, so that remainder-men and reversioners, without their consent, shall be compelled to contribute to present improvements, so that careless or obstinate adjacent proprietors shall be compelled to keep open their ditches, for outfalls to their neighbors' drains, so that mill-dams and other obstructions to the natural flow of the water, may be removed for the benefit of agriculture, and finally, the Government has itself furnished funds, by way

of loans, of millions of pounds sterling, in aid of improvements of this character.

In America, where private individual right is usually compelled to yield to the good of the whole, and where selfishness and obstinacy do not long stand in the pathway of progress, obstructing manifest improvement in the condition of the people, we are yet far behind England, in legal facilities for promoting the improvement of land-culture. This is because the attention of the public has not been particularly called to the subject.

Manufacturing corporations are created by special acts of legislation. In many States, rights to flow and ruin by inundation most valuable lands along the course of rivers, and by the banks of ponds and lakes, to aid the water-power of mills, are granted to companies, and the land-owner is compelled to part with his meadows for such compensation as a committee or jury shall assess.

In almost every town in New England, there are hundreds and often thousands of acres of lands, that might be most productive to the farmer, overflowed half the year with water, to drive some old saw-mill or grist-mill, or cotton-mill, which has not made a dividend or paid expenses for a quarter of a century. The whole water-power, which perhaps ruins for cultivation a thousand acres of fertile land, and divides and breaks up farms by creating little creeks and swamps throughout all the neighboring valleys, is not worth, and would not be assessed by impartial men, at one thousand dollars. Yet, though there is power to take the farmer's land for the benefit of manufacturers, there is no power to take down the company's dam for the benefit of agriculture. An old saw-mill which can only run a few days in a spring freshet, often swamps a half-township of land, because somebody's great grandfather had a prescriptive right to flow, when lands were of no value, and saw-mills were a public blessing.

There are numerous cases within our own knowledge, where the very land overflowed and ruined by some incorporated company, would, if allowed to produce its natural growth of timber and wood, furnish ten times the fuel necessary to supply steam-engines to propel the machinery carried by the water-power.

Not satisfied with obstructing the streams in their course, the larger companies are of late making use of the interior lakes, fifty or a hundred miles inland, as reservoirs, to keep back water for the use of the mills in the summer droughts. There are thousands of acres of land drowned and rendered worse than useless, for the water is kept up till midsummer, and drawn off when a dog-day climate is just ready to con-

vert the rich and slimy sediment of the pond, into pestilential vapors. These waters, too, controlled by the mill-owners, are thus let down in floods in midsummer, to overflow the meadows and corn-fields of the farmer on the intervalles and bottom lands below.

Now while we would never advocate any attack upon the rights of mill-owners, or ask them to sacrifice their interests to those of agriculture, it surely is proper to call attention to the injury which the productive capacity of the soil is suffering, by the flooding of our best tracts in sections of country where land is most valuable. Could not mill-owners, in many instances, adopt steam instead of water-power, and becoming land-draining companies instead of land-drowning companies, at least let Nature have free course with her gently flowing rivers, and allow the promise to be fulfilled, that the earth should be no more cursed with a flood?

We would ask for the land-owner, simply equality of rights with the mill-owner. If a legislature may grant the right to flow lands against the will of the owner, to promote manufactures, the same legislature may surely grant the right, upon proper occasions, to remove dams and other obstructions to our streams, to promote agriculture. The rights of mill-owners are no more sacred than those of land-owners, and the interests of manufactures are, surely, no more important than those of agriculture.

We would not advocate much interference with private rights. In some of the States no special privileges have been conferred upon water-power companies. They have been left to procure their rights of flowage, by private contract with the land-owners, and in such States, probably the legislatures would be as slow to interfere with rights of flowage, as with other rights. Yet there are cases where for the preservation of the health of the community and for general convenience, governments have every where exercised the power of interfering with private property, and limiting the control of the owners. To preserve the public health, we abate as nuisances, by process of law, slaughter-houses and other establishments offensive to health and comfort, and we provide by compulsory assessments upon land-owners, for sewerage, for sidewalks and the like, in our cities.

Everywhere for the public good, we take private property for highways, upon just compensation, and the property of corporations is thus taken like that of individuals.

Again, we compel adjacent owners to fence their lands and maintain their proportion of division fences of the legal height, and we elect fence-viewers with power to adjust equitably the expenses of such fences. We assess bachelors

and maidens, in most States, for the construction of school-houses and the education of the children of others, and in various ways compel each member of society to contribute to the common welfare.

"THE SALT, IF YOU PLEASE."

Everybody has a partiality for dinner, and one of the most frequent expressions at a dinner-table is the one which forms our caption; and in order that our readers may know something of the substance they are using, we will tell them a few facts about salt. Salt is a chemical compound of twenty-three parts by weight of a beautifully silver white but soft metal, called sodium, discovered by Sir H. Davy, in 1807, and thirty-five parts of a pungent, yellowish green gas, called chlorine, discovered by Scheele, in 1774—these two combined form this, the most widely diffused and useful of any compound in the world. It is found in the sea, and in the rocks, from which our principal supply comes. The most wonderful deposits are in Poland and Hungary, where it is quarried like a rock, one of the Polish mines having been worked since 1251. These Polish salt mines have heard the groan of many a poor captive, and have seen the last agonies of many a brave man, for until lately, they were worked entirely by the State prisoners of Austria, Russia or Poland, whichever happened to be in power at the time; and once the offender, or fancied hindrance to some other person's advancement, was let down into this subterranean prison, he never saw the light of day again. So salt has its history as well as science. Other large deposits are found in Cheshire, England, where the water is forced down by pipes into the salt, and is again pumped up as brine, which is evaporated and the salt obtained. To such an extent has this been carried that one town in the "salt country," as it is called, has scarcely an upright nose in it, all the foundations having sunk with the ground, to fill up the cavity left by the extricated salt.

In Virginia there are beds of salt, and the Salmon Mountains, in Oregon, are capable of affording large quantities of the same material. The brine springs of Salina and Syracuse are well known, and from about forty gallons of their brine, one bushel of salt is obtained. There are also extensive salt springs in Ohio. The brine is pumped up from wells made in the rock, and into which it flows and runs into boilers. These boilers are large iron kettles set in brickwork, and when fires are lighted under them, the brine is quickly evaporated. The moment the brine begins to boil, it becomes turbid, from the compounds of lime that it contains, and which are soluble in cold, but not in hot water; these first sediments are taken out with ladles called "biturn ladles," and the salt being next deposited from the brine, is carried away to drain and dry. The remaining liquid contains a great quantity of magnesia in various forms, and gives it the name of "bittern," from the taste peculiar to magnesia in every form.

"But how did this salt come into the rock?" is the natural query, and the wonder seems greater when we recollect that salt-beds are found in

nearly every one of the strata composing the earth's crust. This fact proves another, that as the majority of these salt-beds have come from lakes left in the hollows of the rocks by the recedence of the sea, the sea has through all the geologic ages been as salt as it is to-day. Let us take the Great Salt Lake as an illustration, it being the largest salt lake in the world, but by no means the only one, as such inland masses of saline water are found over the whole earth, but as ours is the greatest in extent, it will form the best example. It is situated at an elevation of 4,200 feet above the sea, on the Rocky Mountains, and has an area of 2,000 square miles; yet, high as it is, "once upon a time," as the story books of our juvenality used to say, it was part of the sea, which retired, by the upheaval of the rocks, and that great basin took its salt water up with it. Should this in time evaporate, and its salt water become covered with mud and sand, and the land again be depressed, then, at some distant future age, the people would be wondering how the salt got there, little thinking that the Mormons had ever built a city on its shores when it was a great salt lake. There are, also, however, salt rocks taking their place in regular geologic series with other rocks, interspersed between red sandstone, magnesian and carboniferous strata; these we can only account for, as we do for other stratified rocks, viz., that they were deposited from their solution in water, or carried mechanically to the spot where now found by that ever mobile liquid. We fear we should be accused of an attempt to put our readers in pickle, so we will stay our pen, hoping they will remember these bits of information when next they say, "The salt, if you please."—*Scientific American*.

THE NEW YORK BANK TELLERS.

There is nothing in bank history more remarkable than the infrequent and comparatively trifling loss by forged signatures. It would seem almost miraculous to a spectator standing by the counter of one of our active city banks, to witness the rapidity with which the Teller pays checks (often at the rate of three in a minute,) whilst at the same time he is subjected to perpetual interruptions from within and without. At the end of the day, he has paid from four to six hundred checks, amounting to more than a million of dollars—a large proportion to strangers. In the fifty-three city banks, during the same six hours, there have been paid from fifteen to twenty thousand checks, covering thirty millions of dollars, and not one forged signature! The records of the Clearing House show that the amount of payments for a year through that channel has reached the prodigious aggregate of seven thousand millions of dollars. Another large amount, not represented in the exchanges, is paid over the counters, making a grand total of probably eight thousand millions in three hundred days, and yet it is seldom that the community is startled by an announcement that a forged check of any importance has slipped through the hands of the Paying Teller in our city banks!

It is doubtless to the terrors of the law, partly, that banks are indebted for this fortunate immunity. But these are operations mostly at a sin-

gle instance of time—when the check is presented. That passed, the forger is comparatively safe. He may set rewards and telegraphs at defiance. It is, therefore, the skill and discernment of the Teller, first and last, that keeps the forger at a respectful distance—skill not only in detecting false signatures, but in reading men at sight by the most obscure of all characters, written upon the manner, and covered by practiced dissimulation, more quickly than you would Roman capitals. The value to the bank of this detective faculty can hardly be exaggerated.

The Paying Tellers of New York disburse daily near twenty-five millions, and in the course of a year eight or ten thousand millions of dollars; and the aggregate of all losses incurred through them by mistake or by abuse of trust, is not, at the highest, as much perhaps, as the one-ten-thousandth part of one per cent.! This is strong testimony in favor of their general fidelity as a class, in view of the extensive powers with which they are entrusted, and especially, in view of the power of certification, which in the manner of its use up to the present day, has been without any other protection than their own sense of propriety and honor.—*Gibbon's "Banks of New York."*

For the New England Farmer.

ANIMAL MANURES, &c.

MR. EDITOR:—Being one of your less scientific, but inquiring readers, I am disposed to inquire further of your correspondent, who gives us "Corn Again," in your weekly of Nov. 27.

I have fallen into the error, which I apprehend is quite a common one, of believing that animal manures do, in New England especially, form an important basis of all farm improvement.

The two first gardeners were placed, no doubt, in far different circumstances, than any of your "inquiring" farmers find themselves, as regards fertility of soil, and other agricultural requisites.

Even in those days, best suited to your correspondent's theory, animals were by no means overlooked; being created prior to man, and consequently, considered necessary to complete the harmony of a perfect world.

As to the Chinese and Japanese, I have no desire to pattern especially after their mode of agriculture, but think your correspondent will find them placing a higher value on animal manures than he would have us infer.

Spade husbandry, at the present ratio of labor, for farmers who have notes to meet, and families to maintain and educate, as a general method, would be more expensive than profitable.

I have found a yoke of oxen and an Eagle plow, or two yokes and the Universal sod and subsoil, equal in amount and thoroughness of labor to as many Irishmen with spades, as would have eaten the oxen at one day's meals, and considerable corn bread beside.

Instead of animal manures being to the soil as the condiments to our food, I have been educated to believe them the food of the plant. Indeed, every corn or oat or grass crop I raise so proclaims them, and I believe the plant as good an analyst of the condition of soil necessary to its growth, as many of your more scientific, but less

inquiring readers. I agree with your correspondent, upon the evanescent properties of guano.

I presume the gentleman's dinner or supper becomes evanescent in the course of a few hours; at least, should think it might, unless he should consume a little beef, or the Yankee dish of pork and beans there-with.

The general practice of farmers in this section is to raise corn, small grains and grass, in rotation; and land well manured after corn, and the crop of grain at seeding, generally produces two good crops of grass, and then is manured and put in corn, &c.

To grow good corn, without animal manures, would be like making water run up hill; one could grow the stalk, but the rounded and well-filled ear of golden corn, would come up missing like Paddy's flea.

It is considered, by many farmers, the surest way to put money in pocket, to consume on the farm all the hay and coarse fodder, and much of the grain, making the marketable products of the farm consist for the most part, of beef, pork and dairy products.

This system, with care in providing cellars in which to secure the manures, and muck, and loam to absorb the liquids, with now and then a load of muck in the hog-yard, "for the scavenger of the family," gives more corn, more rye or grass, and more money, with which to keep the wheels greased, and pay for the *N. E. Farmer*, than the opposite.

With most of us, inquiring farmers, a full belly makes a strong back, even if the food be somewhat of such matters as corned beef and pork and beans.

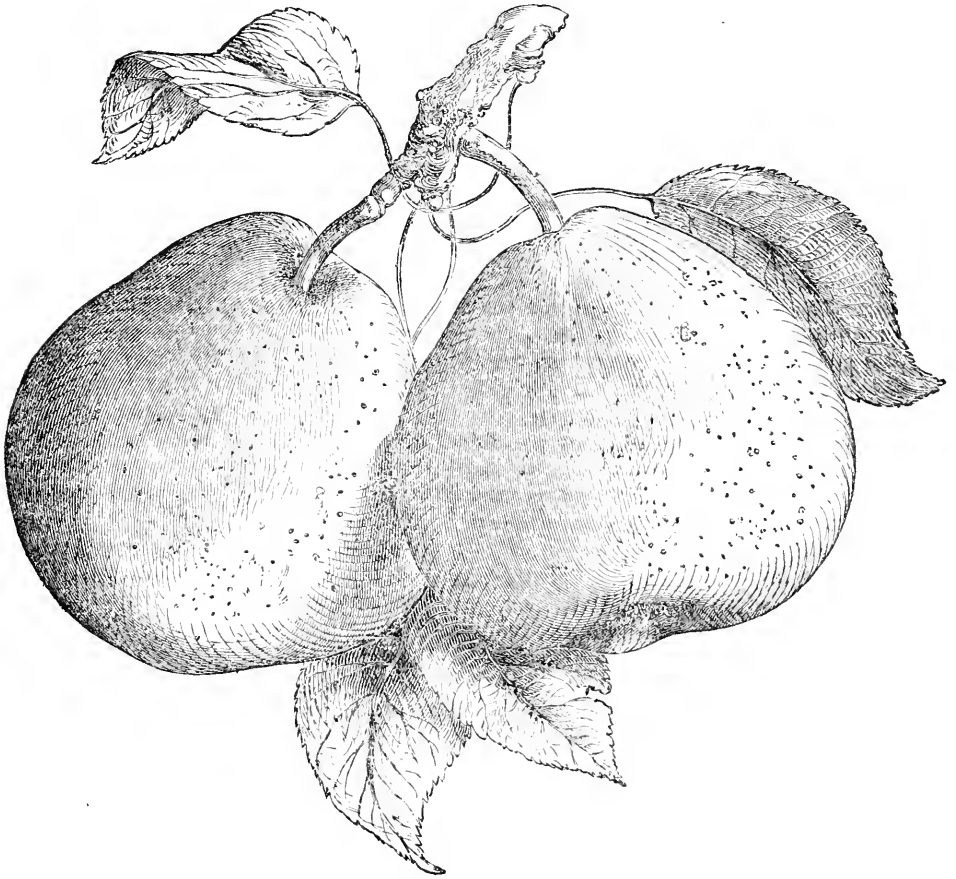
I venture to assert that many of the most potent charms of farm life are found in good crops, well filled barns, plenty of cattle, horses, sheep and swine, sleek and contented, to devour the contents of the same.

I may add, that many farmers, possessors of such charms, and taking pleasures from these fertile sources—advocates of thorough culture, liberal application of manures, a generous but thrifty policy everywhere upon the farm, pay for and highly appreciate the *Farmer*, and are known, by force of introduction, as your less scientific but inquiring readers. A FARMER.

Vermont, Jan. 1, 1859.

GIGANTIC HARVEST HOME.—The Irish papers contain an account of the gigantic harvest home on the estate of Mr. Pollock, in the county of Galway. About 1,400 persons (only one-half of his servants,) were liberally entertained in the Home Farm Stead at Lismay. The roof covers nearly two acres of land, and the building was lighted with gas. The extent of this gentleman's operations may be judged by the fact that he has 1,800 acres in green crops, and 4,000 in grain, with about 4,000 head of cattle.

HOUSE COMMITTEE ON AGRICULTURE.—Messrs. William G. Whiteley, of Delaware, Lawrence W. Hall, of Ohio, Wm. H. Kelsey, of New York, John Huyler, of New Jersey, Richard Mott, of Ohio, James B. Foley, of Indiana, James L. Gillis, of Pennsylvania, R. P. Tripp, of Georgia, W. H. Keim, of Pennsylvania.



THE GRAY DOYENNE PEAR.

This fine pear is known in different localities by several different names, such as the *Gray Butter Pear*, the *Doyenne Boussouck*, *Gray Deans* and *St. Michael Dore*.

Downing says, "The Gray Doyenne strongly resembles the White Doyenne in flavor and general appearance, except that its skin is covered all over with a fine, lively cinnamon russet. It is a beautiful pear, usually keeps a little longer, and is considered by many rather the finer of the two, but in the valley of the Hudson, where both are remarkably fine, we do not perceive its superiority. It richly deserves more general attention. Shoots upright, grayish brown.

Fruit of medium size, obovate, but usually a little rounder than the White Doyenne. Skin wholly covered with smooth cinnamon russet, (rarely

a little ruddy next the sun.) Stalk half to three-fourths of an inch long, curved, set in a narrow, rather deep and abrupt cavity. Calyx small, closed, and placed in a smooth, shallow basin. Flesh white, fine-grained, very buttery, melting, rich, and delicious. Middle of October, and will keep many weeks."

BRICKMAKING BY ELEPHANTS. — The Ceylon *Observer* contains an account of some brickmaking works recently visited by Sir Henry Ward. The works, which turn out about 20,000 bricks a day, are only six miles from Colombo. The clay for brickmaking is prepared by elephants. The wild and tame work together, and both attempt to shirk their work by endeavoring to put their feet in old footprints, instead of in the soft, tenacious, untrodden mud.

A NEW MOVEMENT.

OLD CHESHIRE COUNTY AWAKE.

The *Cheshire County Agricultural Society of New Hampshire*, at its last annual meeting, some months since, then instituted, and has already partially carried into effect, a movement which is destined in our opinion to have an important influence upon our agricultural interests. Instead of continuing to exhaust its treasury, annually, in paying premiums, and in the other expenses incident to an autumnal show, they voted to hold meetings in various parts of the county, and to discuss some of the topics supposed to be of paramount importance in exciting better systems in practical agriculture, and to bring more profitable results from its labor.

In accordance with this plan, the first of the series of these meetings took place at the beautiful town of Winchester, on Wednesday, the 29th of December. The day was a severe one, the wind and snow blowing furiously, and the cold intense. But this did not deter the zealous from gathering, and the afternoon was spent in an earnest discussion upon the subject of *Soils, their reclamation, and adaptation to particular crops*. The meeting was addressed for an hour by the editor of the *Farmer*, then by BENJAMIN READ, Esq., of Swanzey, the presiding officer of the meeting, by Dea. BUFFUM, of Winchester, by Capt. ADAMS, of Fitzwilliam, and others. After an adjournment of two hours for tea, a numerous audience of both sexes assembled and listened to a lecture upon *Agriculture as an Avocation*. After the lecture, the President called upon several persons to speak, and an interesting discussion was continued until nine o'clock. A vote was passed to form a *Farmers' Club* in Winchester, and the initiatory steps taken to establish it.

The second meeting of the series was holden at Troy on Friday, Jan. 7th, and was organized by choosing BENJAMIN REED, Esq., of Swanzey, President, and Dr. CAVERLY, of Troy, Secretary. The weather was again unpropitious; it being rainy through the day, the snow soft and sloppy, and a dense fog covering the face of the earth in the evening. But notwithstanding this, a goodly number was present, and the exercises commenced at a little past two, P. M., and continued until five. The subject, *Mammres*, was discussed with energy, and with an eminently practical bearing, by Messrs. BROWN and REYNOLDS, of Concord, Mass., PARKER, KENDALL and ADAMS, of Fitzwilliam, and WRIGHT and BOYCE, of Troy. In the early part of the evening, a spirited discussion took place upon the *Culture of Indian Corn—its value as a crop, and the best modes of cultivating it*. A variety of topics were incidentally introduced in this discus-

sion. At eight o'clock, a practical, sound in doctrine, and finely written lecture upon *Farm Management*, was delivered by Dr. JOSEPH REYNOLDS, of Concord, Mass.

By this time, a new spirit of inquiry had been awakened, and a succession of questions elicited replies until nearly ten o'clock. It is only possible that any person attending that meeting, left it without resolving to seek new information to aid him in the pursuit of his calling, and to conduct his agricultural labors in a more intelligent and systematic manner.

This movement, projected with admirable foresight and wisdom by the *Cheshire Society*, has already excited an interest and made an impression that will pervade the county in producing more profitable practices, in increasing the amount of their crops, and in swelling the aggregate sums of value on the assessor's books.

The next meeting is to be holden at one of the villages in Marlborough, near Keene, on Friday, Jan. 21st, at ten o'clock, A. M. The subjects to be discussed are, *The Grasses, Grains and Stock*. The meeting will undoubtedly be one of much interest.

"FRUIT TREES ON THE ROADSIDE."

Writing of trees reminds me of another peculiarity of this country, from which "Young America" might learn an important lesson. Along the public roads, for hundreds of miles, are rows of fruit trees, unprotected by ditch, hedge or fence; yet the ripe fruit may hang in profusion on their boughs, or cover the very roadside, and not an apple or pear will be pilfered, not a cherry twig will be broken. Frequently some poor man buys the fruit of one or more trees for a season. All he must do to have it sacredly respected is to bind a withe of straw about the trunk, in token of ownership.

It is not enough that we have plenty to eat and drink, fine clothing, comfortable houses, and productive farms. Every man owes it to himself, his family, his country, to cultivate all those qualities of mind and heart which delight in beautiful objects, which are susceptible of moral and religious growth. And as *home* is the cradle of all virtues, and as external adornments, especially those natural ones which lie within the reach of every citizen of our favored land, such as trees, shrubs, flowers, tasteful lawns, arbors, and trellises, are among the strongest means of making home attractive, it should be the desire and the labor of all good men to diffuse throughout the community a sentiment of regard for rural works and pastimes. To do this, lies within the power of no one man or woman; all should make it their object, and he who labors most will have the satisfaction of knowing that he has faithfully done his part towards accomplishing the great work of the age.

Man must work, he must labor. But he may work willingly, or as a machine; he may work cheerfully, or as a slave. Labor, undirected by knowledge of the great principles which govern

the development of the soil, is always slavish. Is there the grand design of agricultural schools, to lead the tiller of the soil to take an intelligent interest in all the wonderful processes of nature which continually pass before his eyes, in order that, with his powers of observation thus quickened, all the better faculties of his mind aroused and exercised, he may make every hour of labor attractive, and add new grace, refinement and happiness to his home?

The nation must look for true wisdom and strength to the education which controls and shapes the *home* policy of the family circle. Let us then define patriotism, *true patriotism*, to consist in *love of home*. There can be no love of home; and on the contrary, show me a man who loves to adorn his home with those peaceful and refined charms which God designed it should possess, and I can show you a good citizen, an honest patriot, and a true man."—*Gov. Wright's Letter from Germany to Ohio Farmer.*

THE PHILOSOPHY OF RAIN.

To understand the philosophy of this beautiful and often sublime phenomenon, so often witnessed since the creation of the world, and essential to the very existence of plants and animals, a few facts derived from observation and a long train of experiments must be remembered:

1. Were the atmosphere everywhere, at all times, at a uniform temperature, we should never have rain, or hail, or snow. The water absorbed by it in evaporation from the sea and the earth's surface would descend in an imperceptible vapor, or cease to be absorbed by the air when it was once fully saturated.

2. The absorbing power of the atmosphere, and consequently its capability to retain humidity is proportionably greater in warm than in cold air.

3. The air near the surface of the earth is warmer than it is in the region of the clouds. The higher we ascend from the earth, the colder do we find the atmosphere. Hence the perpetual snow on very high mountains in the hottest climate. Now when from continued evaporation, the air is highly saturated with vapor, though it be invisible and the sky cloudless, if its temperature is suddenly reduced by cold currents descending from above, or rushing from a higher to a lower latitude, its capacity to retain moisture is diminished, clouds are formed, and the result is rain. Air condenses as it cools, and like a sponge filled with water and compressed, pours out the water which its diminished capacity cannot hold. How singular yet how simple, the philosophy of rain! What but Omniscience could have devised such an admirable arrangement for watering the earth?—*Scientific Journal.*

STEAM SLEIGH.—A Polish exile in Siberia has invented a means of applying steam power to the traction of sleighs, by which journeys can be made with rapidity over the frozen snows and the steppes covered with ice, which abound in the Russian dominions. Such an invention, it seems to us, might be valuable in this country for winter traveling over our broad prairies and ice-bound lakes.—*Scientific American.*

THERE'S WORK ENOUGH TO DO.

The black-bird early leaves its rest
To meet the smiling morn,
And gather fragments for its nest
From upland, wood and lawn.
The busy bee that wings its way
'Mid sweets of varied hue,
And every flower would seem to say—
"There's work enough to do."

The cowslip and the spreading vine,
The daisy in the grass,
The snowdrop and the eglantine,
Preach sermons as we pass;
The ant, within its cavern deep,
Would bid us labor too,
And writes upon his tiny heap—
"There's work enough to do."

The planets, at their Maker's will,
Move onward in their cars,
For Nature's wheel is never still—
Progressive as the stars!
The leaves that flutter in the air,
And summer's breezes woo,
One solemn truth to man declare—
"There's work enough to do."

Who then can sleep when all around
Is active, fresh and free!
Shall man—creation's lord—be found
Less busy than the bee?
Our courts and alleys are the field,
If men would search them through,
That best the sweets of labor yield,
And "work enough to do."

To have a heart for those who weep,
The sottiſh drunkard win;
To rescue all the children, deep
In ignorance and sin;
To help the poor, the hungry feed,
To give him coat and shoe;
To see that all can write and read—
"Is work enough to do."

The time is short—the world is wide,
And much has to be done:
This wondrous earth, at all its pride,
Will vanish with the sun!
The moments fly on lightning's wings,
And life's uncertain too;
We've none to waste on foolish things—
"There's work enough to do."

Christian Witness.

For the New England Farmer.

INVERTED POSTS.

Having noticed an article on this subject written by Zina Round, of Nevada, Wis., and inserted in the *N. E. Farmer*, Aug. 21st, 1858, and being of the same opinion in regard to the matter, I would give a few reasons why inverted posts and stakes will last longer than those set in an upright manner, and why wood will season better set up top end down, than in any other way.

In order to come at this, we must understand a little of the nature of the growth of plants, trees, &c. The plant or tree consists of roots, which are located in the soil, leaves which are spread in the air, and a stem or trunk and limbs which connects the roots and leaves. This stem is intercepted with sap vessels or tubes which extend from the end of the roots to the surface of the leaves, thus affording a passage for the sap, a circulation of the moisture taken in by the

roots from the soil to sustain the growth of the plant, and from various causes it is drawn up towards the leaves, where it is evaporated. Now one of these causes is the action of these sap vessels or fibres of wood which serve as valves to force the sap upward similar to those in animals in the blood vessels, (as the vegetable and animal kingdom are similar.) This being the case, which is, undoubtedly, in my mind, and which can be proved by experimenting on trees in the sap-running season, it accounts for posts and stakes lasting longer set in an inverted matter, than those set in an upright manner, and also for wood seasoning better set up, top end down; for the action of the sap vessels (while set in this manner) aided by the attraction of gravitation, drains the timber of all its moisture, it becomes seasoned, and will not decay, while those set in an upright manner will retain their moisture, fermentation takes place, hence decay.

R. A. DAMON.

Ripton, Vt.

THE FARM OF ELIJAH WOOD, JR.

IN CONCORD, MASS.

He who manages a farm *profitably*, setting a good example to his neighbors, and to the stranger who passes by his gates, is a public benefactor. He may make two blades of grass grow where only one grew before, but if it is done *at a loss*, he must eventually starve, and he is not a public benefactor, nor his example a good one.

He does not manage a farm *profitably* who increases the fertility of his acres, enlarges his barns, multiplies his kine, and makes his trees drop fatness, if in so doing he starves his soul, breaks down his health, and brings up his family about him in a state of servitude that is only one degree from intolerable.

Such a course is extravagant, unreasonable, and will be ruinous in the end, no matter how many shares may be accumulated in the bank, mill or railroad, how many fair acres teem with fertility, or how many scores of cattle and sheep may graze upon the hills which the owner calls his own. There is no real profit in it all.

The farm of which we are speaking has not been managed in this way,—for while the stock has increased, and the rough places become smooth, and while luxuriant grain and corn, and grass fields, have yielded to him their rich and varied crops, and rivers of milk have been flowing from his healthy and well-tended cows, his own soul has expanded and kept progress with the material things about him. The *farmers' club*, the *lyceum*, the *church*, the *school*, all the *social relations* of life, have been cherished and cultivated as well as the farm,—and this is what we call *profitable cultivation*. For what profiteth it a man if he gain a whole *farm*, and lose *himself*!

Mr. Wood manages two distinct farms; his own, which he has brought to a high state of fertility, principally from its own resources, and an adjoin-

ing farm owned by a non-resident. His crops on these, last season, were 20 acres in potatoes, 13 acres of which were planted in swamp land, in process of reclamation, 20 acres in corn, 4 in southern corn for fodder, 11 acres in oats, 11 in rye, and cut 160 tons of hay! He is wintering 90 head of cattle, principally milch cows, and sold, between the first of October and the first of April of last year, *one thousand, nine hundred and seventy-five dollars worth of milk*, and for the then ensuing six months, expected to sell something over *one thousand dollars worth more*. He thinks the two farms capable of supplying \$5,000 worth of milk annually. But he sells the milk as a matter of convenience, and not because he thinks that the *most profitable* way of disposing of it.

Within a year he has built more than 150 rods of balance and bank wall, bogged and partially reclaimed fourteen acres of swamp land, and has arranged to build not less than 400 rods more of wall, and to reclaim 20 acres more of swamp land, where young trees and bushes are now standing.

On finding that the aggregate of his cultivated land was 66 acres, exclusive of mowing land, the inquiry was a natural one, whether he could give so many acres sufficient manuring to make it profitable to have so many at once under the plow? The reply was, that no acre had been planted without its complement of *thirty* ox-loads of manure, except the swamp land, which had been planted without any. In the summer preceding the crops of which we are speaking, he had tied up about fifty head of cattle, and to their droppings he had added muck, and whatever other valuable materials he could command, in order to swell the heaps and add to their value.

Mr. Wood long ago learned that his low, moist lands were those which he must depend upon for his grass crops, and by a judicious management of them, by a thorough working of them when plowed, by liberal manuring and seeding, followed by a top-dressing of rich, well pulverized compost every other year, he can keep them sufficiently active to produce an average of two tons per acre for ten or twelve years in succession. This is one of the causes of his success in farming; for from land valued at \$100 per acre, he gets an annual crop worth \$30 for the two tons of hay, and a crop of rowen which is either cut and cured or fed by the stock, and worth at least \$8 per acre, making an aggregate of \$38 an acre. The cost of getting this hay is not more than \$5 an acre; the interest on the cost of the land \$6, leaving a net gain of \$27 per acre, without any palpitations of heart as it regards the solvency of these acres! What investments in mills, banks, railroads, or even commerce or trade, are so safe and lucrative as these?

At one of the barns where the stock is kept, water is brought by a hydraulic ram, to the yard, and thus an otherwise heavy and constant labor is averted. Arrangements are being made to introduce water to the other barn by the same means. Just as we were leaving the premises, we noticed eight fine shoats, and about 100 fowls. Mr. W. informed us that he had made careful experiments in feeding the fowls, and had ascertained that he could feed them liberally on a variety of food, at a cost not exceeding one-third of a cent per day, and that the results were so favorable that he intends to increase the number to five hundred, the coming summer.

In managing these farms, Mr. Wood introduces the best implements he can find, whether his great grandfather ever used them or not. His grass is mostly cut with mowing machines, and raked by horse-power, while his plows, harrows, seed-sowers and weeders, are all of the latest construction, if he finds they work better and quicker than older ones. He is a man of progress. His farm-work is all twice performed; first by Head-Work, and then by Hand-Work,—so that his men are moved by a system, and are never vexed by delays and contrary directions. He makes his "brief," as well as the lawyer, and a glance at it shows him precisely where he stands, or in other words, where he stuck up his hoe! When he is appointed to lead in a discussion at the Farmers' Club, he devotes an evening to an investigation of the subject, and is thus prepared to speak upon it with profit to others, and credit to himself.

Last summer he had some dozen acres of rye to harvest, very little of which stood less than six feet high. It occurred to him that *reaping* rye was a slow and laborious process, so he introduced scythes into his fields, and before three acres had been gone over, skill had been acquired to cut it, and lay it out in rows quite as well as the reapers did, and at least five times as fast.

For the New England Farmer.

POTATOES FROM SEED.

"Reader, will you write for —?"

This question, which I find in a leading agricultural journal, awakened a desire to make some small return for the valuable information I obtain through agricultural journals, none of which do I prize more highly than the *New England Farmer*. I have no theory to maintain, but in what I have to say, and with full leave for the free use of scissors or fire, I will give you my experience in

RAISING POTATOES FROM SEED.

Five years ago, finding on some early purple potatoes an abundance of very large balls, it occurred to me that it must be a healthy variety, and a good one to test the experiment of invigorating the tuber, and producing new varieties.

The first year I obtained about a quart of tubers from the size of a pea to that of a walnut—the second season some of them increased to a moderate size for the table—the third many of them were full size—and the last year they average as well as potatoes generally for size.

Though the seed was from an early dark purple roundish potato, the produce is nearly all of a yellow cast—many of the Carter shape—some ripened with early potatoes, some are late.

Now as to quality. I have never found one decidedly good. Some few, not many, have rotted. They are generally pretty smooth, the eye less sunken than most potatoes—most of them are hard and require thorough boiling, and then appear more like a natural than a cultivated plant. What may be the result of further culture, remains to be seen.

We are more inclined to speak of success than of a failure, and while it would have been gratifying to me, I prefer to state facts, and the result of experience and observation, believing it to be the true way to promote the cause of agriculture in its various departments.

Truly yours, s. s.

Amherst, Jan. 3, 1859.

For the New England Farmer.

BARN CELLAR VS. OUT-DOOR MANURE.

FRIEND BROWN:—I have read lately an article in the *Farmer* from the pen of Mr. Mansfield, of Needham, on the subject of manure; and as I do not believe in the doctrine therein advanced, I propose to say a few words about it.

If his doctrine is true, it must be that I live in a very benighted neighborhood, so far as manure and barn cellars are concerned, at least. There are in this neighborhood twenty-three farms adjoining each other; seven in Dracut and sixteen in Pelham, with cellars under the barns where manure is kept and composted, and I will venture the assertion that there cannot be found that number of adjoining farms in New England where better corn, in quantity and quality, is raised than we have raised since those cellars were built, taking the quality of land into the account—and more than that, we have no trouble about our corn coming up, so far as I have learned.

It is well known to every good farmer that manure may be, and often is, strong enough to kill corn and other tender plants, when the seed is put directly upon it, and the man who does not compost and reduce this cellar manure, or use it in some other way than putting it in the hill, has scarcely taken his first lesson in farming, and ought to lose his crop a few times, until he can learn better. Your correspondent says not one word about the way he uses his manure, so that we may infer that it kills, let him use it as he will. He had better take 100 pounds of clear manure, dried in the cellar, and another 100 from under the eaves of the barn, and make them separately into a liquid and give them a fair trial, before he gives up his cellar.

I am well aware that hogs do not do as well in a cellar under cattle, as they do out in good pens or on horse manure. B. F. CUTTER.

Pelham, N. H., Dec. 23, 1858.

For the New England Farmer.

INTELLECT ON THE FARM.

MR. EDITOR:—There is at the present day a very general effort among those who are considered leaders of agricultural improvement, to infuse more mind into the various operations of the farm. Your correspondent has often referred to this subject. There is no danger whatever of a man being too learned to carry on a farm; he may possibly make brains pay better in some other calling, but there is no other which will make a greater demand upon it, if he takes hold of the business in earnest, and as it is capable of receiving. My desire is to see our New England farmers put more of this material into farm business than they have done heretofore. I feel confident if they will do so, they will find an increase of profits. True, muscle and mind or brain must go together. Our people, both men and women, particularly the latter, work too hard. I do not take into the account loafers and the lazy; it makes little odds what becomes of these. They do not give themselves that leisure for intellectual improvement which they ought to have. A farm, of all the places in the wide world, offers the greatest field for mental culture, and I am happy to know that our New England farmers, their wives and daughters, as well as the sons, are beginning to appreciate their calling in this light; depend upon it, farmers, you are in the right road; it will lead you safely and happily to glorious results.

Permit me to call your attention to a delightful source of entertainment as well as instruction. How few farmers, or of those not such, know much about the habits, offices and structure of the hosts of insects found on the farm; many of them great helpers, accomplishing more in a day for the benefit of the farm, than all the hands of the farm could muster; while others are equally destructive. Do you know which are your friends and which your foes? Do you know the various transformations many of these insects pass through? Do you understand the general characters by which the different species are known, and whenever seen, easily recognized? Here is a study for you, full of interest, and easily understood. One that nine-tenths of our New England farmers can comprehend, if they will only take the little trouble required to do so. I know that in order to obtain the information, and make insect study interesting, you will need a microscope, and my object in writing this article is to tell you where you can obtain just the instrument you need, and its cost. If you will send to J. & W. Grunew, of New Haven, Ct., inclosing twelve dollars, they will send you one of the most beautiful little microscopes in this or any other country, every way complete and ready for use. With this little instrument you can devote an hour at the close of the day's work to the study of such insects, or any thing else suitable, which you may have collected through the day. My word for it, you would soon have wife and children and hired men about you, all eager to behold the wonders and the wisdom of God as manifested in the minutest of His works, and you would soon learn that there is one general law or type peculiar to each and every species. Then, too, as you pass around in the or-

chard, you might see some particular favorite tree, its leaves looking sickly and its limbs and trunk covered with moss or fungi. You guess something is the matter with it, but what, that's the question; you take a leaf or two, a bit or so of moss, place them under your glass, and you need not doubt longer; a great and interesting truth finds its lodgment in your brain, to be brought out on some future time for a useful purpose, and many dollars saved thereby.

What I wish is that you farmers should know the whys and wherefores of those thousands of operations which are every day going on about that glorious farm of yours, and be able to explain those operations, so far as it is in the power for human intellect to do. This privilege is yours, and a little effort on your part will accomplish the business; though you may not be a Harris or an Agassiz, still, you may be an intelligent, go-ahead, thinking farmer, and this is honor enough, and what Norfolk wishes to see you.

NORFOLK.

King Oak Hill, 1859.

CULTIVATION OF THE YELLOW LOCUST.

For the information of D. P. POWERS, of Madison, Wis., I will undertake to answer his inquiries respecting the growing of locust timber. I believe I "really know something about it," having sown the seed in three different localities, and brought them to a profitable maturity in each case. And permit me to say, that I look upon the locust as the most profitable timber for cultivation in our country; and have often, in my visits to the prairies of Wisconsin and other Western States, wondered why it was not more generally cultivated, both for timber and shelter from the wind.

The yellow is the kind used here, and probably the best for timber or fuel. The seed can be procured at any of the large seed stores of Albany, Rochester or Buffalo, and probably at Chicago. If the trees can be found of sufficient age in Illinois or Wisconsin, seed can be obtained from them at this time, as it remains on the trees all winter, and is not injured by the storms. I have seen trees bearing seed, on the prairie a few miles west of Racine. Probably plenty can be procured in that region merely for the gathering. Plant the seed about the 15th of May, or when the ground is in good condition to plant corn.

Prepare the seed for planting, by pouring on it rain water, nearly boiling hot. Let it stand in a warm place, say under the stove, or near the chimney corner, until the seeds have most of them swelled to about double their usual size; and are so soft as to be easily cut in two, by pressure between the finger and thumb nail. This requires twenty-four to forty-eight hours' soaking, and if all are not swollen, sow those that are so, and repeat the soaking, but with water not quite so warm as at first.

Prepare the ground in the most thorough manner. It should be rich, dry and mellow, and free from the seeds of weeds. I have succeeded well, on a green sward, freshly plowed, and the surface well mellowed with the rake. The ground should be in fit order for sowing onions, as the plant when it first shoots is very tender and small.

Plant shallow, not over one inch deep, and tread the ground or roll it after the seed is in. Rows about four feet apart, and seeds three or four inches apart in the row; so as to insure plants enough for one to each space of twelve to eighteen inches. Hoe them as soon as they are fairly up, which will be in fifteen to twenty days after planting. With these, as with every other young plant, careful attention is necessary, to insure the best success. If well attended to, an average growth of four feet each may be expected the first season. After the first year, but little attention is needed. Do not undertake to improve them by trimming, except to prevent crotches, which are objectionable if timber is the object.

They will withstand the winds, as well probably as any other tree. The only enemy we dread is the borer, which is sometimes troublesome, but not seriously so. The general advantages are, rapid growth, fourteen to sixteen years producing trees large enough for posts, great durability and weight, with strength and toughness, fitting them for wagon-hubs, railroad-ties, &c. No other timber, I think, equals it for the purposes desired, and certainly none in the facilities with which it can be produced.—LEVI J. HOPKINS, in the *Country Gentleman*.

FIRST LEGISLATIVE AGRICULTURAL MEETING.

It was ordered by the Legislature on Monday, Jan. 10th, that the use of the hall of the House of Representatives be granted for the purpose of holding the usual Legislative Agricultural meetings during each *Monday* evening of the session.

The first of the series was accordingly held on last Monday evening. The meeting was called to order by the Secretary of the State Board of Agriculture, who stated the objects for which the meetings were held, with a sketch of what they had hitherto been, and what they had accomplished, and suggested by way of organization, that a chairman be appointed for the evening, when Mr. MILLER, of Coleraine, was called to the chair, and Mr. G. P. SARGENT, of Newbury, to whom our reporter is indebted, was chosen Secretary.

The Chairman stated what had been done in his own town by way of forming a farmers' club, how it had been conducted, and what its influence had been.

Mr. FLINT suggested the propriety of appointing a committee to nominate a permanent committee of arrangements to have the general supervision of the meetings, when Messrs. PECK, of Sterling, PAIGE, of Brimfield, and the Secretary of the Board of Agriculture, were appointed.

Interesting remarks were made by Messrs. MARTIN, of Warren, HAYNES, of Sturbridge, PAIGE, of Brimfield, and several others.

Mr. FLINT gave a general account of the origin

and condition of the agricultural societies of the State, and what they had done and were doing, and of the origin and manner in which the Board of Agriculture was constituted, and a succinct statement of the connection of the Board with the management of the State Farm at Westboro'. Questions being asked with regard to the State Society, he answered, by giving an account of its operations and management, in the importation of stock, in offering premiums, &c. It was

Voted, That the subject of the next evening's discussion be, *The interest and the duty of the Government to develop and encourage the development of industrial resources of the State*, and that His Excellency, the Governor, be invited to preside.

Adjourned to Monday, Jan. 17th, at 7 o'clock, P. M.

For the New England Farmer.

COUNTY AGRICULTURAL SOCIETIES.

MR. EDITOR:—*Sir*,—I like the plain talk in your columns of this morning, about our County Agricultural Societies, and the support they receive from the State. The original design, at the commencement of the organization, (for I remember it well,) was, that there should be one State society, and one Society in each of the counties of the Commonwealth, and no more, and that each of these should receive \$600 a year from the Treasury of the State. This, if my estimate is right, would amount to a sum not exceeding \$9000—a moderate contribution for the benefit of the farmer. But since then, there have grown up some eight or ten other exerecencies, receiving four or five thousand dollars annually, together with the State Farm at Westboro', three to six thousand more, all of which in my judgment are misappropriations of the funds of the State, that demand immediate correction, inasmuch as they endanger the entire fabric.

A MASSACHUSETTS FARMER.

Dec. 25, 1858.

A SINGING MOUSE.

One of these little animals inhabits our office. For several years past he has made his home in it. He has become very familiar with all hands, and in broad daylight he can be seen playing around the feet of the compositors, or dancing about the cases, seemingly as little apprehensive of danger as if snugly away in his nest. The paste-cup is his delight, but he never objects to a bit of cake, or fruit, with which his admirers occasionally supply him. He is a most remarkable little animal. A piece of cake puts him in high glee, and when he has devoured it, he gets in a corner and sings like a canary bird, his notes being sweet and melodious. Sometimes he will sing for an hour without intermission. He is a general favorite—does what he pleases with impunity—and is regarded as a sort of fixture in the office. Even while we are writing he is playing on the table, and is so tame that he suffers himself to be handled without any show of fear.—*Cumberland Telegraph*.

TRANSACTIONS OF THE ESSEX AGRICULTURAL SOCIETY FOR 1858.

By the kind attention of the indefatigable Secretary of this society, we are favored with a copy of this annual. It is a handsomely printed pamphlet of 224 pages, and contains, beside the ordinary papers showing the operations of the year, 100 pages at least of permanently valuable matter, that will often be resorted to for guidance and instruction.

First among these are the papers relating to the Treadwell farm. By the persevering efforts of the late President of the society, this farm is now in condition to be creditable and useful. I trust it will, ere long, become a model farm. True, it is not one of the best of farms—but if it can become best improved comparatively, this will be enough.

This society was most fortunate in having such orators as Everett and Loring to address them at their annual show. Their speeches are given in full, and will well reward perusal. There are other finely written papers in the volume, which will be read with interest. I am pleased to see such respectful notice, as appears in this pamphlet, of that model of Massachusetts farming, the late Moses Newell, of West Newbury. He was worthy all that is said of him. I have long looked upon the publications of this society as models for imitation—and the present, if I mistake not, will be found equal to any that has preceded it.

THOROUGH TILLAGE.—At one of the Irish agricultural meetings, one of the speakers remarked—and the truth may be well applied in this country:

“What brought out the immense agricultural wealth of Scotland? and what enabled the small farmer in Belgium, who, on seven or eight acres of light, sandy land, was able to do better for himself and his family than we can do on twenty or thirty acres of land in this country? It was not by allowing three-fourths of a light tillage farm to remain in poor herbage, and making the other quarter pay the rent. It was because the farmers in those countries he alluded to, made agriculture a study, a duty, and a pleasure, and because the farmers till their land to the best advantage, and because no man there would keep one single acre of land more in his possession, than his capital and his means would enable him to cultivate.”

TO MEASURE HAY-STACKS.—“More than twenty years since,” says an old farmer, “I copied the following method for measuring hay from an old publication, and having verified its general accuracy, I have both bought and sold by it, and I believe it may be useful to many farmers where the means of weighing are not at hand. ‘Multiply the length, breadth and height into each other, and if the hay is somewhat settled, ten solid yards make a ton. Clover will take from ten to twelve solid yards per ton.’”

BOYS' DEPARTMENT.

THE SLAVE BOY'S WISH.

BY ELIZA LEE FOLLEN.

I wish I was that bird,
Up in the bright blue sky;
That sings and flies just where he will,
And no one asks him why.

I wish I was that little brook,
That runs so swift along;
Through pretty flowers and shining stones,
Singing a merry song.

I wish I was that butterfly,
Without a thought or care;
Sporting my pretty, brilliant wings,
Like a flower in the air.

I wish I was that wild, wild deer,
I saw the other day;
Who swifter than an arrow flew,
Through the forest far away.

I wish I was that little cloud,
By the gentle south wind driven;
Floating along so free and bright,
Far, far up into heaven.

I'd rather be a cunning fox,
And hide me in a cave;
I'd rather be a savage wolf,
Than what I am—a slave.

My mother calls me her good boy,
My father calls me brave;
What wicked action have I done,
That I should be a slave?

I saw my little sister sold,
So will they do to me;
My Heavenly Father, let me die,
For then I shall be free.

THE PINK.

“O, dear mother, give each of us a flower-bed; me one, and Gustavus one, and Alvina one,—and each will take care of his own.” Thus said little Frederick to his mother, who granted his request, and gave each child a flower-bed planted with fine pinks.

The children were overjoyed, and said, “How splendidly it will look when the pinks are in bloom!” For it was not yet the season for pinks; they had only put forth their little buds.

Little Frederick, however, was too impatient to await the time of their blooming, and he wished that his flower-bed might be in blossom before all others. He took the buds in his hand, looking at their green covers, and rejoicing when he saw a yellow or red petal peeping forth here or there. But he could not wait patiently: Frederick opened the buds and unfolded the petals altogether; then he exclaimed with a loud voice, “Look, my pinks are in bloom!”

But when the sun shone on them, the flowers drooped their heads, and before noon they all looked mournful, faded and torn. Then the boy cried about his flowers; but his mother said, “Impatient child! may this be the last pleasure of your life that you mar by your own fault, then you will not have bought too dearly the great and difficult art of WAITING PATIENTLY.”

TATTOOED SKIN.—Our valued friend and contributor, Septimus Piesse, of London, informs us that the marks or devices which some young people, and sailor boys in particular, make on the skin by pricking it with needles, and then rubbing the punctures with indian ink, vermilion and indigo gunpowder, are so firmly fixed that to remove them severe means must be resorted to. The following treatment will be found efficacious:—Blister the part with a plaster a little larger than the mark or "ornament," then keep the place open with a green ointment for a week; finally, dress it to get well. As the new skin grows, the old tattoos will disappear.—*Scientific American.*

☞ The most remarkable instance of indecision we ever heard of was that of the man who sat up all night because he could not decide which to take off first, his coat or his boots.

LADIES' DEPARTMENT.

SCHOOL GIRLS IN WINTER.

We wish to put in a special plea for the girls. Make their dresses short enough to swing clear of the snow and mud, and give them good waterproof boots, to wear to school. Yes, we insist upon it—they should have boots. Women's shoes of the present fashion are no more fit to be put upon country roads in winter, than an Indian's birch-bark canoe is fit to cross the Atlantic. Boots will not look quite so trim about the ankle, or step so lightly upon the floor, but they will do what is of more consequence—preserve the health to show off these graces in after life, and to take a great many elastic steps that otherwise might be fewer, and those leading directly down to the grave.

Another thing we are glad to see coming in fashion: the ladies are learning to skate, and for this they must have boots. Now, girls, get each of you a pair of neat winter boots, and a pair of skates to fit, and the first ice that forms in your neighborhood, large enough, go out with your brothers, or somebody else's brothers, and learn to skate. Be prudent about it, and not overdo the exercise, and you will find it a capital medicine—next to horseback riding.

The only way to bring about a race of healthy women, is to attend to the physical development of the girls before they are diluted in the false system of fashionable accomplishment, that fits them for nothing but elegant imbeciles.—*Ohio Cultivator.*

HOUSEHOLD CARES.

Mrs. Kirkland has very truly said that woman is never really and healthily happy, without household cares. But to perform house-work is too frequently considered degrading. Even where the mother, in obedience to the traditions of her youth, condescends to labor occasionally, the daughters are frequently brought up in perfect idleness, take no bodily exercise except that of walking in fine weather, or riding in cushioned carriages, or dancing at a party. Those, in short, who can afford servants, cannot demean themselves, as they think, by domestic labors. The

result is, too frequently, that ladies of this class lose what little health they started life with, becoming feeble in just about the proportion as they become fashionable. In this neglect of household cares, American ladies stand alone. A German lady, no matter how elevated her rank, never forgets that domestic labors conduce to the health of mind and body alike. An English lady, whatever may be her position in society, does not neglect the affairs of her household, and, even though she has a house-keeper, devotes a portion of time to this, her true and happiest sphere. A contrary course to this, results in a lassitude of mind often as fatal to health, as the neglect of bodily exercise. The wife who leaves her household cares to her domestics, generally pays the penalty which has been affixed to idleness since the foundation of the world, and either wilts away from sheer ennui, or is driven into all sorts of fashionable follies to find employment for her mind. If household cares were more generally attended to by ladies of the family, there would be comparatively little backbiting, gossiping, enviousness, and other kindred sins, and women in good society would be much happier and much more truly lovable.—*Springfield Republican.*

DOMESTIC RECEIPTS.

FRUIT PUDDING.—1½ lb. each of flour, grated potatoes and grated carrots, and ¼ lb. of suet. Salt and spice to taste. Boil 3 hours. To be eaten with wine-sauce.

BOILED BREAD PUDDING.—Half a loaf of stale bread soaked in a quart of milk; 4 eggs; 4 table-spoonfuls of flour. Boil ¾ of an hour; serve with wine-sauce. A little green or dried fruit mixed in is a good addition.

"WINE-SAUCE" WITHOUT WINE.—Butter and sugar thickened with corn-starch, and flavored with the rind and part of the juice of a lemon.

POP-OVERS.—One cup of flour; 1 egg; butter the size of a nutmeg. Bake in small tin rounds. The same rule is good for nice drop-cakes, baked in cups; or boiled batter pudding.

GRANDMA'S BATTER PUDDING.—One quart of milk; 9 eggs, (if you have got 'em;) 9 table-spoonfuls of flour, and a little salt. Steam 1½ hours—if steamed just enough, the pudding will retain its form, and it cannot be excelled for delicacy.

GRANDMA'S MARLBOROUGH PIE.—12 spoonfuls each of sifted (stewed) apple, beaten egg, and melted butter—all thoroughly mixed, and flavored with lemon and sweetened to the taste. Bake without upper-crust. Less butter than the above will do.

APPLE CUSTARD.—Take fine apple-sauce, flavor with lemon or rose, and fill the pie-plates with it. Pour over a nice custard flavored with nutmeg or vanilla, and bake.

A TURKEY BOILED AND THEN BAKED.—Prepare the turkey just as if for baking; then put in a kettle, covering it with water, and closing it with a lid. Boil until quite tender. Then take it out and brown it in an oven for a few minutes. When put upon the table it will be found very tender and juicy.



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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NO. 3.

JOEL Nourse, PROPRIETOR.
OFFICE...34 MERCHANTS ROW.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

CALENDAR FOR MARCH.

Spring is but the child
Of churlish Winter, in her froward mood;
Discovering much the temper of her sire;
For oft, as if in her the stream of mild
Maternal nature had reversed its course,
She brings her infants forth with many smiles,
But once delivered, kills them with a frown.

COWPER.



MARCH is the first spring month, according to the usual division of time, although one sees very little of that "ethereal mildness," which Thomson so pathetically invokes, until April or even May.

Yet long before the "merry songsters" and "budding flowers" which warble and blossom so deliciously in poetry, make their appearance in point of fact, there are "sweet influences" which make themselves felt by all. Those patches of bare ground which we have not seen before since the snow came and covered everything last November—the "softer airs" which breathe upon us in the intervals of east winds and driving storms—the more jubilant crowing of our rooster, who rejoices to tread "his own native heather" once more, and who holds long conversations on the subject with all his neighbors—yes, even the muddy highway, which affords us neither sleighing nor wheeling—and the overflowing rivers, which in some vicinities suggest a second deluge—all these things tell us of returning life, and we cannot help sympathizing in the general

rejuvenation which is taking place in the world. Why! we almost expect to see our own white hair growing brown again, or our wig giving place to a new "native growth."

Now is the time, in this flush of hope, to get all things in order for spring work. See that the farming implements are ready for use—get the seeds together, so that when the frozen ground becomes softened, you may not have that duty to perform—a duty requiring much care and the exercise of a sound judgment.

Make your plans for the whole season's operations with deliberation, and with reference to the whole of your crops. Decide what field shall receive the corn, the oats, wheat, barley, potatoes, roots, &c., so that when the sun has evaporated the redundant moisture, and the condition of the soil invites you to plow and deposite your seed, you will not be delayed by any doubts as to *where*, and to *what extent*, your various crops are to be placed. This is the *heal-work* of the farm, and can better be done by the evening fire, with pencil and paper in hand, than in the hurry and responsibilities of the field. A rude map of your plans, one that any hand can sketch in a few minutes, would greatly aid the memory and facilitate your labor.

There is an old saying, "Time and tide wait for no man." We may procrastinate, if we will, but seed-time will come and go all the same, and if we neglect it, we shall have no harvest.

There is also a *moral* seed-time, which if we fail to improve, will pass by us to return no more—but in this case we shall find not alone *no* harvest, for while the husbandman slumbers, the enemy sows tares!

And yet, while the young cannot be too much impressed with the importance of starting right, we must hazard one suggestion for the benefit of those who have neglected past opportunities,—namely, there are some seeds which it is much better to sow *late*, than *not at all*.

and we cannot help sympathizing in the general

The first spring flower which blossoms, so far as we know, throughout New England, is the May-flower, (*trailing arbutus*.) It is commonly supposed to have received its name merely from the fact of its being found in May, but as it is found still more abundantly in April, we are inclined to receive the tradition that it was so called by the Pilgrim Fathers, in honor of the vessel in which they came over—it being the first flower they discovered in their new home. This, certainly, is the more interesting, and as we think, the more probable theory. We have found its buds late in the fall, thus showing that it makes its preparations for blossoming some months beforehand. We have tried the experiment of placing these buds in a tumbler of water in a sunny window, hoping to produce the novelty of

“A May-flower in December,”

but have never yet succeeded, although they may be hastened in spring by a similar process.

Then there are violets, snow-drops, anemones,—all lifting up their heads in the most out-of-the-way places—many of them “born to blush unseen,” and each one the very synonym for purity and modesty. Did it never occur to you, as you have come suddenly upon one of these wild gardens of nature, “Why are so many beautiful things placed where man seldom or ever sees them?” And did not the answer suggest itself. “It must be that God loves to see them!” With this thought, the solitary places of the earth are no longer solitary. If we indulge our thoughts a little further, is it not easy to suppose these places filled with the spirits, minds, or intelligences of those made holy, not subject to the conditions of animated matter, and all progressing and rejoicing in the love and wonderful works of our Heavenly Father! All these flowers and trees of the forest, the springs that run among the hills, the insects that sport in the sunbeams, and the whirlwind that scatters the flocks or strips the hills, are just as much the work of His hands, and the objects of His care, as that far-off Heaven that is so indefinite, and undefinable in the popular mind! The field for reflection in this matter is infinite.

There are people in the world—but we hope you are not one of them—who look at everything through the medium of “*What is it good for?*” “*What did it cost?*” and perhaps still more to the purpose, “*What will it bring?*” Now it is a good thing to be practical,—but we have little sympathy with those intensely practical people who ignore the refinements of taste, who labor all their lives to feed and clothe the body, but leave the soul entirely out of the account.

Let us have our vegetable garden, with its beets and cabbages and turnips, and take good care of

it too,—but then there shall be a spot set apart to be made beautiful with flowers, “God’s messengers,” as some one has called them, and there shall be a trellis for a vine and a climbing rose over our portico. We will have an orchard with apples, pears and peaches somewhere in the rear of our dwelling, but it need not interfere with the shade trees and shrubbery in front.

Burns turns up a “Mountain Daisy” with his plow, and while he goes on with his labor, composes one of his sweetest poems:

“Wee, modest, crimson-tipped flower,
Thou’st met me in an evil hour,
For I maun crush among the stoure
Thy slender stem;
To spare thee now is past my power,
Thou bonnie gem.”

A less delicate nature would have passed it carelessly by, or, if he noticed it at all, would, perhaps, have wondered why it could not just as well have been a potato!

Nature has many lessons for us, if we will only learn them; and who has a better opportunity to note them than the farmer, whose life is passed in watching the processes of animal and vegetable life? What a world of information he ought to collect, and *does*, if he keeps his eyes open.

“Scarcely a branch of natural science,” says a writer, “but has an intimate relation to the business of agriculture, and peculiar claims upon the farmer.” And he goes on to say—“Nor can any good reason be assigned why he should not have the benefit of full instruction in all the branches of useful learning.”

It is not, however, the study of *books*, so much as the study of the book of Nature herself, to which we now refer, and for which the just qualification is a *habit of observation*. Creation is full of wonders and mysteries, and perhaps, you feel this as much in looking at a grasshopper’s leg through a microscope, as at the most distant planet through a telescope. Perhaps there is as much mystery in the fact that an apple falls down instead of up, and that grass grows *up* instead of *down*, as in the revolution of the sun, moon and stars!

FARM WORK FOR MARCH.

The duties that devolve on the farmer in the month of *March*, though not so instant and pressing as at some other seasons, can no more be dispensed with and have the farm managed well, than can a field be well plowed with the off ox half the time out of his bow. There is so intimate a connection and interweaving of the business of all the seasons, that the omission of the cares of one must sadly impair the whole. In order, then, that *March* shall discharge its special duty to the other months, let us glance at

some of the things that she must not shift off upon April or May—and first, because of the first importance—

MANURES.—There should be as much pride with the farmer to keep everything systematic and neat, as with the merchant to keep his store so, or the captain the deck of his ship, or the mechanic his shop and tools; for thrift usually follows neatness and systematic industry.

In order to preserve these appearances upon the farm, we think as much of the manure should be hauled to the fields in the month of March, as can conveniently be done. There will be little or no loss while it freezes and remains so, and as soon as the ground thaws it may be slightly covered. Here it is, on the field where it is to be used, and where twice or three times as much can be applied to the soil in a day, as could be done if it were to be taken from the barn-yard or cellar. The finer it can be reduced, the more prompt will be its action, and larger the crop, other things being equal. In order to effect this, as soon as the frost will permit, work over, pulverize and mingle the mass, returning it into a well-rounded compact pile. Leave two or three small, long stakes inserted in it, and occasionally draw these up and notice by their warmth how far fermentation has gone on,—as nothing more than a gentle heat should be allowed to take place. A manure heap in this condition, mingled two to four inches deep in moist, porous soil, cannot fail to produce favorable results.

THE STOCK.—Milch cows will need especial care, as if they become thin and weak, it will take until near midsummer to get them into vigorous condition for the dairy.

CALVES should be generously treated. It is thought by some that an early stunt is a stunt for life; however that may be, it is clear that if a calf once loses its healthy and vigorous habit of growth, it requires much time and high feeding to restore it to its original condition.

SHEEP.—Bring to their yard, pine, hemlock, black birch and other branches from the woods, and they will be “much obliged to ye.” A little better feed than usual will strengthen them, and be of much service to the lambs. Liberal feed to them of the best kinds of fodder, will afford the highest profit.

FLAX.—We have not forgotten the sunny days in the open barn floor in February and March, when the eaves were dripping, the bundles of flax drying in the sun, and when the clatter of the “brake” and the “swingling knife” merrily wore away the day. In this region, the terms used in speaking of the processes of getting out flax, would scarcely be understood, so much has the cultivation of this article fallen into decay. But among some of our readers, the scene to which

we have alluded must still be a familiar and pleasant and profitable one. Let the flax be broken, swingled and hatched or combed, before April, or it may become an unwelcome task.

WOOD.—A calm contentment is the crowning glory of the family. What will more directly tend to this than a wood-house filled with seasoned oak, maple, beech or birch, fitted for the hearth or stove where it is intended to use it? Not anything. It needs no suggestion of ours to convince you that a good husband will provide this before planting time, if he can, and so we will not suggest it. But we urge the preservation of peace in the family, if it *does* require dry wood!

WATER.—As the hart panteth after the water-brook, so does a neat, systematic housewife for an abundance of pure, soft water. This is not always to be found in wells, or to be brought by aqueducts; but every person who has a *roof*, may have soft water. Make a cistern in the cellar, either above or below ground, and conduct the water from the roofs into it. This will be found cheaper than lugging water from the brook, or wasting soap to bring *hard* water into a condition fit for use. A plenty of pure, soft water in the family, is a wonderful promoter of the virtues and graces too!

All these things, and many more, are the proper work for March—how can they be omitted, without detriment to the business of the other months?

For the New England Farmer.

BOARDS OF AGRICULTURE FOR STATE, TOWN OR COUNTY.

What have they done, or what are they now doing? This is a fair inquiry, suggested by the perusal of his Excellency's address to the Legislature. Among the expenses of the State, he enumerates \$12,000 annual payment to sustain the boards. What is the benefit of this? To be sure, certain gentlemen are prominent in office, by these organizations; some are Presidents, some Treasurers, some Trustees, &c. &c., all gratuitously, of course, except the consequence attached to the title. But if no other benefit accrues, it is hardly expedient to draw upon the hard earnings of the people for this. Can it be shown that the grounds of the State are better cultivated? that the products are increased? that the condition of the farmer is improved thereby? that the well-being of the community is improved thereby? if so, then we say, God speed the enterprise. Man is a social being, and will often do in connection with others what he would not presume to attempt alone. This is illustrated in every benevolent effort; and why may it not be, when our own good is the object of this effort? We have recently read with interest the doings of the Board of Agriculture in the State of Maine; and should be pleased to see our own Boards giving as good an account of themselves.

January, 1859. A MASSACHUSETTS MAN.

SECOND LEGISLATIVE AGRICULTURAL MEETING.

[REPORTED BY JOHN C. MOORE, FOR THE N. E. FARMER.]

SUBJECT FOR DISCUSSION—*The duty of the Government to encourage the development of its industrial resources, especially the improvement of its Agriculture, as being the foundation of its prosperity and security of its people.*

The members of this Society met in the Representatives' Hall on Monday evening at 7 o'clock. The attendance was respectable, and included many gentlemen whose practical opinions have been fortified by sage experience in the art and science of farming. His Excellency, Gov. BANKS, presided.

Mr. FLINT, the Secretary, reported the names of the following gentlemen as a Committee of Arrangements for the meetings of the Society, and the report was accepted:—Messrs. BAGG and PECK, of the Senate, and Messrs. MILLER, of Coleraine, PAGE, of Brimfield, SARGENT, of Newbury, BARRETT, of Auburn, and NASH, of Granby.

Mr. FLINT, the Secretary, then read the following resolutions as the basis of the evening's discussion:—

Resolved. That it is the duty of every civilized government to encourage the development of its industrial resources, and especially the improvement of its Agriculture, as being the true foundation of the prosperity and security of its people.

Resolved. That the formation of *Farmers' Clubs* for the discussion of Agricultural topics, the promotion of *Agricultural Libraries* for the use of the people, the holding of local or town fairs as auxiliary to the county and State exhibitions, and the collection of Agricultural products and objects illustrating the various departments of the *Natural History* of the country, are among the most practical modes of developing the Agricultural intelligence of the community.

Gov. BANKS, although he said he was unprepared for the task, spoke to the resolutions at length, and with great ability. We can only furnish a brief epitome of his speech, and those which succeeded it. He argued that it was the duty of the national government to give its protection to the interests of Agriculture, although the extent of that protection was a subject concerning which there was much division of opinion. The substance of his observations on this particular included the assertion that, in respect to all our material industrial interests, the duty of the government was to protect them to the extent of exacting as much revenue as sufficed for its support, and no more. Regarding the duty of the local government in encouraging the industrial interests of the people, His Excellency thought there could be no question, generally; but the query arose—*What is the best method for their development?* The people of the Commonwealth, he believed, was to be willing to sustain and encourage that of Agriculture, as it was with us, as with the States at large, the original universal interest from which all others had to draw recruits to fill the avenues made in the professional and mechanical occupations by retirement

and death. What did we see in State Street every day? Men born in Boston, building high the professional and commercial fame of the city? No! but men from the country, who came here, not with jaded look and weakened minds—men with the strong, solid frames, of such as breathed the mountain air, and lived by healthy, invigorating employment. And as it was here, so was it everywhere else. In this respect the encouragement of agriculture was important. But, in another point of view, a more liberal attention to agriculture was necessary as tending to show what the true wealth of the State really was. We required from time to time to realize what we could do. We ought to know, and how should we manage to inform ourselves? Only by the accumulation of the products of the State—their aggregation precisely in the way followed by commercial men in regard to the products in which they had a peculiar interest. If the process showed that we have wants, it also told the manner of their supply, and was useful in this special degree; if it exhibited the power on our part to export, it showed our strength—that we had the whole world to trade with, and to draw upon for whatever our requirements suggested. If such accretion of products was not also made for the purpose of example, even, improvement would lag behind. Community of example and opinion have ever been the best incentive to the advancement and improvements; for it had always been found to be the best way to interchange visits where the results of each year's exchange and labor were brought together, where comparisons could be instituted and valuable suggestions taught. No better mode of proceeding could be adopted than that specified in the second resolution. Bring on, then, our products, and show us what has and what can be done; and, although we may not attain to a perfect organization and superior merit in a day, or even a series of years, we may ultimately reach a position which, without incentives, we would never have reached.

His Excellency proceeded to say that he had no idea until last summer of the extent of the agricultural interest in the Commonwealth, but he determined that he should place himself in the best position to know. Placing himself at the direction of his friend, Mr. Secretary FLINT, his first inquiry was relating to the places and periods where the required information was best attainable. But almost every portion of the State had its agricultural exhibition about the same time, and but a few of the whole could be seen by one individual. This certainly was not right, and nothing but failure could proceed from such malarrangements. People must go beyond the limits of their own town, or district, or county,

to see what they have not been accustomed to see at home. They ought to have opportunity to see the best products of the State aggregated, and then they would be ready to exclaim—"Why is this? What cattle and products I see here! Why is it that I have never heard of such before?" Of course men thus surprised would be very apt to inquire how these superior animals and products were cultivated and perfected— glean lessons of value in the answers—and hence the value of the example, which never could have been had through a merely local exhibition. As exhibitions of what we have in Massachusetts, they are insufficient, for they furnish no idea of what we can or may do; and as this defect constituted a great evil, its correction should be kept for a moment out of sight. No opportunity was furnished at meetings for discussion—although there were very fine speeches made—excellent anecdotes related, and small talk plentiful. The least instruction in respect to anything is found in an after-dinner speech, for in them there is just a glimpse at practical matters. And so one might go from table to table—from pen to pen—and solid information invariably keeps well aloof. But by the very nature of their gatherings, farmers require instruction.— They have a previous knowledge of whatever is worthy in their own localities, and they do not require to have it repeated. But example and discussion are both; therefore, let useless practices be abandoned, and clubs be formed and discussions take place all the year through, and the result would turn out good. To spend one day or two per annum in sober trifling, never would be of any value. The interest of the State demanded that a better system should be inaugurated—a more advanced and profitable cultivation of the soil—and to effect this end, discussions such as were recommended in the resolution would be highly beneficial. The State already gave some \$13,000 per annum for the encouragement of Agriculture, and was probably ready to be more liberal, in the shape, it might be, of employing agents conversant with rural affairs, to visit the several localities, and teach farmers the most improved manner of enlarging their products; and in this connection it would be well to institute such clubs as the second resolution specified, that these teachings could be discussed and their value applied in practice. It would ultimate in a much greater benefit to the farming interests than the present system of local shows, and at the same, or very little more expense. County exhibitions might be retained with some degree of profit if their meetings could be distributed over the districts; but, periodically, the people should be called together to see what the State could do; for the farmer's pros-

perity was emphatically bound to that of the Commonwealth, and whatever he did to improve his own interests, in similar degree did he contribute to those pertaining to the general welfare. These observations, His Excellency said, in conclusion, were thrown out without any preparation, and he hoped the discussion would have such attention from the meeting as to elicit the most reliable and safe opinions.

SIMON BROWN, editor of the *N. E. Farmer*, was called on by His Excellency to speak.

He said the question before the meeting was one which had occupied his thoughts for many years, although he doubted his competency to lay his views respecting it before the audience in so clear a manner as he could wish. He proposed to confine his observations to the subject of the second resolution, which related to the State. Massachusetts stood high among her sister States in point of education, morals, arts, sciences and agriculture. Her institutions were of the most liberal and enlightened character, and were everywhere copied because of their perfection; her laws were approved on the same grounds, and no section of the union was oftener looked up to and copied as an example, than Massachusetts. It would be strange, then, if she should be found to have neglected any one of the prominent interests of the people; but it was otherwise with her, for she had done everything to promote their welfare. Glance over her territory, and it would be found that her charities recognized every citizen within her limits—that those who were lowest, and who had the least care from those who ought to provide for them, are never forgotten or neglected. She had made ample provision for the alleviation of the unfortunate and the suffering. Look at her alms-houses! How many are there? Not only her own citizens, but people from almost every nation in the earth. Could such a State neglect any one of her interests? Decidedly not! Bounties have been in turn offered by her to everything which needed protection. The County Agricultural Societies receive \$12,000 from her per annum, and in past times she has spent much money in their behalf. But had her generosity always been properly appreciated, and her kindness acknowledged? They were not? Some of the counties were endowed with as many as four societies, receiving, severally, bounties amounting to \$400 and \$600 annually, and what had been the conduct of some toward this liberality? If a farmer raised a pair of fine oxen to which a county prize was assigned, the State required of him a specific statement how he had accomplished it, so that his skill and mode of practice should be imparted to every other citizen of the State. And this ought to end the whole matter between them—the farmer

having received the *first premium*, and the State, as an equivalent for its bounty, a specific statement of the manner of producing the article. But it is quite often otherwise; the information given is frequently incomplete, and the stock, or article receiving the premium, is *taken to other shows*, and premiums again awarded, thus perpetrating a fraud upon the bounty of the State, and cutting off others from the privileges of a fair competition! These facts are well known—that the same plowman, the same stock, the same old rug, vegetables, grains and implements, after having once received the *highest premium* at one exhibition, are entered at another and again paid the highest prize! This is evidently contrary to the intention of the Legislature, a misapplication of its bounty, and certainly not the spirit in which the generosity of the State should be met; in order to prevent such practices in future, the Legislature should enact a law that *there should be only one agricultural society receiving bounty from the public funds in each county in the State*. She long ago employed Mr. COLMAN to make agricultural surveys of the counties, and to whose valuable reports we were so much indebted—for sending Prof. HIRCOCOCK abroad at her expense to inspect the agricultural schools there, and show us what we could do at home, if we had the will; for publishing works on the *Fishes, Quadrupeds, Insects and Geology* of the State, each being a monument of her liberality and high purpose, and for establishing a Board of Agriculture which she still generously sustains. Had she ever been parsimonious? By no means; she had done all she ought to do; we ought to be satisfied with her liberality, and if we had not made a progress in proportion to its extent, it was our fault, not hers.

What, then, ought to be done, as things now stood? Massachusetts should legislate for the farmer as faithfully as she has done for the manufacturer. Scope for that duty was ample. Let her, among other things, fix on a mode for the measurement of milk. What is a can of milk? a myth, a fabulous hydra, which nobody knows or can reasonably pretend to understand. So far as it could be practically described, it was 9½ quarts when the producer was concerned, and 7 when the buyer became interested, and 10 quarts when resold to city customers! Let us know what a can is, so that those who furnish large quantities of milk per diem for use in the city, may know how to sell. In this connection, proper officers should be employed to investigate the quality of milk, and detect its adulteration. One-fourth of it would be found to be Cochituate water after it came through the hands of the sellers, as could be proved if pains were properly taken. So much for law; and as for money, none was

needed from the State beyond the bounties already awarded for agricultural encouragement. If the treasury was wide open, Mr. BROWN said, he would not take a dollar to add to that bounty. Farmers did not want it in order to obtain the information they need. In respect to agricultural information the best way was to commence at the soil, and educate the farmer thence upwards, so that he might be proud of his products as the mechanic was of his invention, or the sculptor of his finished marble. Make a man proud of his vocation, and much to ennoble it would be accomplished. Why was the hall not filled to-night? Because the people do not care for farming, although they all acknowledge it the organic element in the general prosperity. If this were a discussion of some political party, these seats would be crowded, and the speakers cheered with audible approbation. These vacant seats are so many records of the *indifference* of the community with regard to agriculture as an occupation, and of the importance of instituting a series of meetings and discussions *among the people themselves*, to aid them in obtaining a better knowledge of the practical operations of the farm, and of the elementary principles that are indispensable in its profitable pursuits. The person who wrote the article in the *Atlantic Monthly*, which has created so much comment, was right in his estimate of *some* farmers; but he made a mistake in constituting a general rule for the exceptions he had too truly before him. The fault lies mainly with the farmer that his calling is thought ungentee; he is content to hear and profit not—to listen perpetually to others and produce nothing mental himself.

Now what is wanted, is simply that the farmer should understand his business—that he should *know how to do what he undertakes*—and that he should endeavor to make his son understand it as well. He had no objection to Colleges for instruction in the scientific principles of agriculture, for the investigation of theories, or for any good purposes which they may subserve, but our first effort, the effort of the present moment, must be, to begin with the simplest elements, and teach them in various portions of each county in connection with the true principles of the practical operations of the farm. If a college were already in operation, he knew of no young men ready to enter it, merely because they had enjoyed no opportunity to qualify themselves for such a position. Who had taught them, and where? On the contrary, we should begin at the lower round of the ladder, and climb progressively and surely to the top. This object would be effected if farmers only loved their occupation. They would cherish it, and talk of it earnestly, and men would listen to them and be taught to profit by their

words. Prompted by this love of their occupation, individual effort among farmers would soon work wonders, and on individual effort everything, almost, depended. In conjunction with Farmers' Clubs no limit could be placed to the good it would accomplish; and if gentlemen would go home determined to institute them, if in five years hence they failed to pay for themselves, Mr. BROWN said he would, if able, be responsible for the intermediate outlay. Besides the credit of aiding the noblest of all human interest up to the mark of its highest improvement, it should be understood that the benefits of such associations, intellectually considered, would be important and useful to individuals in teaching them to condense and express the promptings of their minds. Mr. BROWN concluded by advising that no society should be allowed to duplicate its premiums year and year again, in favor of the same article or animal; that counties spend a portion of their bounty money in the encouragement of meetings and discussions among the people, as where this had been done in New Hampshire and elsewhere, the very best results had followed, and the meeting might rely on it that such good would follow as they had never known to proceed from any hitherto tried means.

SANFORD HOWARD, Esq., of the *Cultivator*, was the next speaker. He endorsed the sentiments of the previous speakers; advocated an extended area of comparison in connection with the products of the State, and illustrated its benefits by relating sundry appropriate anecdotes; recommended but one society in counties, which should have its exhibitions distributed over the territory; approved of Farmers' Clubs, and stated his belief that a due attention to their interests would enable farmers to add a very large percentage to their products at a very trifling expense of labor as contrasted with the unscientific manner in which many of them operated at present.

JOHN BROOKS, of Princeton, spoke in opposition to the importing of foreign scientific agriculture to American farmers, as it had always proved unreliable, and in favor of our constituting a science from what our experience taught us. He approved of State exhibitions if conducted by the Board of Agriculture.

Mr. SHELDON, of Wilmington, put in a plea for the right of every man to have a portion of the public territory to till—in other words, that it was the burden and duty of Uncle Sam, seeing he had the means, to “give every man a farm.”

Mr. BROWN, of Concord, then offered the following resolution for the acceptance of the meeting:

Resolved, That the Legislature be requested to pass an act requiring each county society receiving a portion of its bounty to devote one-third of the whole amount received to the support of Agricultural meetings and discussions in various parts of the county.

After being discussed by Rev. Mr. BABBIDGE, of Pepperell, W. J. BUCKMINSTER, Esq., and others, the resolution of Mr. BROWN was laid on the table, with the view that time should be granted the society to consider and act upon it deliberately.

The meeting occupied over two hours; and at its close Mr. FLINT announced the subject for discussion Monday evening to be, “*What breeds of stock are best adapted to mixed farming?*”

For the *New England Farmer*.

CONGRATULATORY---THE FRENCHES--- NEW ENGLAND.

MR. EDITOR:—The monthly *Farmer* for January, 1859, has come to hand, and “looks like a picture,” as fond mothers and nursery-maids say. As “the apparel oft proclaims the man,” so also does it the periodical. Its type and paper are excellent; worthy the matter it presents and the price charged. Good, substantial, white paper gives good typography, as good land good crops.

Your associate, Judge French, I perceive, has given you and your rural home a regular “set to!” But it is what you might have expected from a lawyer; and there is no doubt, from his own admission on the stand, that he smuggled the article in, in utter violation of the *lex scripta*, the *lex non scripta*, and all the other recognized lexes of the land! With such a man you probably claim no “kith or kin;” and undoubtedly, on the first opportunity, you will make him feel the *lex talionis*.

But, “Know all men by these presents,” nevertheless, however, notwithstanding—Judge French is a man after my own heart. Probably he is regarded as a “good lawyer,” (if the phrase is not a contradiction!) and an unimpeachable judge; and the readers of your journal know he has some critical knowledge of agriculture—neat cattle, swine, and particularly horses—so that he of course, must be

“Great on the bench, great in the saddle”

Besides, he possesses a fine vein of wit and humor. It crops out in all his topics, or rushes melting into all their chasms. In other words, he *overflows* with mirth; and no system of *underdraining* has sufficed to abate it! Whether in charging a grave jury or “teaching the young idea how to hoe,” I apprehend it must be forever welling up. This agreeable humor, often coming in contact—perhaps through the *Farmer*—with that of a souver and graver nature, forms a kind of neutral salt, which may be of some benefit to agriculturists, if not to agriculture! A disposition like Mr. French’s, capable of diffusing so much happiness among others, surely need not go abroad for its own.

But there is another French who writes for your paper. If I read understandingly, he was raised in New Hampshire, but was taken up and transplanted into the polyglot city of Washington, where the sword of the nation officially hangs, and where he has been spreading his branches, perhaps in more than native luxuriance, for there exists a peculiarly rich alluvion, (formed from

the occidental Pactus, in which exotics are usually planted,) not readily found in any other geological district! His botanical initials are B. B. When he first began to write for the *Farmer* I supposed him to be a spurious French—an inferior species of the genus that had been falsely labelled—but I am now convinced of my error, and feel satisfied that he is a regular—"Yankee doodle dandy."

New England is not so grave as formerly. The bustle and business of her great cities and expanding villages, together with more wisdom, have dissipated her "physiognomy of grace." She now looks with a smiling face upon her embellished farms and industrious workshops, rather than with a sad one into her churches. She has become as independent, if not more so, than any other section of the Union, and her stability is not likely to be disturbed. Read the following extract from a speech of Hon. Tristram Burgess, delivered in Congress in the times of southern nullification, when much sectional feeling was exhibited against the north respecting a protective tariff. Read it, New England men, and if you cannot heartily respond to it, search for something more sublime elsewhere in the English language.

"O no—place New England in a region of rock, without earth or water, our labor shall drill the solid stone, and like the staff of the Prophet, let out the gushing stream. Our perseverance shall beat the flint into small dust, and cover the whole surface with soil. The dews and the rain, and the sunshine of Heaven, the only creatures of God left by you in amity with us, shall give to our new earth moisture and fertility; and time, and labor, and God's blessing, shall cover the whole region with verdure." D. W. L.

W. Medford, Jan., 1859.

For the New England Farmer.

DISEASED HENS—LOW ROOSTS.

MR. EDITOR:—I notice a communication in your January number, from C. T. Paine, respecting diseased hens, and with your permission, I will give what I think the main cause of it is. *It is in the construction of the roost.* I was formerly troubled in the same way, and it was some time before I discovered a remedy. My roosting room is 12 feet square, and 8 feet high in the clear. My roosts were formerly constructed like ladders, two of them, say 7 feet wide, placed leaning against each other, at an angle of 45°, the rounds or roosts 2 feet apart, the top one being 7 feet from the floor. I noticed that the hen was never satisfied unless she could place herself on the topmost round, this being the height of her ambition. In the morning, instead of jumping to the next roost below, and so on, in order to get down, she would almost invariably jump the whole 7 feet, hitting herself against the building, or striking hard upon the floor. Some of the oldest and fattest hens would at times not come down all day, for fear of hurting themselves, and occasionally I found eggs broken, and soft eggs under the roost dropt from these fowls. I sometimes took them down from the roost by hand, that they might eat, or I believe they would have remained on the roost until compelled by hunger

to come down. I accordingly had the roost altered, the top one not over 4 feet from the floor, and the hens then came down in the morning without difficulty. Since that time, I have not been troubled with diseased fowls, or eggs broken under the roost.

Should a hen lay soft shelled eggs, put chalk, refuse lime, pounded bones or shells within her reach, and you will have no more of it.

I also find another bad feature among persons who keep fowls, which I think brings on disease. It is in allowing too many cocks to run with the hens. Many cocks are large and heavy, and they not only worry the hens badly, but frequently break them down, and cripple them. I have seen them with their spines so badly hurt, as to lose the entire use of their legs from this cause. In no case should there be more than one cock to eight hens. I have at this time but one to twenty hens, and I find an increased supply of eggs in consequence of it, but in the breeding season, keep more. My rule for some years being, to purchase the best cock I can find in the spring, never using one raised by myself as a breeder, and never keep a hen over one, or at most, two winters. By adopting this plan, and giving them plenty, and a variety to eat, with care and cleanliness, I am never without good poultry, and plenty of eggs, and the case is rare with a diseased hen, and a soft-shelled egg.

Canton, Jan., 1859.

Low Roost.

For the New England Farmer.

SHAPE OF SLEIGH RUNNERS.

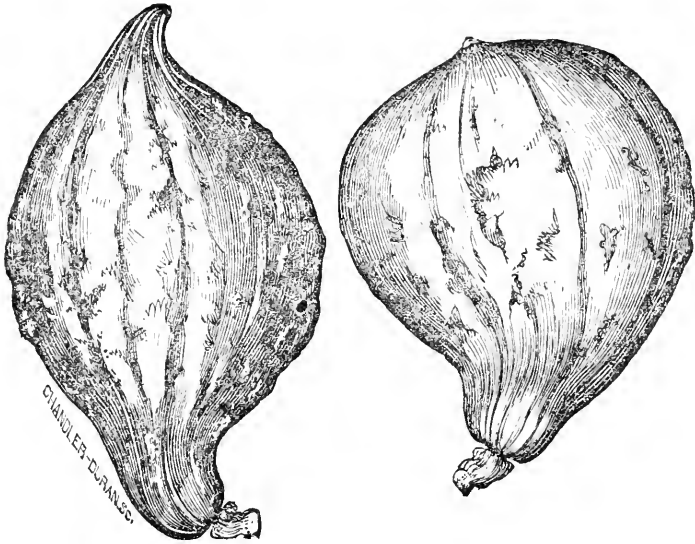
Nearly all our sleighs are made with one defect. The hind part of the runner should slant upward to correspond to the forward part. The cast iron sled shoes used on the heavy Boston sleds are shaped right in this respect. They are alike at each end.

Whenever a sleigh, whose runners are straight clear out, goes over a hollow place in the road, the runner at the extremity *cuts in*, sometimes into the hardest road; because, perhaps, nearly the whole load presses down upon an abrupt corner. Now, if the runner were bent up, instead of cutting in, as so often noticed, thereby greatly increasing the draft, as well as jarring unpleasantly the occupants of the vehicle, it would glide smoothly along, and go through the cradle holes without cutting them deeper.

Concord, Mass.

W. D. B.

EVERY INCH of rain falling in the course of a year, is equal to a weight of rather more than 100 tons of water per each imperial acre. The mean annual quantity of rain in Detroit, is 28.300 inches; equal to nearly 2,900 tons of water falling annually on each acre of land. At Dearbornville Arsenal, Mich., the mean annual rain is only 21.610, the smallest quantity, or the dryest place, given in the *Army Meteorological Register*, for the whole United States. The highest mean or wettest place is West Point, N. Y., where 64.670 inches of rain is the annual mean quantity, equal to 6,467 tons of water on each acre.—*Farmer's Companion.*



THE HUBBARD SQUASH.

This squash is an important acquisition to our list of vegetables, as nothing of the kind ever served upon our table equals it in quality either for boiling or for pies. It has one property not mentioned in the extract which follows from Mr. GREGORY's circular, and that is, that the Hubbard squash, in the early stage of its growth, is far better for boiling than any *summer squash* we have ever tasted. Mr. G. says:—

With the single error of the absence of a concave ring in the stem where it unites with the squash, the engraving conveys to the eye all that is possible without the aid of color. The color of one variety is a dark, dull green, about an olive green, usually accompanied with lines of a dirty white color, which begin at the calyx and extend, in the depressions of the sutures, about two-thirds the length of the squash; that portion of the surface exposed to the direct action of the sun's rays is often of a brownish hue. The other variety is of a light clay blue color. Each of the varieties have usually a dense, hard shell, somewhat thicker than a cent, and often abounding with rough, knotty protuberances. The flesh is usually of a very deep orange color, usually thicker than the Marrow, and remarkably fine-grained and compact in its structure. In quality this squash is universally conceded, as far as opinions of its merits have been expressed, to rank at the head of the numerous varieties of the squash family cultivated in the United States. Its characteristics are an exceeding dryness of the grain from the time of harvesting until the middle or close of November, after which it becomes less dry, but very sweet and fine-flavored, tasting sometimes like a sweet potato, at others like a boiled chestnut. In keeping properties it excels the *Marrow* and its varieties, keeping its

qualities unimpaired about three months later than these, until late in the spring. The true measure of the keeping properties of any variety of squash, is, not how long it will keep from decaying, but how long it will preserve its good qualities. In weight the Hubbard averages the same as the pure Marrow squash, though specimens have been raised under circumstances peculiarly favorable, weighing upwards of twenty pounds.

While making up this account, we received by mail the following note:—

The Hubbard Squash—seeds of which are now furnished by J. J. H. Gregory, of Marblehead, I have raised and tested repeatedly, and find it superior to any other variety I have ever met. It is as superior in the quality of its meat, as it is inferior in its external appearance. The specimens I have seen, have ranged in weight, from three to eight pounds, generally not more than six pounds. It is worth trying by all who have a taste for the delicious. J. W. PROCTOR.

South Danvers, Jan., 1859.

A NEW KIND OF APE.—Prof. Owen, the celebrated naturalist, delivered a lecture with diagrams, on man-like apes, and described a new species recently discovered on the western coast of Africa, named the Gorrilla species, the adults of which attain the height of five feet five inches, and are three feet broad across the chest. Its head is double the size of a man's, and its extremities are enormously developed. They existed in some numbers in the interminable forests of the Gambia river. The negroes of the country, in their excursions into the forest in search of ivory, exhibited little fear of the lion as it slunk away from man, but they dreaded the

gorrilla, for when he saw men advancing, he came down out of the trees to the attack, and could strangle a man with the greatest ease. The strength of this man-ape is enormous; his jaw is as powerful as that of a lion, and his canine teeth equally formidable.

For the New England Farmer.

HUNGARIAN GRASS SEED.

Will you please inform me through your paper where I can obtain some of the Hungarian grass seed?

S. E. T.

Warren, Mass., Jan., 1859.

REMARKS.—Among the new forage plants which from time to time have been introduced to the farmer, the *Hungarian Grass* is one which has met with much favor, and promises to become one of the staple grasses of New England. We suppose it receives its name from the country, *Hungary*, where it is probably indigenous, and supports vast herds of cattle on its fertile and widely extended plains. If such be the case, it must be adapted to our Western prairies, and become invaluable there both for pasture and hay crops.

If this grass is to prove a valuable acquisition, as we believe it will, the pure seed ought to be afforded to the farmer at a fair profit, so that he may avail himself of it at once.

Side by side with the inquiry of our Warren correspondent, we have a little pamphlet entitled, "*Honey Blade Hungarian Grass Seed*," emblazoned with the Coat of Arms of Hungary, and giving a history of the grass, with numerous extracts from newspapers, by one Felix H. Benton. The pamphlet bears upon its title the imprint, "J. M. Emerson & Co., No. 406 Broadway, N. Y." Of all this we make no complaint—it is one of those amiable weaknesses often resorted to, to catch the popular eye and ear. But when we come to the git of the thing, the point that is to draw upon the pocket of the purchaser, we find a duty resting upon us which we embrace the earliest opportunity to discharge. The pamphlet before us reads thus:—

It will be put up in uniform bags of about sixteen pounds each, the amount in each bag being sufficient to seed an acre.

The prices will be as follows:—

One bag for one acre.....\$3.00
Club for eleven bags.....25.00

Now we beg leave to say to our friends that the *pure Hungarian Grass Seed* will be for sale in this city, at the Agricultural Warehouse of *Nourse, Mason & Co.*, Quincy Hall, or of *Nourse & Co.*, 34 Merchants Row, for \$4.00 per bushel at retail, and \$3.00 in large quantities, thus saving about the sum of \$5.00 on each bushel purchased, for it takes, as we learn, *three* bags of about sixteen pounds each, to make a bushel!

For the New England Farmer.

A COMPARATIVE STATEMENT

OF THE PRODUCT AND VALUE OF MILK AND BUTTER.

BY GEORGE S. BOUTWELL.

I commenced saving milk for butter on the 10th of May last, and continued until October 1st. The milk was weighed once a week, and twenty pounds were considered equal to one can of eight quarts. The milk would have sold for eighteen cents a can, and the butter was sold for twenty-four cents a pound. I give the result of each month's operations:

MILK.	BUTTER.
May, 163 cars.....\$29.34	177½ lbs.....\$42.60
June, 21½ cans.....43.37	201½ lbs.....38.36
July, 18½ cans.....33.93	168½ lbs.....40.02
Aug., 21½ cans.....38.07	193½ lbs.....46.50
Sept., 202½ cans.....36.45	174½ lbs.....41.94
	\$219.42
Cost of making 914½ lbs.	Value of residue of 1007
butter at 5½c.....\$50.28	cans at 8c.....\$80.56
	\$209.93
	\$231.54

Difference in favor of butter.....\$68.44

It is thus seen that during the entire season 22 pounds of milk produced a pound of butter; but in the month of May only 18.3 pounds were required.

Groton, January 10, 1859.

HENS LAYING ALL THE YEAR.

Some people think that if they keep their hens warm in the winter, that they will lay eggs freely all the year, but that is a mistake, as fowls can be made to lay but about 10 dozen eggs each in the year, if ever so great pains are taken with them in the winter; and when they lay a good deal in the winter they lay enough less in the spring, so that not over the average of 10 dozen eggs are obtained usually. The *Prairie Farmer* has the following statement, which leads one to infer that his hens may be made to lay 100 or 300 eggs in a year—according to the management of them. Still the better treatment spoken of is advisable, as more eggs will be laid in the winter, by adopting it, when they command a better price, but it will be at the expense of the regular spring laying:

TREATMENT OF HENS.—Two flocks of hens were compared. One laid eggs almost all the time; the other laid scarcely any. On examining their treatment, the following differences were found to exist: the former had a warm cellar to roost in during the winter; the latter roosted in a stable where the wind blew in. The former had a fine place in an open cellar for scratching among ashes, lime, and earth; the latter scratched in the manure heap, or in the stable when the cows were put out. The former had plenty of good water, with milk, &c., the others had no drink except what they could find.—*Rural American*.

LARGE HOGS.—Mr. Benjamin Derby, of this town, has slaughtered this week two hogs which weighed thirteen hundred and thirty-five pounds. The weight of the larger was seven hundred and twenty-eight pounds.

W. D. B.

Concord, Mass., Jan. 7, 1859.

For the New England Farmer.

CORN AND CORN STALKS.

Among my earliest recollections of the corn crop is seeing the then universal practice pursued of cutting the stalks. This was generally done early in September. They were bound and stooked the same day, and in two or three weeks, as the convenience of the farmer directed, they were housed for winter fodder. It was an animating sight, to see the ripe and ripening corn crops, the husks falling from the long golden ears, reflective of rich maturity as the sunbeams fell upon them. But innovation was in due time to spoil these beautiful features in the autumnal landscape. Somebody tried the experiment in a cold season of cutting up corn when half matured and stacking it an indefinite period. Circumstances favored the experiment. Perhaps an early frost cut off the standing corn and prevented its attaining the same degree of maturity with that which was cut up. At any rate, the thing took, and for a few years every farmer, nearly, adopted the practice of cutting up his corn early, to ripen in stacks. For a year or two, I was among the popular number that adopted this course, but my experience was so bitter that the "old fogey" arose within me, and I returned to the old way, which I have persistently followed.

The objections that I found to the "new way," were that it made a heavy work of harvesting; that in order to have the corn get sufficiently dry for husking and housing, a length of time was required that materially injured the stalks for fodder, and, what was worse than all, the corn was not so bright and heavy, while the good, rich, old-fashioned golden puddings were out of question. There was not the life or nutriment in the meal, I find in that where the grain ripens "the natural way." Such were my impressions, at least, and in order to convince myself whether it was a *whim*, I inquired of several millers, of the relative value of corn harvested in the two ways, and found them unanimous in declaring in favor of grain ripened on the hills.

Farmers, too, are beginning to see the difference as every year's observations go to show, while some who still cut up their corn admit the inferiority of their mode of harvesting, but plead the saving of labor at the cost of the ultimate value of the crop. Then others have taken the other extreme, and question the propriety of disturbing the stalks at all until the crop has ripened. After the pollen has fallen from the tassels, one service of the stalk is performed. Yet there can be no doubt but the stalk and leaves above the ear are of service in elaborating sap, and in absorptions from the atmosphere long after the pollen has ceased to fall, and when the tassel is becoming dry, and the greater the amount of elaborated sap that is thrown into the ear, the more rapidly it will mature, and the more perfect its maturity. But when the leaves begin to dry upon their edges, and exhibit around the border a torn appearance, it matters but little how soon the stalks are taken off, which should always be done in fine weather, and they put in a condition to hay as fast as possible. A few fine days will hay them thoroughly, and if they are well secured, all kinds of stock will thrive upon them.

After the tops reach the condition above alluded to, and are taken off, the point of separation soon dries over, so as to prevent the evaporation of sap through the wound, and it is turned into the ear to give the kernel maturity, while an increased exposure to the sun urges forward the ripening of the grain, which, matured in this way, unless the stalk falls to let it on the ground, will long remain uninjured by storms.

Then the amount of fodder saved by cutting up the butts at harvesting with the stalks already properly secured, will not lose in comparison of the fodder saved by cutting up the whole at once. Stock will do well on the leaves of the butts if fed to them in early winter, to the exclusion of other fodder, which may, probably, if given out, create a distaste for them; for animals, like men, will leave the less valuable food for the best when both are set before them.

The idea of raising corn, is, first for the crop of grain, the fodder coming in as an extra. Then, the next thing is to get the largest amount of sound, bright corn. This, in my experience, is gained by cutting the stalks as soon as they begin to show full maturity. If corn stalk fodder is the thing sought, the better way is, to sow broadcast, and harvest when the stalks have attained their growth.

W. BACON.

Richmond, Jan., 1859.

For the New England Farmer.

WHEN AND HOW TO USE MANURES.

MR. EDITOR:—Being a reader of the *N. E. Farmer* (monthly), I notice that there are various theories about the use of *green manures*, especially that taken out of "barn cellars." More particularly a communication from A. WARD, in the December number of 1858, and one from R. MANSFIELD, in the January number of 1859. Mr. W. seems to be at a loss how to apply his manure, and Mr. M. seems to suggest the idea that the south side of, and under the eaves of the barn, is the most suitable place for manure to be kept, and as my experience and practice is rather different from that of Mr. M., I venture to give my experience in corn raising for the last three years.

Four years ago a cellar was made under my barn 8 feet deep, for a shed for cattle and deposit for manure, the cattle being kept in the stable above, the manure falling directly underneath, and thus receiving the urine of the cattle. I cut all kinds of fodder except hay, and what is left, if any, is used for litter; thus my manure in the spring is all fine, and I am not troubled with what is called "long manure."

My practice has been, generally, to break up my green sward, which is a sandy loam from 8 to 10 inches deep, late in the fall; in the spring roll my ground, cart out my manure in its green and crude state, from 15 to 18 cords to the acre. Spread upon the ground and immediately give it a thorough harrowing, or cultivating so as to thoroughly mix the manure with the soil; then, just before planting, plow the ground from 3 to 5 inches, and harrow again. For the last three years I have raised from 60 to 70 bushels of corn per acre. My success I attribute to the strength and thorough mixture of the manure with the soil

All the manure from my cattle, horses and

hogs, is kept under cover until carted out in the spring, and as long as my crops of corn, oats, potatoes and hay are about double what they used to be under the old system of having the manure scattered about the yard, and the heaps at the windows "under the eaves on the south side of the barn," I think I shall continue the practice of keeping it from sun and rains until wanted for use, or until I am convinced that I am in an error.

Barre, Vt., Jan. 9, 1859.

W. C. WHITE.

REMARKS.—Statements of such practical operations as the above are valuable, and will help to settle the question under discussion. We shall be glad to have Mr. WHITE still further aid us in settling it.

THE OLD MASSACHUSETTS SOCIETY.

The Transactions of the Massachusetts Society for the Promotion of Agriculture have been laid on our table.

This time-honored Society has now been steadily and diligently pursuing the object for which it was established, for sixty-six years. Associated in its labors, have been from the beginning, some of the most talented, philanthropic and patriotic men in our Commonwealth. This society is believed to be the third in order of time, formed, established and endorsed, (in any part of the world) to promote the cause of agriculture, and has never lost sight of its object. It has been chiefly sustained, and its funds furnished by the "merchant princes and solid men" of Boston, who have been as fully awake to the importance of agriculture to the prosperity of the Commonwealth, as any other class of its citizens. They were the first to take into consideration the low state of agriculture in the State, and to associate themselves and procure from the Legislature an act of incorporation for its promotion. They have held monthly meetings and devoted unstinted labor to the object. They have initiated a large proportion of the improvements and institutions to which the State is now indebted for the advanced condition of its agriculture. We will now enumerate a few of them.

In 1801, Fairs for the sale of stock were proposed by them, which were the origin of the present fairs held at Cambridge and Brighton.

In 1802, Merino sheep were introduced into the State, under their auspices.

In 1804, the Botanic Garden at Cambridge owned its establishment to their efforts, and was sustained in part by their funds for several years.

In 1808, they offered \$1000 in premiums for various agricultural and mechanical improvements.

In 1809, they imported a plow, which, with the premiums they subsequently offered, awak-

ened an interest in the improvement of this the most important implement in agriculture.

In 1813, an agricultural journal was issued under their supervision, which was continued several years, and contained a large number of valuable papers, and was not discontinued till agricultural newspapers were ready to supply its place.

In 1814, they gave the first premium to a straw-cutter and threshing-machine.

In 1816, the Society held its first Cattle Show at Brighton. In the same year they gave various premiums for agricultural machines, and imported two Alderney bulls and two cows.

In 1817, they established the first plowing-match ever held in the State, and which led to their establishment throughout the State.

In 1819, they imported wheat and turnip seed from France and millet from Russia.

In 1821, they offered \$2000 in premiums for stock, farms, farm products and implements.

In 1823, they offered large premiums for farms, and introduced the mangold-wurtzel and rutabaga.

In 1824, they procured a Hereford bull and heifer.

In 1825, a Yorkshire stallion and mare.

In 1833, they imported at large expense, an Ayrshire bull and three cows.

In 1845, they imported specimens of Devon stock.

In 1850, they imported more Alderney stock.

For the present year they have offered \$1000 for the best plantation of forest trees suitable for ship timber, of five acres, and \$500 for the best conducted farm.

During this long period, they have aided by their funds and influence the several county societies, all which may be considered the legitimate offspring of this venerable parent. The Middlesex Society, the oldest of the flourishing family, owes its origin to a circular addressed to several gentlemen in the interior of that county by this Society, and the rest have been born in regular succession. Since the county societies have established annual fairs all over the State, the Massachusetts Society has ceased its annual exhibitions, and appropriated its funds to the diffusion of information, the importation of stock and other measures designed to promote agriculture throughout the State, and especially such measures as would not be likely to be undertaken by the county societies. Its action for the few years last past has not brought its officers so directly into personal contact with the farming population of the State, as formerly. As its movements occupy a smaller space in public, and make less show and parade, some have been led to infer that it is falling into its dotage. But we are

not at all disposed to make this inference. It is aiding the good cause, by means, which, though quiet and unostentatious, are yet powerful, and will be felt for good, long after the more noisy displays of those who are good farmers periodically, have been forgotten.

The present volume is highly creditable to the Recording Secretary, and suggests the value and interest of a more extended selection from the records of the Society. A history of the agriculture of the State would show who have ever been the true friends of the farmer, and if prepared as it would be by the Secretary, would be a noble monument to the memory of the noble men who founded this Society.

A brief statement of what the Society *has done*, scattered among the people, would not only be a matter of justice to the Society itself, but would correct that spirit of complaint which has been manifested within two or three years past. Those who conduct its affairs are men of the world, of integrity, and of sound judgment, and are unquestionably desirous of promoting the agricultural interests of the State in every way, so far as their personal labors and the funds placed in their control will permit.

For our part, the Society has our respect and gratitude, and we wish it a long life of usefulness and high character, such as it has always sustained.

We were honored with an election to this Society several years ago, but have never attended any of its meetings, or known of one having taken place. While there is probably no rule of exclusion to any, we cannot doubt but its affairs are better managed by a few than they would be by a large number. It has done well in the past, and we have entire confidence in it for the future.

For the New England Farmer.

THE GOVERNOR'S NOTIONS OF AGRICULTURE.

Very properly, (as I think,) does the Governor place the interests of agriculture in the front rank in his message, not to be cut down by the enemy, but to be greeted by friends; for credit is given to the exertions of those who have so disinterestedly and effectively sustained our agricultural associations. All praise be to him, who by precept and example does justice to the industrious tiller of the soil, by whose efforts (next to the smiles of Heaven,) we "live, move and have our being." No complaint is made of the annual appropriation of \$12,000 for the sustaining of these institutions—a mere pittance compared with the benefits to accrue.

His Excellency appears to have a just sense of the irregularities, in the present distribution of this bounty, but doubts whether the present organizations should be disturbed, at the same time clearly indicating that these inequalities

should not be increased. What he means in speaking of town societies is not readily seen; but I presume he would not recommend an appropriation by the State, for the support of such societies. That they can be advantageously organized, we have no doubt; that they may be made useful auxiliaries to county societies, I believe is equally clear; but that it is not expedient to increase the number of societies (favored by bounty) beyond the number of counties, has ever been my deliberate opinion. ESSEX.

Jan. 12, 1859.

For the New England Farmer.

FLOWAGE OF LAND ON CONCORD RIVER.

The injuries sustained by meadow-owners on Concord River and its tributaries, together with the gross outrages perpetrated on them under forms of law in seeking redress, is a subject once more before the public mind. The report of the mass meeting of meadow-owners in Concord, December 27th, in the *Boston Journal*, also copied in the *Farmer*, presents something of a view of the nature of the case.

These meadow-owners have too patiently born their wrongs, as honest farmers not accustomed to litigation, and allowed one or two individuals to pursue the subject alone. But their growing injuries are awakening them to the necessity of action, and they are now banding together for a thorough investigation in view of an ultimate remedy. It is not a question of trifling moment. Not even an uninterested mind with a knowledge of the facts can call it such. It has sufficient *local* interest to entitle it to public consideration, regardless of the general principles involved, and the welfare of a large community. It is even connected with matters concerning every inhabitant of the State. Thousands of acres, much of which is more valuable than upland, rendered worthless to swell the coffers of a very few. This meadow land, owned by farmers, from five to thirty and forty acres each, is the main dependence of their profit in farming. It demands no expenses for cultivating or fertilizing, but yields its annual crop with only the cost of harvesting. And farmers have depended on it for their winter's supply of hay; its loss subjecting them to the necessity of buying hay, or keeping a less number of cattle; either of which methods detracts from their income.

But aside from pecuniary loss to farmers thus interested, another important and more general view of the subject regards it as the cause of deterioration of health. The miasma from standing water on the meadows, and the decomposition of so much vegetable matter, is a fruitful source of disease. It has been given to the world as grave advice, and I think through the *Farmer*, not to suffer vegetable matter to lie about, exposed to the atmosphere, to absorb its noxious qualities, because injurious to health. But if this advice should be deemed necessary on account of a few small quantities, how much more so when the air is tainted by thousands of tons of decaying matter lying on the banks of a river for miles, with dwellings within a short distance.

But it is argued by some in opposition that

those situations on the plains near the river are healthiest. This may be a fact; but it determines nothing against the principle. If they are healthiest, it is because the miasma rising into the air passes over the plains. But somebody gets it—those who live on the hills and highlands. Fogs will be seen settling on the hills. This may be the reason why some situations on the hills are so unhealthy, as some in this town are more so than other places; and thus by the miasma rising higher into the air, the injurious effects are more widely spread. For even a light wind, moving at the rate of twenty or thirty miles an hour, will carry the noxious effluvia over a broad extent of territory. Therefore the question is not altogether local, but concerns the inhabitants of distant parts of the State. The flowage of so much land in various parts of New England may be one cause of a decrease of health; for few things are more injurious than impure air—whether in doors or out.

Then, as flowage of land, not only in this case, but in others, is for the advantage of a few individuals to the injury of many, is it not the duty of every advocate of equality of rights to define the privileges of all according to strict justice? Will future legislators show the blindness of their predecessors to common rights and privileges, by further enactments, or remain silent regarding the present, favoring incorporated companies at the expense of general loss? Can an individual man, without money and without influence, boast of an independent government and equality of rights, if money and influence are weights in the scale of justice?

It is to be hoped that the agitation of this question will not cease, until justice shall have asserted its power in determining the rights and privileges of incorporated companies, and in sustaining the common rights of all.

L. H. SIEMAN.

Wayland, Mass., Jan., 1859.

For the New England Farmer.

AGRICULTURAL TRANSACTIONS AT PLYMOUTH COUNTY.

I always look at these with great interest, knowing the wisdom and experience that has directed them. I was particularly pleased to see in the publication for 1850, a compendious digest of the mode of growing Indian corn, in that region, by a gentleman who has probably given more attention to this matter than any other in the State. On looking it over, I do not find any essential difference in his rules, from what I had been taught from my youth. He would have the ground plowed six or seven inches deep, and dressed with about eight cords of manure to the acre. He would have the seed selected in the field—well-formed ears, that ripen the earliest; hills about three feet apart, and four stalks, the most vigorous, ultimately left in the hill. These will give a sufficiency of stalks to yield an abundant harvest—say eighty bushels to the acre. More than this may not be expected, without extra hoeing and manuring. For the manures about our barns and pig-sties he gives a preference, not rejecting entirely the new-fangled preparations, far-fetched and dear-bought. Such sound advice as this I respect, wherever found.

For the *equestrian spirit* manifested by this society I cannot say as much. Premiums for horses, in every possible form, and twice as much as for neat stock, are still proposed. This seems to indicate, a sort of bravado interest, as much as to say, we know what we are about, and will do as we please, let others say what they may against it. I do not run to horse, so much as do our friends at Plymouth, at Springfield, and at Worcester, and I think the time will come, when they will see the error of their ways. If they do not, I think their practices will be a *great damper* upon healthy agricultural improvement in the Commonwealth.

ESSEX.

January, 1859.

For the New England Farmer.

ROOT CROPS.

MR. EDITOR:—As I am the only one of your correspondents, who does not think much of turnips as a crop to raise for stock and hogs, you will allow me to be heard oftener than you would if others took the same side. Your correspondents give me all sorts of advice, and recommend turnips for all kinds of stock. Gentlemen, I am much obliged to you, but I have tried them to my entire satisfaction, and reject them.

They raise them much cheaper than I ever did, but even at their tables of cost, I do not wish to buy. I would like to see a statement of the exact cost of raising a field, from the time the ground was plowed in the spring, till the last bushel was fed out, either in hours or dollars, not estimated, but kept from day to day. Your correspondent, Mr. Bassett, gives his statement, but I presume he will not say that \$7 was the exact cost of raising his 103 bushels of turnips, but only the estimated cost, in his opinion.

He took sixteen rods, or one-tenth of an acre, and calls the manure \$1,00. I do not know the worth of manure with him, but here at \$5 a cord, and to those who buy it costs more, it would be about one-half an ox-cart full, or allowing that but half the goodness of the manure was spent, one cart full, or ten loads to the acre. To use his own language, "Would any sane man venture to put ten loads of manure to an acre of land for a root crop?"

He recommends me to read a communication signed "The Desponding Farmer." I do not think that would apply to me, as I both like farming, and think I find it profitable. I love the farm, the stock, the barn, the produce, and all that a good farm produces. I have had quite a number of farms thrown upon my hands, as guardian, executor and administrator, and in every instance, I have been able to show an income in dollars and cents, more than the interest of what the farm brought, over and above the carrying on, taxes, &c., and that without cutting wood or timber.

I agree with Mr. Bassett that the hog, properly cared for, is a very important consideration with regard to the corn crop, and all other crops. I believe that a hog, well cared for, will make extra corn on an acre enough to fat him.

But his last conclusion I do not believe in:—"That no turnips, no hogs." I have thirty of the hog kind, large and small, and I do not find

the least difficulty in making them grow without turnips or milk. I have killed three within a few weeks, from twelve to fifteen months old, that averaged over 350 pounds each, and I do not think they ever tasted milk, except from their mother, or turnips, and yet they cost me eight cents a pound. I admit that hogs, and all other stock, will do better on a variety of food. I use corn, rye, shorts, rice-meal, and such refuse potatoes, apples and other stuff I have, that will not sell or do to use in the family.

We have as good a set of farmers in Hollis as you can find in the State. They have drawn premiums for their farms, their nurseries, their crops, their teams, almost always where they have tried. They have almost all of them tried roots, and after a few years given them up, and I venture to say, that the gentleman that raised 2500 bushels this year will not raise 2500 bushels a year ten years from this time, or in 1868.

Our late townsman, William P. Saunderson, Esq., was as good a farmer as there was in the State, and for the last fifteen years has been in the milk business, where roots will tell, if any were. He went into the root crops largely, raising English turnips, ruta bagas, sugar beets, carrots, &c.; but after a careful trial of at least twelve years, he gave them all up. In appraising his estate, last week, not three bushels of roots, potatoes excepted, of all kinds, were found in his cellars. He has taken premiums for his farm, his nursery, and various kinds of produce, yet he gave up the root culture, and spent his labor, his manure and his best land to increase his corn, oats, wheat, apple and hay crops.

I do not believe that it will pay to boil potatoes, turnips, apples or any of the roots for stock or hogs, when wood is worth \$4 or \$5 per cord; but when it is not more than \$1 or \$2 a cord it may do. Nor will it do to compare our farming, where labor is so high, with the farming of England, Ireland or Scotland, where labor costs comparatively nothing, and where they cannot raise corn. If they could raise from 30 to 100 bushels of corn, in England, to the acre, you would not hear much of their turnip crop. People should raise what their climate is best calculated to raise to profit, as their great crops.

One man tells me he kept some young cattle through, on corn fodder, straw and turnips, and they came out well. I have kept my young cattle through, on corn fodder and meadow hay, for years, without the turnips, and they came out well. I prefer to use a part corn fodder for my oxen and cows, to all English hay, and they do better on it, and the cows give more milk.

Hollis, Dec. 25, 1858.

E. EMERSON.

SCIENTIFIC CONCLUSIONS.

Scientific experiments, as well as theoretical hypothesis, have established the following positions. We believe they may be set down as agricultural truths:

Substances, rich in nitrogen, increase the verdure, lengthen the straw, and promote and prolong the growth of plants.

Lime generally shortens the period of growth, strengthens the stem and hastens the time of ripening of both corn and root crops.

Saline substances, applied alone, and even,

comparatively in minute quantities, on some soils, produce a remarkable effect, on other soils but little.

While one substance, applied alone, produces little or no effect, a mixture of two or more may give rise to striking differences.

Phosphoric acid, lime, and some form of organic matter, are essential constituents of such a mixture as shall everywhere and under all circumstances produce a marked, beneficial effect on old, worn-out land.

Sulphuric acid has a beneficial effect on leguminous plants.

PRIZE ESSAY ON MANURES.

We have before us, and have perused with a lively interest, an *Essay on the Preparation and Application of Manures*, by Doct. JOSEPH REYNOLDS, of Concord, Mass. This essay was presented to the *Massachusetts Society for the Promotion of Agriculture*, and received their highest prize of one hundred and fifty dollars.

The essay commences by stating that Salts, Gases, Acids and Water are all essentials, and then proposes the inquiry, *How many of these elements are necessary to constitute a manure?* The subject of *Liquid Manure* is also introduced, and ably treated. The author says—

The saving and use of liquid manures is deserving of more attention than it has yet received in this country. It is easy so to arrange the stalls of cattle, as to receive their urine into troughs under the floor, and to convey it into a cistern in the cellar, or outside of the barn. This may be pumped into a water-cart, to which a sprinkler is attached, similar to those used in watering the streets. If it is pumped in through a strainer, the sprinkler does not become clogged, and it may be rapidly conveyed to the field, and distributed as a top-dressing, upon grass or grain, with immediate effect. When the soil is not deficient in carbonaceous elements, there can probably be no better top-dressing applied. It is not as permanent in its effects as the solid excrement, but more immediate, and it may be applied twice a year upon grass, with less expense of labor than one dressing of solid manure. The cost of the necessary apparatus for saving and distributing it, is small. As a top-dressing for a field where turnips are to be grown, it is very excellent. As a top-dressing in the spring, or during the summer, for pasture lands, it is perhaps superior to any dressing that can be applied. If the undiluted urine is thought too strong, it may be easily diluted in the field, if water is at hand.

The *Application of Manures* has received considerable attention, and the writer has given many facts, and offered suggestions that will prove of high value to the attentive reader. He says—

One great necessity for applying manure in our climate, is, that plants may be forced more rapidly through all the stages of their growth, since if left to themselves, the season would not be long enough to bring them to perfection; and

that system of culture which pushes them forward early, that they may get well rooted, and therefore be the better able to endure the droughts of July and August, and thus arrive at early maturity, before the frosts of September, we think must be the best system. Could we add another month to the summer of our climate, we could cultivate many crops, with a much less amount of stimulants than we require at present. Now we have to guard against the droughts of summer, and the early frosts of autumn, and I do not esteem it safe practice, to deposit the manure for the corn so deep in the soil that the growing crops cannot reach it till late in the season. When stable manure or compost is plowed in deep, we would recommend the application of well diluted guano, ashes or fine compost in the hill. In this way, with a season at all favorable, the crop will rarely fail.

This essay is valuable, because in preparing it, the writer has had the advantage of a practical experience on the soil to blend with his chemical acquirements in the laboratory; and this varied knowledge has so tempered both as to give them a value which a mere theorist cannot impart to his productions.

THE DESTRUCTION OF FORESTS.

By ROBERT DEMOCKER, Landscape Gardener in Cincinnati. Translated for the *Ohio Farmer*, by Dr. C. A. Hartman, from the German of the Cincinnati *Hochwächter*.

The social life of the plants has recently given rise to many contemplations and experiments, the results of which are of the highest importance to the tiller of the soil, as well as to the horticulturist. We have learned, that the existence of a great many plants depends on their association in large masses, while others, small herbs and even shrubs, need the protection of their taller relation, the trees, under the shade of which the carbonic acid finds the necessary temperature for its decomposition, and proper assimilation by the smaller plants; for these the trees also prepare the humus wanted for their further nourishment, in the leaves and other parts falling off every year. Many social plants deprive the ground of certain inorganic ingredients, which are absorbed again and given back by other plants partly in their decomposition, partly in the secretions of their roots. All these plants live harmoniously together, supplying each other; the life of the one kind wholly depends upon the existence of the other. These facts have led to the alternation of crops, and have made agricultural chemistry one of the most important assistants on the farm and in the garden.

The large associations of high-growing woody plants, commonly called forests, are the generators and regulators of the vital air needed by the animals; they are also the fathers of the springs, attracting the rain and spreading it successively as well as proportionately over the ground where mosses, and other herbs, with densely arranged roots, detain the water so received for quite a long time, and retard its evaporation. The disappearing of the forest causes not only want of wood and water, a dry and poor vegetation, but usually promotes inundations. The falling rain then washes down unhindered the soil from hill

and mountain. Moss, turf, shrubbery, and trees formerly took hold of the moisture, forming it into lively springs, and quiet brooks; now the water runs down unimpeded, breaking loose and carrying off the ground, spreading sands and stones all over the fields and meadows, swelling the rivers and inundating the surrounding country. In flat regions and closed valleys, where the forests are destroyed, the waters accumulate and form unhealthy swamps. Formerly the trees consumed, in these places, all superfluous fluidity, and the obnoxious gases arising from the stagnant waters. The Roman Campagna, for instance, once the well cultivated home of whole nations, where now the most pernicious fevers are raging, the dreaded malaria drives off in summer time the few inhabitants to the neighboring mountains, where in ancient times was the celebrated granary of Rome. This, and the present condition of Spain, Greece, a part of upper Italy and of the southern part of France, show in the most evident manner, the productiveness of soil and men is diminished by the destruction of the forest; islands like England may overcome to a certain degree the fatal consequences of such destruction.

The forest is the greatest benefactor of mankind; it is a necessity everywhere, and still it is everywhere more and more destroyed. Room is wanted for the fields and meadows; wood is wanted in great quantities; the forest has to furnish both, without regard to its own preservation; human wickedness and foolishness, political storms, and other causes, destroy inexorably those great means of national welfare and general blessing. All wise governments have comprehended long ago the utility of the forest, and have provided a regular protection and care for it. This regular management of the forest is, at present, preserving and culturing the few remaining mountain-forests in Germany, France, and Belgium, is producing new forests in deserted and swampy districts. Such a scientific and general care of the forest in this country is rather difficult, not to say impossible. The farmer destroys unconditionally, unscrupulously, not considering that he destroys with it the well-secured future welfare and the riches of the country. "Fields as well as lungs," says Bettzieck-Beta, (a German author), "are here destroyed by consumption, produced by the reckless endeavoring to get rich in the shortest time possible."

Now we do not want to quarrel with the farmer for cutting down his trees, be it for the purpose of making money out of them, or to get more room for his agricultural propensities; we deem it his duty, however, to repair the damages inflicted by it as far as possible, and the much more so, as this can be done in a manner the most useful to himself. We will show how it may be accomplished, supposing a man is willing and persevering enough to try it.

Wherever the soil is easily washed away by rains, and the plow cannot be employed, extensive orchards with high-growing trees ought to be planted, and the ground covered with mixed grasses, adapted to its special character. In a few years the fruit trees will protect the soil against drying up too quickly, the grass also retaining the humidity for the trees. All expenses will be paid a hundredfold in a short time. These

orchards can never replace the forest completely; they are, however, important and profitable means to diminish the fatal consequences of the disappearing forest. Apples, pears, cherries, peaches, peccan-nuts, Italian or Spanish chest-nuts, are particularly adapted to such a plantation. Ditches, swampy flats, and similar localities, may be covered with Lombardian hazle-nuts, and all places not accessible to cattle can be surrounded by fences of quince trees.

All farmers are respectfully requested to examine these propositions, and to act in accordance with them. Whoever feels interested in the welfare of his contemporaries and their descendants, will do well in setting an example to his neighbors.

A SCOTCH LOVE SONG.

[FROM THE GREENWICH AND WICKFORD PENDULUM.]

They told me thou wert false, Jamie,
And did na care for me;
I heeded not their voice, Jamie,
I thought it could not be,
So loving were thy words, Jamie,
So winsome was thy smile;
I did na think that it, Jamie,
Could veil one thought of guile.

Dost thou recall the hawthorn glade
Where we sat side by side,
When, on a summer's night, Jamie,
Thou sued me for thy bride?
My heart was very full, Jamie,
As in the pale moonshine,
I promised to be thine, Jamie,
To be forever thine.

Together there we knelt, Jamie,
The bent and reverent knee,
And prayed our Heavenly Father's love
Might rest on thee and me.
So radiant seemed my path, Jamie,
My cup so full of bliss,
How could I e'er dream, Jamie,
That it would come to this?

I never see thee now, Jamie—
Thou comest not to me:
'Tis said thou seek's another's love
Ah, Jamie, can it be?
They tell me she is rich, Jamie,
And of a lordly line,
Not thrice her wealth and rank, Jamie,
Could buy a love like mine.

My cheek that erst was red, Jamie,
Is palin' day by day;
I felt it in my heart, Jamie,
I'm wearin' fast away.
Then, Jamie, when the Summer oomes,
And blossoms clothe the tree,
Bestow one loving thought on her
Who died for love of thee.

H. A.

ROSE INSECTS.—If our lady readers are desirous of keeping their rose-bushes free from the small green vermin that so frequently infest them, the following remedy will be found a most effectual one: To three gallons of water, add one peck of soot and one quart of unslacked lime. Stir it well—let it stand for twenty-four hours, and when the soot rises to the surface, skim it off. Use a syringe for applying it.

EXTRACTS AND REPLIES.

APPROPRIATIONS FOR THE SUPPORT OF AGRICULTURAL SOCIETIES BY THE STATE.

About \$12,000 is annually drawn from the Treasury for this purpose, and distributed to about twenty societies—no single society receiving more than \$600. So far this is well, and as it should be. I have noticed some complaint of there being more societies in some counties than in others. If this be an error, it was an oversight in the Legislature in making the grants, more than in the societies who received them. Such irregularities will hereafter be guarded against. It was a condition of such grants from the State, that the society should have raised their funds and invested them on interest before they would be entitled to favor from the State. How those societies who have laid out all their money in land and buildings—from which no interest or income accrues, or can be expected to accrue,—can entitle themselves to a share of the bounty of the State, is beyond my power to imagine. I think it must be by a hocus-pocus such as is said to be in use occasionally at Uncle Sam's custom-houses. I think if gentlemen so upright as the Governor and Treasurer should chance to run upon any such management, they would hesitate a while before they would suffer the money to be drawn. If they do not, they will ere long find the stool on which they themselves stand to be in a tottling condition. INQUIRER.

Jan. 1, 1859.

COTTON SEED MEAL.

I notice in the April number of the *Farmer* that you speak favorably of cotton seed meal for milch cows. Does your experience since that time confirm the opinion you then expressed? I have fed it to cows and calves to a limited extent, and have not noticed any injurious effects. But I have recently heard opinions expressed unfavorable to its use, by those who have fed it to a large number of cows. Indeed, the objections to it were very strong, principally, I believe, in consequence of its effects upon the physical condition of the cows.

I should like to hear from yourself and others who have made trial of this meal. Analysis shows it to be richer than linseed meal, and I suppose it can be bought for a less price. B.

REMARKS.—We have used a ton or two of cotton seed meal, and we have thought with good results—though we were not able to make a comparison of it with other grains, in feeding it out, in consequence of frequent absence from home. But from what observation we were able to make, and the report of the man who tended the stock, we were favorably impressed with it as a feed for milch cows.

We shall be glad to hear from others on the subject.

A NEW DISCOVERY.

It is stated that a gentleman of Fitchburg, Mass., has discovered the cause of the potato rot to be a "general poisoning or corruption of the surface soil." As a remedy, he proposes to

bring the subsoil to the surface, in sufficient quantities to avoid the use of the surface soil, in the growing of the plants; just as though the same causes that diffused the poison over the surface, had not spread it in the subsoil also. I should as soon think of prescribing "the taking off the skin of a man" for the cure of the itch, or any eruption apparent on the surface. So prone are men, when they get hold of an idea, to run it until it merges in absurdity.

BUTTER IN WINTER.

I often see directions how to make good butter in your valuable journal. In making butter, I find many obstacles; my cow has been fed on carrots for several weeks; since that time we have churned several hours (with the cream at 62) without making the butter come. Do you suppose the carrots have a tendency to prevent it? If so, is there any way to avoid it? Can the cream be churned again by any process?

Jan. 11, 1859.

A SUBSCRIBER.

REMARKS.—We believe the carrots would have a tendency to produce good butter, and not to retard in any way its coming. If you have churned a *day or two* on your cream, you had better appropriate it to some other purpose than the making of butter.

The first thing essential in making good butter in winter, is to get good milk, and then if the milk is set in some place, cellar or closet, where the temperature will remain at 60° Fahrenheit, cream will rise abundantly, and the butter will come in ten minutes after commencing churning the cream. Some persons scald the milk when it comes to the house—but that is not so essential as an even temperature at 60° for the milk to stand in. We are making 20 lbs. per week without the slightest difficulty.

MASSACHUSETTS AGRICULTURAL SOCIETY.

With the mercury 8° below zero, I have just examined the pages of Mr. Secretary Fay's publication in explanation of the doings of the Massachusetts Society for Promoting Agriculture. Although the predominating influence of *wealth* is apparent on every page of this Society's history, still there is sufficient of good developed to make the whole worthy of commendation. For myself, I do not think a man any the better or worse, for being born a *millionaire*, or chancing to have married a wife that is one; still it must be admitted, that there are some things that such persons can do, that others cannot do. I rejoice that this publication is made, because I think it will put down that ambitious spirit, that appeared in 1857, and is again beginning to show itself on the banks of the Connecticut. Every person who reads this handsome volume of 150 pages, will be satisfied that those who have managed the concerns of this society have had a high and honorable purpose, of doing the best they could to advance the best interests of the farmers of the State. If other associations would proceed with a single eye to the general good as they have, and not allow themselves to be swerved

from the path of propriety, they would leave a record that would shine brighter and brighter, unto the perfect day.

January, 10, 1859.

ESSEX.

FRUIT TREES—EFFECT OF GRAFTING.

MR. EDITOR:—Fruit trees, and their cultivation, is a subject which I feel particularly interested in, and though my observations of these are home observations, and consequently quite limited, yet if they can be of use to any one, I am willing they should be further published in your valuable paper.

That each tree has a condition of life peculiar to itself, long, short, or intermediate, few persons, if any, will deny, but that there is a transfer of such condition by grafting, old age not excepted, few realize, and yet this is true, I believe, entirely true, and that I can substantiate it. But, says one, "If this be true, why then a large proportion of our fruit tree interests are of no account, for they have been grafted from old trees!" Well, this is even so, and were I to make a comparison of the thing, I should say that animal life can as well be re-instated by the sustenance which has established and perfected it, manhood, if you please, as that a fruit tree can flourish any considerable length of time, when grafted from an old one, and the reasons are just as obvious. The truth is, that the life principle, the tree life principle has been shortened in, and in, until no thing comparatively remains of it, and now we are suffering from such practices.

Walpole, N. H., 1859. W. T. BLANCHARD.

CLAPBOARD OR BATTEN BARN.

A "Subscriber" wishes to know if he shall use clapboards or battens. My experience for quite a number of years is, to use neither for ordinary barns. My practice is, to use half-inch lining boards, and then board with straight-edged boards one inch thick, taking care to make them break joints with the lining. It has this advantage over battens, that, with a less number of girts to nail to, wind and storm is perfectly excluded, it being understood that the boards and linings are well-seasoned before they are used. I find by experience, that hay can be put into a tight barn much greener, and it will keep much better, than it will in a loose boarded barn; the stock will eat less hay, and look better, and do better, and they are better every way, if it be properly ventilated, than they possibly can be in the old-fashioned loose boarded barn. If you do not believe, come and see. D. D. POWERS.

Pittsfield, Mass., Jan. 10, 1859.

WEATHER AND CROPS IN MAINE.

We are having pleasant weather and fine sleighing. December was a pleasant month. The ground froze up rather early, so that most farmers did not do up their plowing. Corn and other grain did well, excepting wheat, of which there is not much sown about here. Potatoes turned out well, and not so many rotted as usual. Hay is rather high, twelve dollars a ton, and stock cheap. As a general thing, farmers here keep more stock than hay, so hay is kept high, and cattle poor—a poor policy, I think. There are

a good many such farmers that will sell their hay, and cheat their cattle, and soil, for the sake of a few dollars, for the present time. G. D. S.

West Danville, Me., 1859.

INJURED HORSES.

To "Taunton"—I have known a horse to receive a very severe cut from kicking against the plate that attaches the whiffletree to the crossbar, severing the cord so that it protruded from the wound, to recover, so as to perform carriage and farm work without inconvenience. Three-fourths of an inch was cut off, and it was then placed back, and, as is well known in surgery, the interstice filled and restored the ankle to nearly its former strength and flexibility. v. c. G.

Nashua, 1859.

REMARKS.—We are glad to hear it. The one or two horses we have seen thus injured, were utterly ruined.

FLOORS IN HORSE STALLS.

"W. D. L." is informed that it is customary to build horse stalls with inclined floors, but they are usually inclined more than is necessary to secure the object—cleanliness, particularly in sale-stables, as it makes a horse look larger to have his forward feet elevated three or four inches, but it is very objectionable for a horse that stands much in the stall. One-half inch to the yard is amply sufficient.

It is a very good way to construct the floor of two thicknesses of inch boards instead of one of plank, matching the under layer, and placing the upper boards about three-eighths of an inch apart, using boards about six inches wide. It economises the bedding twenty-five per cent.

Nashua, N. H., 1859.

v. c. G.

DANVERS RED POTATOES.

Mr. William Hanson, of Barre, Vt., raised the past season, 505 bushels of Danvers red potatoes on 1½ acres; also 725 bushels of oats on 13 acres (10 acres greensward.) L. H. THURBER.

Washington, Vt., 1859.

DUCHESSE D'ANGOULEME PEARS.

J. H. JONES, Esq., Clinton, Illinois, writes us that he raised the above named variety of pear last season that weighed from 12 to 17 ounces each.

Should like the volume mentioned, if it can be sent free of cost.

BUNCH ON A HORSE'S LEG.

Can you or your readers tell me the cause of a bunch on a horse's forward leg, below the knee on the inside; I think it is called a *splint*; and if it can be taken off, or if it hurts a horse? The bunch is as hard as bone. A SUBSCRIBER.

Millbury, Mass., Jan., 1859.

A MORRILL COLT.

Mr. PERLEY ROBERTS, of Washington, Vt., has a Morrill colt, foaled June 13th, 1857, which weighed, Dec. 29th, 1858, 947½ pounds. He had no extra keeping.

For the New England Farmer.

ROOFING MATERIALS.

DEAR SIR:—When I answered your questions about roofing materials through your paper, I did not expect to arouse the wrath of all the proprietors of unmentioned small quarries in Vermont, nor did I wish to involve myself in a newspaper controversy, nor did I suppose I should be purposely misrepresented.

I did not say that slates must fade to be as good as the Welsh, but that all the strong and best Vermont slates do fade upon continued exposure to the weather, whilst all which do not fade are soft and of little value for roofing, however well they may be adapted to slabs, &c. The fact is unquestionable, and may be proved by any one who will trouble himself to try the experiment of wetting a slate which soaks water, and exposing it to the action of frost. The same power which will break your pitcher when full of water, by freezing the water, will in a few seasons' exposure, disintegrate the slate.

My object in writing you was to convey desirable information to those of your readers who may have buildings to cover, and to facilitate their researches; after giving the merits of slate for a roof, I gave tests of value. These tests are admitted by the best authorities to be of absolute importance, and properly applied, will satisfy any experimenter.

For power of resistance to frost and consequent power to resist disintegration, the quantity of water a slate will absorb in a given time, the one absorbing the most is the poorest.

For strength, elasticity, toughness and long resistance to strain when laid on the roof, or to concussion of hail, of falling stones, bricks, or the tread of persons moving over the roof, the weight a given slate will bear without breaking when supported by its extremities and loaded in the middle.

These two points settled for or against any different specimens of slate, that one will be best for general use which is equal to or better than all others in strength, &c., and in inability to soak water, and which splits with the greatest uniformity and smoothness, and yields the largest number of squares to the ton.

I am aware that slates according to their size should be thicker or thinner, and that some absolute thickness is proper for each size, but the least increase over this proper thickness, is a loss to the purchaser, in the strain of unnecessary weight upon the roof, in the extra freight paid for that increased and useless weight; and is a loss to the producer in waste of stock. I mentioned the Glen Lake and Eagle as the best Vermont slates, because the Glen Lake first and Eagle next, are uniformly best in all these three qualities. The Eagle is necessarily thickest for the character of the stone, and is thicker than use requires.

The Forest slate I know very well; it is an excellent slate, as are many others, but when submitted to the water test, it will be found to soak more water than they. I have seen the experiment carefully tried by disinterested persons, and it always soaked most water of the three.

The Farnham quarries of mottled slate I know very well. The writer who describes them says,

at start, that they are soft. Soft slates, unless greasy and naturally rotten, *always soak more water than harder varieties*, and fail in the first test. The soft slate is like soft wood or any other soft material, unless pliable, like wrought iron or copper, or other metals, is less able to bear a strain and weight than hard kinds of the same material; and in the case of this slate the following fact bears me out.

A large number of squares of the mottled slate were piled last spring at the Fairhaven depot, and were sold this summer to some slaters, who before they could use their purchase, were obliged to pick them all over, and in many cases recut (or dress) the slates; and there was, two months ago, at that depot, at least one-eighth of the whole quantity culled and thrown aside as waste. The mottled color he speaks of so enthusiastically is the worst feature about them. It is bad enough for all our slates that they change a little in color when exposed to the sun for a time, but when laid they are uniform in color, and become nearly uniform after the fading is over; but these mottled slate look like a pie-bald horse, at first; a roof laid with them is a real curiosity for one accustomed to observe color, its effect is like a face spotted with small-pox or mottled with the eruptions of scarlet fever; it is neither one thing nor another. This slate, like many others, will find its largest and true use as slabs for marbleizing, for tiles, &c.

But to close all I have to say upon the subject of slate, I would propose that all the slate manufacturers hold a meeting at a convenient place, and select a committee of three careful and scientific chemists and engineers, who shall visit the various quarries, obtain fair samples of the slate, both slabs and slate ready for the roof, which they shall submit to the most severe tests in order to establish their value for the various uses to which slate may be put; let this committee report progress through your paper from time to time, and finally publish in it the result of their labor.

If a careful investigation were made at once, a conclusion satisfactory to all parties could be arrived at before the spring sales commence, and all might purchase intelligently.

This is the practice in England. Every new slate is tested by competent persons, and their opinions published, so that no one need buy a poor article for a good one. The uses for slate are many, and some kinds not good for one purpose are pre-eminently good for others; let this be known to the public.

I have proposed this plan to the proprietors of the Glen Lake quarries, and they express great readiness to enter into such an inquiry, and are ready to subscribe liberally towards it, or to pay their share of the cost; this seems to me very fair, and I hope the plan may be adopted by all quarry owners.

RUSTICUS.

A FAT FISH.—The siskawit, a fish of Lake Superior, is reported to be the fattest fish that swims, either in fresh or salt water. The fishermen say that one of these fish, when hung by the tail in the hot sun of a summer's day, will melt, and entirely disappear, except the bones. In packing about fifty barrels, a few seasons ago at Isle Royale, one of the fishermen made two

and a half barrels of oil from the heads and leaf fat alone, without the least injury to the market-ability of the fish. Besides this leaf fat, the fat or oil is disseminated in a layer of fat and a layer of lean throughout the fish. They are too fat to be eaten fresh, and are put up for market like the lake white fish and Mackinaw trout.

STATE BOARD OF AGRICULTURE.

A quarterly meeting of the *State Board of Agriculture* was held at the State House on Tuesday, Jan. 18. Gov. BANKS, Lt. Gov. TRASK, and nearly every member of the Board, were present. His Honor the Lieut. Governor in the chair.

The management of the State Farm at Westboro', during the last year, has been in the care of a Superintending Committee of eight persons, and the report of this committee, and its consideration, was the first business in order.

The report gives in detail the operations of the committee in regard to the stock, crops, methods of seeding and cultivating, reclaiming, trenching, laying down lands, draining, and all other matters that have engaged their attention. As an illustration of their mode of proceeding we cite an experiment in *seeding land to oats*. They had six acres to seed with oats—they were all sown broadcast, April 27 and 28, and harrowed in as follows. No. 1 received *five* bushels per acre; No. 2 received *four* bushels; No. 3 *three* bushels; and No. 4 at the rate of *two* bushels. The lots were manured with 100 lbs. of plaster per acre, spread broadcast and harrowed in, with the exception of a strip of one acre *running across the several lots*, which received no plaster. The oats were harvested July 28, and threshed Sept. 2d and 3d. The yield of lot No. 1 was 42 bushels; that of No. 2, was 35½; that of No. 3, was 40, and that of No. 4 was 26½ bushels. The acre that received no plaster yielded 20½ bushels, the grain weighing 28 lbs. to the bushel, and being much the same on all the lots except on No. 1, on which both the grain and straw were much the lightest.

The results of this carefully conducted experiment would seem to settle the question pretty conclusively, that *three* bushels of oats is the amount most profitable to be used for seeding an acre of land that is in fair condition. This committee reported as much in detail upon all the other crops of the farm.

The committee close their report by saying, that the aggregate amount for permanent improvements during the past five years has been no less than \$13,727 58, while the aggregate amount for boys' labor was \$9,437 75. The value of personal property is \$4,804 36 greater than when the Board first took charge of the farm; or, in other words, the Board leave that amount of personal property belonging to the State over and above

the aggregate amount received from the Trustees in 1854.

The sum spent for permanent improvements, for the labor of the boys—for implements, stock, &c., amounts, during the five years, to \$32,423-17. The aggregate amount received from the Commonwealth during the same period, including the value of the inventory received from the Trustees in 1854, was \$29,081,00, showing a balance of \$3,342 17, which the farm returns to the State more than the whole amount received.

SECOND DAY.

Wednesday, Jan. 19, 1859.

The Hon. MARSHALL P. WILDER was called to the chair.

In consequence of the Board having decided at a previous meeting no longer to conduct the affairs of the farm, a committee was appointed to report a plan of business for the year, and they reported that the Board be subdivided into committees, each of whom should investigate a special subject, and report to the full Board, annually, in January, the result of their investigations. This report was adopted.

Under a resolve of the legislature of 1857, the Board of Agriculture was authorized to "*investigate the various methods of arresting the disease of the potato,*" proposed by certain applicants for the premium of ten thousand dollars offered by the legislature of 1851. The Board committed this subject to a committee of three persons, who reported that some fifty applications had been presented to the Executive from time to time, but that only about twenty out of this number could be found and placed in their hands. These were carefully considered, and so far as was practicable, the methods proposed of arresting the disease were tried at the State Farm, and all failed—they, therefore, reported, that in their judgment no person is entitled to receive the premium. This report was accepted by the Board, and its Secretary was directed to communicate these facts to the legislature now in session.

Reports were next made by delegates who visited the various county societies, and judging from these alone, the conclusion must be, that they have all reached a remarkable degree of perfection. We cannot believe that the management of these Societies has been such that they are susceptible of no improvement, or that there have not been innovations introduced not contemplated by the legislature, or justified by a sound discrimination, and we regret that these reports have not spoken plainly and forcibly upon any departure by any society from the plain intentions of the legislature.

Before the sitting closed, these reports were pretty thoroughly discussed and criticised, and

some of the innovations introduced into the county societies plainly pointed out,—especially that of occupying so much time in racing, trotting, or pacing horses for money, in direct contradiction to both letter and spirit of the statute of the Commonwealth. It was stated that no society could plead that it did not offer money itself, for it was liable for whatever was done by its consent on its grounds. Other violations of the statute were also pointed out.

THIRD DAY.

Thursday, Jan. 20, 1859.

The report of the special committee to propose a plan of operations for the ensuing year was considered in committee of the whole, and a wide range of subjects was proposed from which to select such as should be referred to sub-committees for their investigation.

The Board probably continued its settings through one or two more days, but an engagement out of the State deprived us of the pleasure of remaining with it. Its concluding business we must give at another time.

THE WIND.

A truly mysterious agent is the wind, viewless itself, yet having an eye withal toward which if one finds himself moving he will be sure to feel its force if he does not see its form. It is strong-armed also, beating down opposition with relentless strength. Its voice is terrible sometimes, and sometimes softer than a flute. Now it has the plaint of an æolian harp; then life-like whistles loud and clear. It sobs among the pine cones, rustles in chestnut's summer leaves, and rattles in the bare branches and falling foliage of the autumn. Almost noiselessly does this invisible tenant of the space above us seem to creep, though in fact unseen, along the waving grass and corn, which bend in reverence as it passes.

The wind has been said already to have an eye. It has breath, too, now smiling in the sirocco or simoon, now cutting down men with the norther and prostrating in the hurricane. Generally it may be inferred that it possesses a good character. The common saying that it is an ill-wind that blows nobody any good, implies that usually it is a good creature enough. It blows our vessels to pieces sometimes, indeed, but then, how many more does it blow, with their rich freight of men and merchandise, across the oceans? Winds derive their character, as men do, from the country of their origin. Those from the land of boreas are apt to be savage in their attacks as the white bears of the pole, while those from the tropics softly kiss our cheeks and woo us to repose.

It makes itself useful in a thousand ways, one of which is turning mills and powerfully helping all sorts of manufacture. As an entertainer it is unrivalled. How sublimely it brings up the thunder-shower; how beautifully it floats along the sky, the billowy cloud. It causes the hail or rain drop to patter against the window; and, if

you are a good-for-nothing sloven or slattern in your house-keeping, it will drive the snow or water through the broken pane or dilapidated roof. While fishing in the lake or lying under a shady tree upon its banks, the wind is ever ready to amuse one. Now it stirs to myriads of ripples, running after one another over its surface, and now it fans the lounge with the big branches of the chestnut above his head.

It is not always, however, that it appears as master of the revels. In the character of avenger it now and then rushes upon the stage and makes its audience tremble. Wide forests are instantly laid low by its irresistible yet viewless arm; dwellings torn asunder and crushed beneath its weight; men and animals are lifted up and whirled about like snow-flakes in a winter's storm. So it is on the land.

At sea its power is terrific. The ocean is lashed into rolling mountains. Earth and the heavens meet and mingle together in night and chaos. The elements put forth their voices, but above all their horrible thunder the wind rides triumphant, and utters its trumpet summons to the universal uproar of battle. It rages, it screams, it shrieks. Over all other sounds the blast of the invisible is heard; and that power which is the cause of the boiling of the deep, the agony of the cracking ship, yet is itself forever unseen. —*Newark Daily Advertiser.*

For the New England Farmer.

FEMALE EDUCATION. *

BY WILSON FLAGG.

Thus far the education of young men has been the principal theme of discourse, but the intellectual improvement of the other sex must not be disregarded. The interest and happiness of the female sex are not to be overlooked in our schemes for advancing any department of business. Welfare must not be sacrificed to wealth, if the two are incompatible; and it is better that the farmer's crops should suffer, than the members of his household. But the two things are aids to one another, and the generality of pleasant, rural homes are connected with well-cultivated farms, and he who pursues a liberal and progressive system of agriculture is commonly the generous father of a happy family. No man, however, is likely to be a successful farmer, if his wife or housekeeper be not well-instructed in all that concerns domestic economy. Yet the aim of our endeavors is not the training of young women to be patient drudges, who are destined to be farmers' wives. It is sufficient for their practical education, that they gain, with habits of neatness and industry, a good knowledge of housewifery and the arts of the dairy. But something must be added to these qualifications, to make them intelligent mothers and valuable members of society, as something must be added to the farmer's practical knowledge, to render him a useful and respectable citizen.

It is a matter of common observation that

farmers' daughters, in Massachusetts, have generally received a better literary education than farmers' sons; and some of them are accomplished female scholars, whose brothers are very deficient in knowledge. The daughters, perceiving the necessity of preparing themselves for some employment away from home, have chosen, in numerous instances, to be educated for teaching a school, while their brothers have let themselves as journeymen, to other farmers, or have learned a mechanical art. We have never yet observed, however, that these young women were unfitted, by their literary acquirements, to be good housekeepers; but we have known many of the young men, who, on account of their ignorance, were miserable farmers.

Useful knowledge does not foster a silly pride; and though studious habits may partially incapacitate one for labor, they do not beget idleness or negligence. These are often the affectations of one who has the vanity to imitate the supposed eccentricities of genius; and they are commonly observed in those who are wanting in native good sense—that intellectual jewel, which is as rare as genius, and infinitely more valuable. Some of the best housekeepers we have ever known, surpassed all their neighbors in mental cultivation, and compensated for their want of physical strength by their superior management. On the other hand, a farmer's daughter is often disqualified for the performance of duties devolving upon a farmer's wife, by practising some manual art that leads her into the city, or by employment in a factory. We are also persuaded that a young man is more likely to acquire a distaste for farming, by serving four years in a dry goods store, than by studying four years at college. It is at the footstool of science that one learns to venerate the plow, while trade too often generates a taste only for the frivolities of town life.

No evil, we think, is likely to arise from educating farmers' girls to the highest point that is compatible with their attainment of practical information. And it may be remarked, that as the employments of women in this country are chiefly within doors, there is less necessity that they should possess that robust vigor, which is required by the labors of the other sex. The evil that arises from the influence of study and other sedentary occupations upon the physical constitution, is more compatible with feminine than with masculine occupations. It is also well known that the strongest women are not the best housewives, nor the strongest men the best farmers. Good health and a symmetrical development of the form, are of more value, in the present state of society, than mere muscular strength. The public are prone to consider these two qualities as identical; nothing is more common, however, than to find stout, muscular people who are predisposed to certain diseases, from which those of a more slender habit are free. Even pulmonary consumption is not confined to persons of inferior muscular power; though it will not be denied, that health and strength are to a certain extent mutually dependent, and that the physical powers must be cultivated by exercise, or the health will decline. It is more important, however, to preserve the soundness of the brain and the vital organs, by good air, generous living,

* This Essay on Female Education is the Supplement to the author's "Prize Essay on Agricultural Education," but was omitted by the Trustees in their publications. It is now published for the first time.

temperance and cheerfulness, than to strengthen the muscles by labor or gymnastics.

A certain amount of physical delicacy in a woman is pleasing to the other sex, especially to those who are educated and refined. Hence, in proportion as farmers are intellectually informed, will they demand in their wives an amount of delicacy of person, which may be incompatible with their ability to perform the laborious tasks which have usually devolved upon the mistress of a working-man's family. This is a matter for serious consideration. If our farmers' wives were to become, on the average, as feeble as those individuals of the sex who have never been accustomed to any kind of labor, we should be exposed to national degeneracy. Yet it cannot be denied that the direct tendency of improving the social condition of any class is to diminish their physical power, though they may be improved in health and symmetrical development. It is important, therefore, to determine whether the amount of general health may not be increased, by certain improvements in our social habits, so as to compensate for this infirmity in animal strength.

We are disposed to look upon the subject with favorable hopes, when we consider that as society relinquishes the laborious habits which were necessary at an earlier period, it adopts the more prudent and healthful customs of a better civilization. For centuries past the grand causes of disease have been excessive hardship and imperfect sustenance among the lower classes, causing the destruction of the individual; and indolence and luxury among the higher classes, causing a degeneracy of the race. Intemperate drinking, at the same time, has prevailed among all classes, and produced more disease than all other causes. As civilization advances, these sources of disease are diminished, because the most of our vices, especially that of drunkenness, originated in the customs of a barbarous age, and are lessened as we improve in knowledge. At the present time, intemperance is most prevalent among the rude and ignorant, notwithstanding the fact that the higher classes are not entirely free from it. The tendency of a higher civilization, therefore, is to ameliorate disease, no less than to improve the muscular strength. As the refinements of life are multiplied, the injurious vices are diminished, and man improves in health, in symmetry of development, in intellectual power, and as the best statistical tables show, in longevity, while he degenerates from the hardy vigor of his ancestors.

We speak of these matters in this connection, because women are more liable than men, to suffer from the want of those exercises that strengthen and invigorate the frame. If the sex, however, are led to the adoption of habits, by which they avoid the causes of disease; if they strengthen the vital organs by exercises which are yet insufficient to produce great muscular power, we need not be fearful of the general consequences. The farmer, with the aid of improved agricultural machinery, is not obliged to toil so severely as his more hardy predecessors, to obtain an equal amount of profit. The female members of the farmer's house enjoy similar advantages, compared with those of earlier times; and with less animal power, are able to accomplish superior re-

sults. While we would carefully guard every class of the community, especially the rural class, from all effeminating habits, we are willing to admit that there is no danger of real degeneracy, while the general health of a class is improving; especially, if there be a gradual gain of intellectual power and longevity.

Volumes of cant have been written and spoken on almost every subject, and cant has been freely used in discussing upon female education. Too much praise has been bestowed upon mere "smart women," as if women were horses, and were to be esteemed in proportion as they are able to perform an extraordinary amount of brute labor. A young farmer who marries one of these smart women, is regarded as peculiarly fortunate, because he is thereby saved the expense of some hired help. Her intellect is not taken into the account. We might, with equal reason, congratulate the wife of a man who can perform the labor of an ox, because the family is thereby saved the expense of an additional farm-laborer, though all his neighbors, by expending more intellect on their farms, are more thrifty than he. We cannot set too high a value on capacity for labor, when it is united with intellect; but we do not always consider that unintelligent labor cannot avail much, except in a menial or subordinate situation.

In reviewing the housekeeping qualifications of our female acquaintances, several instances will probably occur to almost every one's recollection, of women of feeble frame, who have performed the duties of a farmer's household with admirable success. She who perfectly understands the way in which every thing ought to be done, can always find hands for the work. There is light work enough in the house to keep one's feeble hands always diligently employed, while the head is directing the tasks of others.

Our aim in making these remarks is not to discourage any rational attempts to preserve that hardy vigor, which, if not absolutely essential to health, is still a great blessing to either sex. But we would discourage that vulgar contempt for the refinements of life, which we observe in many places, and the notion that if a young woman is well-educated and refined in her taste, she cannot be fit for a farmer's wife. It is true, that such a woman would demand more intellect than one with less culture would require in a husband; and this very circumstance is calculated to elevate the farmer's occupation, by imposing upon those who follow it the necessity of more intellectual culture, to be acceptable to the fair sex. Such a woman would also demand more education for her children, and thus in a great variety of ways would her influence tend to advance the respectability of farming and of farmers. The refinements of life are too commonly classed in the same category with the vanities of fashion; but there is this remarkable difference between them, that while fashion is idolized by all the vulgar, the refinements of life are found only in families of superior cultivation.

Let our farmers' daughters, therefore, be well-educated, to save them from the love of vulgar amusements and extravagance, from bigotry and frivolity, and to make them effectual aids in advancing the interests of agriculture, by their influence over the other sex. Let us endeavor to

dispel those barbarous notions, that all the education a farmer's wife should possess, must be confined to the dairy and the kitchen; that woman was created but to be a servant to man, and to administer to the physical wants of his family. When we meet with a woman of superior education, we find one who is attached to rural life, and who, if she were married to a farmer, would administer his affairs in the most acceptable manner. She would also render his house agreeable by her conversation and her good sense, and by enlisting his sympathy with her own love of nature, make him more contented and happy, when employed at home or in the field.

Another important consideration is the power that is placed in the hands of an intelligent mother, to afford her children a superior domestic education. A mother enjoys more opportunities than the father for exercising influence upon the children. It might be allowed, therefore, that we should first educate the daughters, rather than the sons of farmers, even if the interest of the latter were the only object of our concern. A mother, who is capable of instructing her children, seldom fails to exercise her capacity for their benefit; but the same cannot be so generally said of fathers. We have no doubt that the talents of the father as often descend to the offspring as those of the mother, though a contrary notion prevails; but it will be admitted by all, that the mother's ignorance and the mother's education are more generally transmitted to the offspring than those of the father.

But it is not the literary education of young women of the rural classes that should be only regarded. Inducements should be offered to them to make themselves acquainted with the theory of agriculture. The knowledge of the intelligent and believing wife might often convert the ignorant and unbelieving husband to faith in new improvements, and induce him to learn and to be progressive. Her instructions to the children, if she could not influence her husband, might redeem them from the bondage of ignorance, and lead them to improve upon their father's practice. The farmer's wife should be well acquainted with the farm and its wants; she should have sufficient practical knowledge of agriculture, to be able, if it were necessary, to superintend the exercises of the farm. A woman does not unsex herself by extraordinary acquisitions of knowledge; but rather by assuming the masculine manners and habits of the other sex.

In the preparation and distribution of tracts, the educational wants of the female sex must not be overlooked. There are some studies and exercises that are supposed to be peculiarly adapted to female taste and genius. This is said of botany, which certainly enjoys more favor among young women; and perhaps it is only through their influence, that young men could be induced to give any general attention to it. But it is needless to dwell any longer upon the share which woman may have in imparting a taste for the study of nature, and for the refinements of life, to the other sex. We may remark, in conclusion, that if we would improve farmers and farmers' sons, in taste and in the amenities of society, they must receive their culture through the female sex; but all practical knowledge and tact must proceed from their formal experience and observation.

For the New England Farmer.

FARMERS, LOVE YOUR CALLING, AND MAKE YOUR HOMES PLEASANT.

MR. EDITOR:—Probably mine is a hackneyed subject, but as it seems important, it may be well to "keep it before the people."

When we look around over many farms of our land, and observe the absence of improvements, the indifference paid to making things convenient about them, and the absence of shrubbery, and shade trees, and sundry fixings about the house to beautify and give an idea of a "pleasant home," we see that some do not appreciate the beauties of landscapes, trees and flowers, or are disposed to make the most of the things around them in life, so far as rural enjoyment is concerned. But some may say that common farmers having nothing but their farms, which may be small, cannot afford to spend large sums of money like the rich, in beautifying their grounds; true, yet it costs but little to set out a few shade trees, and shrubbery, in a tasty manner, and to have the rose, the dahlia and the peony to blossom in the yard. I am aware that many live on farms not their own, and so cannot be expected to make those improvements that they would on farms of their own. But some hire farms when they may be the proprietors of small estates, merely because they may get better returns from the banks than they could from farms, perhaps, and so live on, farming for gain without being in love with their calling, and ignorant of the superior enjoyments of those intelligent farmers who live on their own acres, and take pleasure in endeavoring to improve their farms, and in rendering their homes pleasant and happy places, and fit abodes of progressive farmers.

E. T. C.

Portsmouth, R. I.

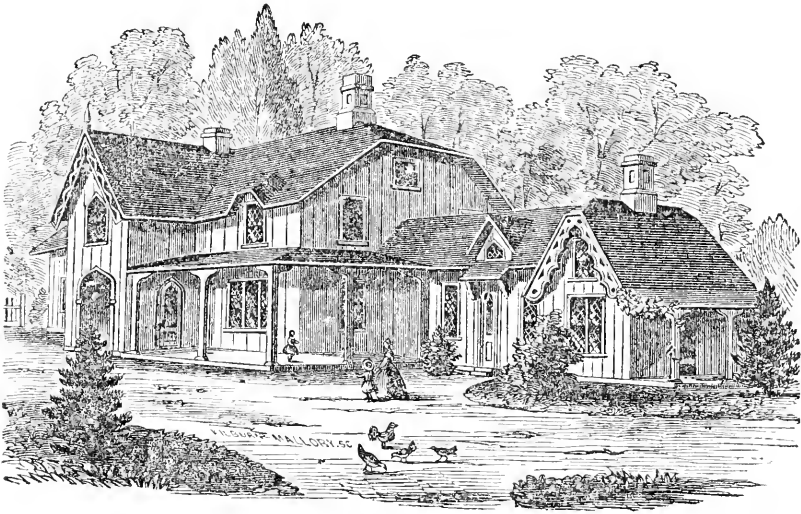
REMARKS.—Excellent. Indoctrinate the people with these ideas, and the price of good land in New England will advance twenty per cent. in less than five years.

For the New England Farmer.

POTATO CULTURE.

I have always noticed in this section that potatoes planted on old pasture or mowing land, newly broken up, and planted without manure, were nearly or quite exempt from the rot, and that some particular varieties have never rotted in the field, though heavily manured. These facts I cannot exactly harmonize with Mr. RED's theory. I read with hope the plan your Concord correspondent was so fortunate to peruse, and practice with success. I inserted peas in the potato according to directions, and waited patiently the result, which I am sorry to say was not very favorable. Several varieties which I tried, rotted just as bad as those planted without peas. I cut the tops from some soon after they commenced drying, and covered the stubs with earth. I dug part of them, and found only one affected, and that but slightly. My hired man dug the rest, but said there were no rotten ones among them. The same varieties in other hills and rows, were one fourth perhaps affected. W. I. SIMONDS.

Roxbury, Vt., Dec. 22, 1858.



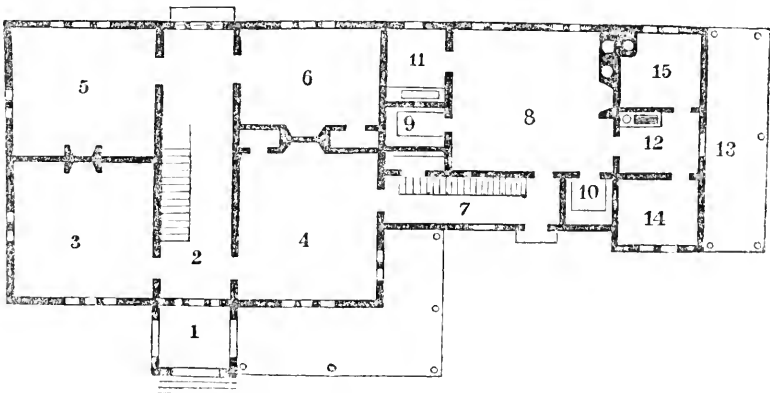
DESIGN FOR A FARM-HOUSE OF THE RURAL GOTHIC STYLE.

The accompanying drawings are a design and plans for a farm-house of the Rural Gothic style, with conveniences for an estate of considerable size. The designs were furnished expressly for our columns, by Geo. E. Harney, Esq., Architect, Lynn, Mass.

The accommodation is as follows: The first floor contains No. 1, a porch, open on three sides, and communicating on the fourth with the hall No. 2, 8 feet wide, and extending through the house, with a door at each end. This hall contains stairs to the chambers, and opens into the principal rooms of the house. No. 3, parlor 15 ft. square; No. 4, living room 15 by 16; No. 5, bedroom 13 ft. by 15; No. 6, bedroom 10 ft. by 15. This room, if desired, may be used for a li-

brary. No. 7 is a back entry containing the servants' stairs to chamber and cellar, and opening into the kitchen, No. 8, 18 ft. by 18. Connecting with the kitchen are two large china closets Nos. 9 and 10, and a store-room, No. 11; No 12 is a pantry, 7 ft. by 8, opening upon the small veranda, No. 13; No. 14 is a dairy or milk-room 8 ft. square, and No. 15 is a wash-room or scullery of the same size.

The second story contains seven good-sized bed-rooms with their necessary closets. Those in the L being entirely distinct from the main body, and reached by a different flight of stairs, may be used for servants and hired men. The attics, if not needed at present, may be left unfinished, and used for drying purposes. The cel-



GROUND FLOOR PLAN.

lar occupying the whole of the space under the house should be divided into several apartments corresponding to those on the first floor, to be used for storage, fuel, &c.

Construction.—Although we greatly prefer stone or brick for the construction of such buildings, yet as there seems to be such a prejudice in favor of wood, (especially in New England,) we have designed the above to be built of that material. For outside finish, we should prefer plank stout inch-and-a-quarter plank—put on in the vertical manner, and the joints covered with two and a half inch battens. The ornamental portions, window-hoods, verge-boards, &c., should also be made from inch-and-a-quarter plank.

We have designed the windows to be filled with lozenge or diamond panes, but these, although more in accordance with the style of the house may be omitted, and rectangular squares inserted in their place.

Cost.—Built in the above manner, the interior finish of a plain, inexpensive character, this house would cost, in the neighborhood of Boston, from \$3800 to \$4000. G. E. H.

For the New England Farmer.

VARIETIES OF PEARS.

MR. EDITOR:—I have taken the liberty of sending to you a list of those varieties of pear which have fruited well the past season in our locality. There is probably no fruit tree which varies so much upon different soils; each variety, we may almost say, has a peculiarity of its own; hence the Bartlett will assimilate to itself materials for an abundant crop in almost all good soils, while the Beurre d'Arenberg, Diel, Wilkinson and Lewis require a strong and deep soil. It is hardly possible for any single individual to decide upon this desideratum, hence the necessity for an interchange of opinion among the most experienced of our cultivators. There are some varieties which bear the largest and best fruit upon young trees, the Flemish Beauty, for example, while the Glout Morceau require years of bearing before they will develop good fruit; there are others which produce the best specimens when worked upon our largest standard trees; the Seckle, for instance. A want of knowledge of these peculiarities accounts in a measure for the various and conflicting statements made at Pomological Conventions. At a recent meeting two cultivators living within 20 miles of each other, their grounds being exposed to the sea, with similar aspects, were diametrically opposite in their statements of the Napoleon pear; with one it was "very poor in quality and withal, a shy bearer;" with the other its "peculiarly fine quality was never surpassed, as well as its abundant bearing."

From my own experience of the Napoleon, I have always found it poor and astringent when grown upon a warm and sandy loam, while upon a strong and retentive soil I have seen it juicy and fine. The Belle Lucrative as a fall pear, and the Bloodgood as a summer fruit, when grown

upon our warm and light soil, we have found to be the two best of their season. There are but few varieties which are equally good in all soils, where the tree will grow, the diversity of soil and culture necessary for some varieties must influence cultivators in forming a list, and this diversity of soil and culture should be given, to enable them to make a selection for their locality. "I have known," says one, "fruits which were very fine immediately around the spot where they originated; but worthless when planted a few miles away in another exposure." Now this word *exposure*, as well as the often misapplied word *acclimation*, have little to do with facts; the want of a congenial soil has more to do with the matter than exposure.

The following pears have generally fruited well in my vicinity, particularly in the season of 1858:

<p><i>Summer.</i> Bloodgood. Rostiezer.</p> <p><i>Early Fall.</i> Bartlett. Andrews. Golden Beurre of Bilboa.</p> <p><i>Fall.</i> Beurre Bosc. Urbaniste. Belle Lucrative. Louise Bonne of Jersey. Thompson. Seckle.</p>	<p><i>Native Fall, very Hardy</i> <i>Trees.</i> Bleeker's Meadow. Bouffon. Fulton.</p> <p><i>Best Eating Winter.</i> Winter Nelis. Lawrence.</p> <p><i>Winter Baking.</i> Pound Black Pear of Worcester.</p> <p><i>Fall Baking.</i> Rushmore's Bon Chretien.</p>
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Salem, Dec. 27th, 1858.

J. M. IVES.

For the New England Farmer.

ELECTRICITY.

MR. EDITOR:—I notice in your paper of Dec. 25th some inquiries made by Non-Electricity, in reference to ventilation and electricity, and hasten to answer him at my earliest opportunity.

His several questions, in substance, are, "Why is it that a building well ventilated will not be struck by lightning?" I answer, simply because the *cause* is removed, and where there is no cause there can be no effect.

The atmosphere on the *outside* of the building is not changed by ventilating the building any more than the waters of the ocean would be changed by turning into it a tub of fresh water, but by ventilating you *do* change the air *inside* of the building and make it in the same condition of that *outside*, thus taking advantage of one of the laws that govern electricity, viz., "Likes have no affinity for each other," thus avoiding the disastrous effect of natural equilibration when one of the bodies is confined.

Groton, Jan. 12, 1859.

ELECTRICITY.

CEMENT FOR BROKEN CHINA.—Take a very thick solution of gum arabic dissolved in water, and stir into it plaster of Paris until the mixture becomes a viscus paste. Apply it with a brush to the fractured edges, and stick them together. In three days the article cannot be broken in the same place. The whiteness of the cement renders it doubly valuable.

☞ Our very *manner* is a thing of importance. A kind *no* is often more agreeable than a rough *yes*.

CHESHIRE AGRICULTURAL SOCIETY.

On Friday, the 21st inst., we had the pleasure of attending another meeting of the Cheshire County, N. H., Agricultural Society, in pursuance of their plan to "*have gatherings and discussions in various portions of the county, instead of expending all their funds in paying premiums.*" We look upon this as an important movement—a movement better calculated to promote the interests of the cause than any other within our knowledge. It is an example for Massachusetts, which we hope all her agricultural associations will not be slow to adopt.

The meeting was held in one of the churches of the beautiful town of Marlborough, N. H., about five miles from Keene. The exercises commenced at 10 o'clock, A. M., and with adjournments for dinner and tea, were continued until after 9 in the evening, and notwithstanding the rain and extremely bad travelling, there were good audiences during the whole time of highly interested men and women.

The subjects under discussion were, "*The Grasses, Grains and Stock*"—but most of the afternoon was devoted to the subject of the *Grasses*. The President of the Society, Gen. NELSON CONVERSE, occupied the chair, and with happy facility called up those to whom no special duty had been assigned. All the other officers of the Society were present, and the time between the regular addresses was occupied in inquiries, and in the expression of numerous valuable facts and suggestions by practical men. In these discussions Messrs. LEVERETT, MAY and ELLIOT, of Keene, Dr. RICHARDSON, Messrs. HARVEY, HOLMAN and WISWELL, of Marlborough, Col. REED, of Swanzey, and others whose names we did not learn, took an active part,—the President occasionally eliciting experiences too good to be lost, by his happy manner of getting intelligent, but too modest farmers, upon their feet.

There is no doubt on our mind but this is the true mode of expending a considerable portion of their funds, as a hundred dollars will go far towards holding a meeting in every portion of the county. Like the morning paper, it brings the intelligence desired to the *very homes of the people*, and lays it before them in an informal and agreeable manner. But more than all else, it leads them to express their own views, publicly, upon matters of vital importance to their interests, and introduces a spirit for discussion and investigation which will not fail to work out the happiest results.

We look with impatience for the projection of similar plans in our own Commonwealth.

The village of Marlborough is a beautiful one, romantically nestling among the hills, with the *Grand Monadnock* ever keeping "watch and

ward" over it, and breaking the progress of the fierce northeasters that would otherwise pour themselves into its bosom. A busy little stream, called "The Branch," a tributary of the Ashuelot, babbles through the valley, urging the machinery by which is wrought out all manner of children's toys, and wooden ware. The village is remarkable for the uniformly neat appearance of its buildings, for the air of thrift and comfort which pervades them all, and for the number of young shade trees which line the roadside, and give taste and refinement to the dwellings. It has, also, one of the best hotels in New England, kept by ASA MAYNARD, Esq., where the traveller will not only find the utmost neatness and order in every department, but his wants anticipated by the kind attentions common at his own fireside. Sancho Panza would have said, perhaps, "Blessings on the man who invented taverns!" We have great affection for a good old-fashioned country hostlerie, away from railroads and the gongs and other pestering particulars of cities, where we can eat and chat and pass the otherwise lonely hours with the family, and be cared for and feel that we are *at home!* Come you here, who travel and climb mountains, and desire to get above the clouds. This is your starting point for the *Grand Monadnock*, and the home of good cheer while you ramble.

At 9 A. M., we left this pleasant spot for the station, three miles distant. There had been a slight fall of snow the previous night, and now the graceful branches of the hemlocks, loaded with pure white snow, contrasting beautifully with the lively green upon which it rested, bowed themselves on either side, reminding us of the Eastern custom of partial prostration, when those whom it is wished to honor pass out or in. Graceful silver birches, rock maples of exquisite symmetry, and noble beeches, skirted the way, while the mountain streams, swollen by the January thaw, were dancing cheerfully on their way to "The Branch," to turn out still more pails and tubs and children's toys! What a pity, that some accomplished artist had not occupied our place, who could have perpetuated this delightful mountain forest view, to please and instruct the thousands who never will be blessed by a personal contemplation of a *Winter scene among these Crystal Hills*.

HILLSBOROUGH SOCIETY.—The Hillsborough County Agricultural and Mechanical Society has elected the following named persons as its officers for the ensuing year:

President—P. M. ROSSITER, Milford.
Rec. Sec.—GILMAN WHEELER, Milford.
Cor. Sec.—H. A. DANIELS, Milford.
Treasurer—DAVID STUART, Amherst.
Vice President—John Dodge, Bennington; Isaac Kimball, Temple; Thos. G. Holbrook, Bedford; David Clement, Hudson

For the New England Farmer.

SOIL AND CLIMATE IN VERMONT.

MR. EDITOR:—I noticed with interest a communication in your late issue from S. R. HALL, on the climate and soil of Orleans County, Vt. It is certainly of importance that the climate and soil of our State, especially its northern portions, should become more generally known by your readers; and facts, communicated from such a source as the one referred to, will naturally command attention. But one or two points claimed by Mr. Hall need farther attention. He says, "Should the soil ever deteriorate, we have immense quantities of the richest variety of sphagnum muck, much of which lies above shell-marl, in the beds of ancient ponds and barren meadows. This marl, when converted into lime, and mixed with muck, makes a manure worth from fifteen to twenty per cent. more than cow dung." Now the point is this, if it be true that lime mixed with muck, which is found in great quantities throughout our State, and even New England, forms a fertilizer of one-fifth greater value than common stable manure, it ought to be more generally known. Such a fertilizer, the materials of which are so abundant, would soon bring about a new era in our agricultural operations. But in this matter we want something definite, and fully established on scientific principles. We do not wish to rely on hasty conjectures based on mere theories. We must have something practical and substantial. It is an undisputed fact, that lime and muck form a valuable manure, but that it is fifteen or twenty per cent. *more* valuable than stable manure, is not generally believed. A matter of such importance to the agriculturist should be thoroughly investigated and fully understood.

Again, your correspondent has manifestly fallen into error, where he quotes from "the President of the County Agricultural Society," and states that the stock therein mentioned, viz., four oxen, ten cows and two year olds, two horses, three colts and twelve sheep, is "fully equal to forty cows." This statement seems absurd, for where is the farm in Northern Vermont, of one hundred acres, which produces sufficient in one season to winter forty cows? The amount of the stock mentioned, is only thirty-one head, while a great part of it would require much less than an equal number of cows. But let us investigate the matter more closely, taking the data published in the same number of the *Farmer* which contains Mr. H.'s letter. Four large oxen, supposing their weight to be 6000 lbs., (probably a high estimate) will require in six months, (from 1st Nov. to 1st May,) nearly eleven tons of hay; ten cows and [ten—Ed.] two year olds, supposing their weight to be 8500 lbs., will need about twenty-three tons; two horses and three colts, say eleven tons; and twelve sheep, if their average weight be eighty lbs., about three tons more. The whole foot's up in round numbers forty-eight tons. Now forty cows, weighing 850 lbs. each, according to the same data, will require nearly ninety-two tons, sufficient to winter almost double the amount of stock mentioned; or, reckoning them at an average weight of 700 lbs., they must have seventy-five tons.

Such a statement, so wide of the truth, ought

not to pass unnoticed, though it come from a source so eminent. We should suppose that Mr. H., who has resided in Orleans County nearly twenty years, and who has, "during that period, been several years engaged in the geological survey of the State," and who has "had a better opportunity to compare the soil in this, with other portions of New England, and especially other portions of Vermont, than, perhaps, any other person," would be able to form a more correct opinion of the productiveness of a farm of one hundred acres, and also a more correct estimate of the comparative quantity of fodder required by different kinds of stock. W.

Brookfield, Vt., Jan., 1859.

REMARKS.—We suppose Mr. HALL intended to convey the idea that the *shell-marl* was to make a component part of the fertilizer he speaks of.

THIRD LEGISLATIVE AGRICULTURAL MEETING.

[REPORTED BY JOHN C. MOORE, FOR THE N. E. FARMER.]

SUBJECT FOR DISCUSSION—*What breed of stock is best adapted for the purposes of general farming?*

The Legislative Agricultural Society met in the Representatives' Hall, last Monday evening, for the special discussion of the above subject—Hon. JOHN W. PROCTOR, of Danvers, in the chair. There was a very full meeting.

In opening the business of the meeting, the CHAIRMAN apologized for his non-preparation to speak on the subject for debate, which was one of much interest, and one on which opinion differed. We had various kinds of imported cattle among us, besides our common red or native stock. Some thought they had better cattle from the imported descriptions; but it was notorious that the majority of our best cattle were from this native stock. Some upheld that there were no native cattle, as all came from imported stock at some time. As well might it be said that there were no native men. As he understood the question, it meant what class of cattle would be best for mixed farming? There were gentlemen present who had had more enlarged opportunity to give information than he had, consequently he would not dilate on the question, but call on Dr. LORING, of Salem, who had given much attention to the subject.

Dr. LORING responded. He had come to learn and not to teach, for he was only a tyro himself in the branch of husbandry under discussion. Their practical experience was worth a world of theorizings. What is the breed of cattle, if any, which were best fitted to the dairy and the stall here in Massachusetts? About \$15,000,000 in value of cattle was owned in this State; and the question might arise as to what was the most profitable description to cultivate. The statistics

of the commonwealth showed that the farmers aimed at the perfection of a dairy stock, and they were right; for their best interests lay in this feature of husbandry. In accordance with the rule of necessity, farmers designed to convert their produce into butter, cheese and milk. Now the question was, what kind of cattle was best for the perfection of this object. We had heard of the old red cattle, which, in the ranks of lower animal life, stood in the same rank as the old red man did compared with the present New Englander. With this red stock there was no rule by which like would produce like. Perfection amongst that class of animals was always accidental, and it was of no use to talk of scientific breeding from that kind of animals, either for fattening or for the dairy. What, then, could we do? In Connecticut we might be told that the short-horn cross was the best; but bring it here, and it would soon deteriorate. We had not feed for them, while our physical circumstances were adverse to their profitable rearing. And how was it with the Devons? Could any one ever say that, at home, they were favored as dairy stock? No! With the exception of the Ayrshire stock, we had none worth our cultivation here in Mass. We would find them fine healthy cattle, with a hardy constitution, and a lacteal development showing emphatically their value. As oxen, they had all the advantages that could be derived; and the farmers of Massachusetts would find it so if they deigned to try. The Alderneys were not, in any respect, a race of animals that could be adapted to our wants. Finally, Dr. LORING thought the question one of the most important that could be discussed, and advised his audience to get stocks of cattle on whom they could rely in producing their like in regard to physical and productive properties. He related his experience as it proved that it was foolishness to go into the process of correct breeding without unquestionably pure stock, as they never would produce herds intended by nature for the advantage of the farmer, and the interests of Massachusetts.

W. J. BUCKMINSTER, of the *Ploughman*, spoke in favor of the Devon cattle, and did not expect ever to see better for all general purposes, or for size and adaptability to the wants of the farm. One point about them was that they were easily kept and thrive well on very poor feed, and even fattened well on common meadow hay, which costs less than English hay by nearly one-half. One cow, he saw, which weighed nearly 1200 lbs., which was a very respectable weight. But the size interfered with the milking properties, and it was not assiduously cultivated by farmers. There were no ring-streakings and specklings among the produce of the Devon stock. Mr. B.

had information from a party of experience that the half-breed Devons would do one-third more work, with a sixth less food than the Durhams, and not be fatigued or fagged out, as the latter would be.

SANFORD HOWARD, of the *Cultivator*, was the next speaker. His observations substantially were, that he had recent opportunity while in Scotland of seeing Ayrshire cattle, and had inquired into their origin, of which he gave a succinct history. The breed had assumed a character of its own as much as any other which was held to be artificial, and was as popular as any other in Britain for dairy purposes. Jerseys were also popular; but the Ayrshires were preferred above all others, and their adoption was extending much in England and on the Continent. No other breed was kept in Scotland for dairy purpose. They were harder than the Short Horns or the Channel Island cattle—neither of which could be adapted to the climate of the west of Scotland, where the Ayrshires had their origin. Whether or no the Ayrshires would make superior oxen, as compared with other breeds, was a question; but, from what he had seen he had no reason to doubt that they would compare well. It was not uncommon to find cows making 250 lbs. of butter or 500 to 600 lbs. of cheese, where from 60 to 100 cows were kept on a farm. In England, Devons were not generally kept for dairy purposes, but for beef. Herefords were much the same—and it might be considered that fattening was a leading characteristic of both kinds. The Short Horns were the most profitable kind for beef in the richer lands of England, but they were valuable no where else, and seldom good for milking purposes. Generally, in England, they were very unlike the improved Durhams we saw here. The best beef cattle in Scotland were the Galloways and the Kylore or West Highland cattle. These and the Galloways would prove profitable for beef in the prairie and mountain districts in this country; but if their milking qualities were cultivated they would be spoiled. Mr. Howard had little sympathy with the idea that one kind of cattle was best for the farmer.

LEANDER WETHERELL spoke approvingly of a cross of the Short Horn, if the farmer wanted to make good beef at three years old; but you must have good blood as well as symmetry of form. This cross would best suit the Connecticut valley for both fattening and working purposes. Almost all the cattle there had Durham blood in them, and it was essential for successful breeding for working purposes. They were strong, enduring and patient, and when they became too old to work, were generally in a fine condition to make beef. But the quality of the beef of Durham cattle was not so good, it might

be confessed, although there might be an exception in favor of the grades. If weight was of any importance to the farmer, he had the advantage in cultivating the Durham grades. For raising calves the adoption of the Durham grade was the best that the speaker knew. He mentioned that an instance was within his knowledge where this grade stock had, for fifty years, in one stock, produced five milk cattle, very similar in productive properties. To keep the best cattle for breeding purposes was a rule that no family should keep out of sight.

ASA G. SHELDON, of Wilmington, spoke briefly to the question, throwing out hints that the *disposition of premiums at shows was not the best calculated to encourage improvement*. There ought to be no distinction made between the breeds, but all should compete on the same level. When it was otherwise, the effects were profitable, and, in a series of competitions within his knowledge, the native stock, for three years successively, took the first premiums. This was proof that the native stock made the best dairy stock here, and it would be again, provided opportunity for proof were given. The production of milk and oxen were the two grand objects with the Massachusetts farmers; and it was Mr. S.'s opinion that the native stock were the most reliable for oxen. Mr. Sheldon said he raised his own stock, and described the peculiar marks which, in his estimation, denoted perfection in his breeding animals, and related a curious anecdote concerning one of his cattle.

Mr. JOHN C. MOORE made a few observations, by request, relative to the mode of breeding and treatment of cattle followed in Ayrshire, amongst improving farmers. These differed essentially from what we have them among us. He thought attention to native stock would perfect them to the extent of production of imported cattle.

The CHAIRMAN was in favor of native cattle, and quoted statistics showing that they were, on the average, preferable to any other stock.

Mr. DAVIS, of Plymouth, also spoke of the native breed, and thought that, if improvement was to take place, it might as well be among them as by the means of other cattle. He quoted instances which tended to show that the process might be a profitable one, and that there were cases of great productive ability among native stock. Four pounds and a half of the milk from a cow of a friend of his had yielded one and a quarter pounds of butter. If this could be done in one instance, why could it not be in many instances?

Dr. LORING reviewed the arguments of the several speakers, and drew consolation from those of his opponents, in so far as they supported his own in showing that, (as stated by Mr. Sheldon,) several competitions had taken place at

which no native cattle were produced worthy of the prizes. He further urged that whenever perfection had showed itself in cattle, it had been the fruit of previous importation of foreign stock. It was his opinion that, wherever there was a really valuable herd of cattle, it had its origin from foreign importations.

Mr. SHELDON retorted that when the imported cattle were shown against the native cattle, in the instances he had quoted, none of them had taken a premium. As certain evidences of the superior merit of the native cattle, he had spoken of they were brought down from Middlesex County to Boston, and took the premiums when pitted against all the breeds that could be exhibited against them. If we had taken half the trouble in improving as we have done in importing, our improvement would have been much greater and more reliable.

The subject for next week's discussion will be "*Fruit and the Cultivation of Fruit Trees.*"

A motion was made by Mr. SARGENT, of Newbury, that the Ayrshire cattle were the best stock for general purposes.

Mr. PAGE, of Brimfield, spoke briefly concerning a purchase he made of cattle which he deemed to be native—and which possessed extra properties. At 23 months old one of their produce brought \$50, and when 4 years old, she gave 40 lbs. of milk per day for three weeks in succession, and could not be bought for \$100. But it turned out that the dam of this cow was an Ayrshire cow! All her produce was thrifty and easily reared; and as there was little native stock now to be found, the fact spoke favorably for the opinion laid down by Dr. Loring, that perfection comes from imported stock.

Mr. SARGENT, of Newbury, made a few remarks in support of his resolution. He had long been in favor of Durhams, but his experience had told him the Ayrshires were preferable.

SIMON BROWN, editor *N. E. Farmer*, was not satisfied that the Ayrshire cattle were the best for *all* purposes, otherwise he would vote for the resolution. He had seldom seen Ayrshire oxen, and was not ready to give an opinion of their merits. He believed Ayrshire cows, or grade Ayrshires, the best stock for the dairy. He approved of systematic breeding, in order that pure results should flow from its practice. He would vote for the resolution if the words "general use" were stricken, out and the words "dairy purposes" substituted.

Dr. REYNOLDS, of Concord, spoke briefly to the general question, arguing that cattle were improving, and that the cause was judicious crossing with imported blood. He doubted the ability of any gentleman to trace the pedigree of native cattle in such manner as to prove them uncrossed.

The CHAIRMAN said that all cattle were *native* that could not be proved to belong to the imported races.

Mr. SHELDON thought that *good keep* had as much to do with improvement of cattle as had foreign importations.

Several other gentlemen spoke, and the meeting broke up after 10 o'clock—Mr. Sargent's resolution being first laid on the table.

For the New England Farmer.

BOOK KNOWLEDGE VS. EXPERIENCE--- SALTING PLUM TREES.

MR. EDITOR:—In this month's number of the *Farmer* an article appeared with the above caption. The writer does not inform us of the *modus operandi* of his applying this article. Having had some experience in this matter of salt on land, I can only say that in February of 1845, I applied to one acre five hogsheads, and for the two following seasons my trees produced greatly, particularly the Green Gage; I had at that time upwards of twenty-five varieties of the plum. Previous to this my fruit was badly stung by the curculio. I could not, however, perceive that the salt had any effect upon the black wart, which has since destroyed nearly all the plum trees in this section; my fruit was most satisfactorily preserved for two years from the curculio. A friend from a neighboring city on a visit to my place while the salt lay upon the surface, on his return home applied brine to a few trees, which killed them outright; salt as well as guano must be used in a proper manner; crude salt or brine must not come in close proximity to the roots; it should be applied to the surface of the ground early in the spring, to the extent or spread of the branches, and remain upon the surface some two or three weeks before spading in. The plum is naturally a marine tree, and it is surprising how much salt it will assimilate and thrive upon. The asparagus is also a marine plant, hence a sprinkling of salt over the bed in early spring is beneficial, but we should not reason that if a small portion would be good, a large quantity would be better. A servant of Judge P., of our city, reasoning after this fashion, destroyed his plants.

Regarding the severe experiment, as it was then called, on my land, Mr. Downing, who visited my place when the crop of plums was upon the trees, remarked in his *Horticulturist*, that my garden was in a neighborhood not remarkable for plums, and that the abundant production of this fruit, he attributed to the destructive effect of the salt on the curculio.

Many writers in our agricultural papers are too indefinite; they should be more explicit, not only in the precise article recommended, but the season and mode of applying it. We often find lime recommended, but whether stone or shell lime we are not informed; the article lime, so highly commended by Mr. Pell, the great apple-grower in New York, is *shell*, and not stone lime, the latter having frequently magnesia in combination, which is deleterious to the land.

Salem, Dec. 15, 1858.

J. M. IVES.

CONVENTION OF AGRICULTURISTS AT WASHINGTON.

The delegates invited by the Secretary of the Interior to represent the agricultural interests, from the several sections of the United States, met in the Patent Office in Washington, on the 3d January.

D. J. Browne, Esq., who has charge of the Agricultural Division of the Patent Office Bureau, was present, and explained to the members of the convention the objects of the meeting to be for the purpose of aiding the department in obtaining more thorough and reliable information in regard to the present condition and progress of agriculture throughout the Union, both as it regards statistical facts, and as to the results of improvements instituted and practices followed in the various branches of farm and plantation management. This information to be published in the Reports, with a view to the "elevation of agriculture, so essential to our wealth and prosperity, as a nation, at least to an equality with other pursuits."

The Convention then proceeded to organize. Hon. Marshall P. Wilder, of Massachusetts, was chosen President, and Major Ben. Perley Poore, of the same State, was chosen Secretary. The roll of names being then called, it was found that the different States and Territories were represented.

The Secretary then read a list of questions presented by Mr. Browne.

A discussion then sprang up in regard to the name by which the Convention should be known, and it was finally voted that it should be called the "Agricultural Advisory Board of the Patent Office."

It was also voted to divide the Board into five divisions, as follows:

1st. The New England States, New York, New Jersey, and Pennsylvania.

2d. Delaware, Maryland, District of Columbia, Virginia, North Carolina, South Carolina, and Georgia.

3d. Florida, Alabama, Mississippi, Louisiana, Texas, Indian Territory, Arkansas, Missouri, Kentucky and Tennessee.

4th. Ohio, Indiana, Illinois, Michigan, Wisconsin, Iowa, Minnesota, Nebraska, and Kansas.

5th. New Mexico, Arizona, Nevada, California, Oregon, and Washington.

The delegates of each division form a committee to examine and report upon the interrogatories submitted to them, with power to change and to propose others, or more, as they might think proper.

It was then voted that a committee of five be appointed by the chair, as a business committee, to bring forward subjects of discussion during evenings, and the following gentlemen were appointed:

Hon. D. J. Browne, of Patent Office, (*ex officio*); F. G. Cary, of Ohio; Dr. John A. Kennicutt, of Illinois; James G. Holmes, of South Carolina; Frederick Holbrook, of Vermont, and Hon. Delazon Smith, of Oregon.

It was then voted that there should be a regular meeting of the Board, each morning at ten o'clock, after the adjournment of which the several divisions should go into session by them-

selves in committee room for the transaction of such special business as devolved upon them.—*Maine Farmer.*

For the New England Farmer.

LEGISLATION—LAND DRAINAGE COMPANIES.

BY H. P. FRENCH, EXETER, N. H.

How far it may be competent for a State Legislature to provide for or assist in the drainage of extensive or unhealthy marshes, or how far individual owners should be compelled to contribute to a common improvement of their lands, or how far, and in what cases one land-owner should be authorized to enter upon land of another, to secure or maintain the best use of his own land, these are questions which it is unnecessary for us to attempt to determine. It is well that they should be suggested, because they will, at no distant day, engage much attention. It is well, too, that the steps which conservative England has thought it proper to take in this direction, should be understood, that we may be better determined whether any, and if any, what course our States may safely take, to aid the great and leading interests of our country.

The swamps and stagnant meadows along our small streams and our rivers, which are taken from the farmer by flowage, for the benefit of mills, are often, in New England, the most fertile part of the townships, equal to the bottom lands of the West; and they are right by the doors of young men who leave their home with regret, because the rich land of far-off new States offers temptations which their native soil cannot present.

It is certainly of great importance to the old States to inquire into these matters, and set proper bounds to the use of streams for water power. The associated wealth and influence of manufacturers is always more powerful than the individual efforts of the land owners.

Reservoirs are always growing larger, and dams continually grow higher and tighter. The water by little and little creeps insiduously on to and into the meadows far above the obstruction, and the land-owner must often elect between submission to this aggression, or a tedious law-suit with a powerful adversary.

The evil of obstructions to streams and rivers, is by no means limited to the land visibly flowed, nor to land at the level of the dam. Running water is never level, or it could not flow, and in crooked streams which flow through meadows obstructed by grass and bushes, the water raised by a dam often stands many feet higher at a mile or two back, than at the dam. It is extremely difficult to set limits to the effect of such a flowage. Water is flowed into the subsoil, or rather is pre-

vented from running out. The natural drainage of the country is obstructed, and land which might well be drained, artificially, were the stream not obstructed, is found to lie so near the level, as to be deprived of the requisite fall, by back-water, or the sluggish current, occasioned by the dam.

These obstructions to drainage have become subjects of much attention, and of legislative intervention in various forms in England, and some of the facts elicited in their investigations are very instructive.

In a discussion before the Society of Arts, in 1855, in which many gentlemen experienced in drainage took a part, the subject of obstruction by mill-dams came up.

Mr. G. Donaldson said he had been much engaged in works of land-drainage and that in many instances great difficulties were experienced in obtaining outfalls, owing to the water-rights on the course of rivers for mill-power.

Mr. R. Grantham spoke of the necessity of further legislation, "so as to give power to lower bridges and culverts under public roads, straighten and deepen rivers and streams;" but he said authority was wanting, above all, "for the removal of mills, dams and other obstructions in rivers, which in many cases did incalculable injury, many times exceeding the value of the mills, by keeping up the level of rivers, and rendering it totally impossible to drain the adjoining lands."

Mr. R. H. Davis said if they were to go into the midland districts, they would see great injury done, from draining the water for mills.

In Scotland the same difficulty has arisen. "In many parts of this country," says a Scottish writer, "small lochs (lakes) and dams are kept up for the sake of mills, under old terraces, which if drained, the land gained by that operation would, in many instances, be worth ten times the rent of such mills."

The river Nene, running a sinuous course of sixty miles from Northampton to Peterborough, possesses a natural fall of $3\frac{1}{4}$ feet per mile. This is held up in levels throughout, by no less than thirty-three water mills for grinding flour, and thirty-four lochs and eleven staunches, some for the mills and some for the purposes of navigation, the natural fall being 177 feet and the aggregate heads of the lochs and staunches $163\frac{1}{2}$ feet. This occasions the water at the dry weather level to be higher than the adjacent meadows for about one-third the length of the valley, but the full-water level stands above the adjacent meadows for three fourths of the length of the valley.

So long ago as 1633, a commission sat to inquire into the best mode of redressing the abuses causing such damage to the lands on the Nene,

and they ordered the dikes to be scowed and obstructions removed, and the river widened to its ancient breadth. They fixed the number and width and gauge of all the gates at the mills. But an investigation 200 years later shows that the mill-owners could not be thus restrained. By raising their dams, by putting on flush-boards, by stopping up outlets and various other devices, they had greatly enlarged their privileges, so that by a survey made in 1826, and another subsequently, it appears that only five mills out of twenty-one inspected had their wheels and wasteways according to the prescribed levels. The excess of water generally amounted to from eight inches to two feet of water at each mill, and often to three feet. It was found that the land-owners could not even enforce the well-known ordinances of the Court of Sewers. "It was found that nothing could be done to restrict the millers, but by plunging into endless lawsuits."

By authority of various old acts giving powers to Sewers Commissioners, and to navigation companies to maintain the river Nene navigable for boats, &c., and by a new act in aid of a grand enterprise for draining the whole valley, it is supposed that the navigation will be improved, the water-power of the mills increased generally, though one at least must be removed, the healthfulness of the district be much increased, and immense tracts of land thoroughly drained and made productive in agriculture. "The district will also possess the essential conditions needful for irrigation, a fresh water stream on a permanent level, sufficiently elevated to supply a flow over the surface of the meadows, combined with a competent system of dams for carrying off the spent floods."

Under the provisions of the Nene Valley Act are divisions of 6000 acres of the lands benefited by the drainage, and subjected to an annual "outfall tax" of about one shilling per acre, and a "district tax" for their own interior works at the rate of five shillings per acre. Both these rates are to be apportioned according to the degrees of benefit received by the lands from the proposed improvements, the graduation to be fixed by valuers or referees. The whole cost of the improvements will be about £275,000.

This sketch of the operations in the Nene Valley is given merely as an illustration of the mode of operation in the mother country, and to show how the rights of land-owners are constantly and almost inevitably encroached upon by those who control the water-power.

In another instance, that of the Rye and Derwent Drainage, an account of which is found in the 14th vol. of the Journal of the Royal Ag. Soc., a plan of compensation was adopted, where it became necessary to remove dams and other

obstructions, which is worthy of attention. The Commissioners under the Act of 1846 removed the mill-wheels and substituted steam-engines corresponding to the power actually used by the mills, compensating, also, the proprietors for inconvenience and the future additional expensiveness of the new power.

"The claims of a short canal navigation, two fisheries and tenants' damages through derangement of business during the alterations, were disposed of without much outlay, and the pecuniary advantages of the work are apparent from the fact, that a single flood such as frequently overflowed the land, has been known to do more damage, if fairly valued in money, than the whole sum expended under the Act."

For the New England Farmer.

PRICE AND MEASUREMENT OF MILK.

MR. EDITOR:—I wish to make a single inquiry through the columns of your paper; that while so much attention is being given by the milk-raisers of our State in selecting the best cows for milk, and discussing the various breeds as to their milking qualities, and paying exorbitant prices therefor, and of raising different crops of roots, and of the manner of feeding the same so as to produce the greatest quantity of milk, they say not one word about the price they are to receive for their milk, or give it the slightest attention, but submit to whatever price the milkman chooses to pay them, be it ever so ruinous. With the exception of a few towns in the immediate vicinity of Boston, milk is the main product of the farm, and to which the farmer gives his exclusive attention. With all other products of the farm, the farmer generally has a price, but with his milk, the main thing he has to depend upon, *he has no price, but takes whatever the milkman chooses to give him!*

Milkmen are different in some respects from dealers generally—there is no competition with them—they make the price both with the raiser and consumer, and stick to those prices. If one of their party happens to "bolt," he is kicked out, and if possible, his customers got away from him. If he proves too able for them, and believes in the manly art of self-defence, they despise him, as belonging to an unhealthy organization, not fit to associate with.

Is there no system by which the milk-raisers can have a voice in the price of milk, or are they willing to remain dormant, and take whatever the milkman chooses to give them?—a system by which the farmers can co-operate together, and break up this infernal practice of buying by one measure, and selling by another, and regulate the price of their milk instead of submitting every thing to the milkman?

The milkman adheres strictly to beer measure, and will buy by no other. Cannot the milk-raiser adhere to wine measure, and sell by no other? I read with pleasure your article in a previous number of the *Farmer*, upon forming farmers' clubs in the different towns of the State, and liked your suggestions very much, and I hope it

will meet with the favorable consideration of the farmers of the several towns, as also the best method of raising and selling milk.

Lexington, Jan. 24, 1859. A SUBSCRIBER.

REMARKS.—We have long been surprised that this subject has not received more attention by those directly interested in it. If the milk-buyers of Boston and the surrounding cities were aware of the impositions practiced upon them, they would rise in their might, establish milk depots, employ their own agents, and apply at once to the Legislature for proper officers to inspect the milk brought to them.

We hope our correspondent—whose name is before us—will arouse the community to a sense of the need of important changes, and we assure him that numerous enterprising and intelligent men are ready to act, and are only waiting for some one to lead off in the matter. Under a proper system of buying and selling, purchasers in the cities would get *better milk, and more of it, at a less price than they now do*, while the profits that are now divided among the go-betweens, would partly go to the producers, where they belong.

The farmer cannot live by the prices he now gets for his milk; it would be worth fifteen to twenty per cent. more to him made into butter—while such a system of corruption has crept into the trade, and milk itself, that *children cannot live upon it*, nor all honest men thrive upon it, who are engaged in its purchase and sale.

We have intelligent and active committees upon agricultural subjects in our present Legislature, and we now suggest to our friends to make another effort.

First, To settle the law beyond all question and cavil, as to what a legal liquid gallon is in this Commonwealth. Whether it is a wine gallon of 231 cubic inches, or a beer gallon of 282 cubic inches. The people do not understand it.

Secondly, To legalize the "can" as a measure of capacity, because the necessities of the trade demand it just as much as the grain trade demands a fixed legal capacity for the half bushel.

The "can" is now a sort of hydra-headed monster that will take in only seven quarts in the country, but conceives so rapidly on the way to the city, that on arriving there, it will disgorge *ten* quarts with the greatest ease!

Thirdly, To ask the legislature to legalize certain persons to inspect milk offered for sale, and affix heavy penalties upon those who adulterate it, when that fact shall be proved upon them.

Now is the time to act. Pour in your petitions to the Legislature in the course of next week. We subjoin the form of a petition, so that all may have it to act upon at once.

TO THE SENATE AND HOUSE OF REPRESENTATIVES, IN GENERAL COURT ASSEMBLED.

Your Petitioners respectfully represent, that the Farmers of this Commonwealth are deeply interested in the production and sale of *Milk*; that the number of Cows kept within our borders is about 150,000, producing annually a quantity of Milk, valued at the low rate of three cents per quart, and allowing four quarts per day to each Cow, at the sum of *six millions five hundred and seventy thousand dollars a year*; that Milk for the Markets is generally delivered by the producers in *Tin Cans* furnished by the purchasers, said to contain a specified number of quarts; that many of such purchasers still continue to use the *Ale Quart*, which is not recognized by the Statutes now in force, while others use the *Wine Quart*, which is the measure prescribed by law; and that great inequality, injustice, and fraud, both to the producers and consumers, result from such confusion of the standards of measure, the Cans varying from 8¼ to 8½ quarts.

Wherefore, they pray that it may be prescribed by law, under adequate penalties, that no *Cans* shall be used in the delivery or sale of Milk, except such as *shall be legally sealed by the town or city sealer of weights and measures, and marked with a figure or figures denoting the capacity of such Can* in quarts by *Wine Measure*, with a proper allowance to be by law prescribed, for the reduction of the bulk of the milk in cooling.

And your Petitioners, as in duty bound, will ever pray.

For the New England Farmer.

MAINE BOARD OF AGRICULTURE.

The Maine Board of Agriculture met at the State Farm, Jan. 19th. Robert Martin, of West Danville, was chosen President, N. T. True, of Bethel, Vice President, S. L. Goodale, Secretary. The Board, representing twenty-four societies, held two sessions a day and a public discussion every evening, to continue for ten days. The Board is an able body of men made up of practical and intelligent farmers who are earnest in their labors to elevate the condition of agriculture. Reporters are constantly present who spread broadcast through the papers, among the people, every important point discussed, so that the whole agricultural population of the State are at once, to a great extent, on an equal footing with the members of the Board. This we think is an important point. Shut up the doings of such a Board in Reports merely, and the few only will be the wiser. The last year, topics were assigned to each member to be reported and incorporated into the Secretary's Report of the present year, which to Maine farmers is becoming a most important document.

The close observer of our history will be struck with the marked improvements that are going on in many parts of our State, in agriculture. We have better stock, barns, deeper and more careful tillage, more reading, thinking men every year. Farmers' Clubs have sprung up even here.

In looking over the capital of our State, I find that the most elegant building in the city is the new jail just erected. Punishment in jail, means now, loss of personal liberty and nothing more, while to some poor fellow it may be a comfortable refuge.

T.

Augusta, Me., Jan. 22, 1859.

EXTRACTS AND REPLIES.

MANURE ON SOWED CROPS—LIME, ASHES AND PLASTER IN THE HILL.

I wish to inquire whether it is best to spread on all manure in the fall for a sowed crop, or let it lay in the heap until spring? Whether the strength will not soak down in the spring when the ground is not beyond the reach of the roots? (a.)

Also, whether lime or plaster should be mixed with wood ashes, or whether all three be mixed together, or used separately, to put in the hill for corn or potatoes? (b.)

A portion of my farm work for a number of years has been, raising potatoes for the market, and I have read everything in the *Farmer* with interest, on the subject of the potato rot. For a number of years I have noticed that a portion of the vines have been eaten by some insect, but the insect I could never find. On reading the statements last fall, made, I think, by Mr. READ, of Baltimore, I was satisfied that rot was caused by the bug he had discovered. But when I began to dig I did not find a single potato in those hills where the vines were eaten that was affected with rot, while in the hills by their side, where the vines had not been eaten, there were rotten potatoes.

W.

New London, N. H., Jan. 6, 1859.

REMARKS.—(a.) If you mean by a sowed crop, rye or wheat sowed in the fall, we should say spread the manure and plow or harrow it under before sowing the grain. If you, fortunately, get manure after this work is done, and you wish to give the crop the benefit of it, make it as fine as possible and spread it on in the fall.

(b.) Mix your lime, ashes, and plaster, and apply them all at once. No harm will be done by the mixing that we know of.

POTATOES IN 1858.

Mr. Secretary Flint, in his letter to Gov. Banks, says that the crop of potatoes in Massachusetts has been uncommonly good, and that the yield amounted to six million bushels, at least, of the value of \$3,000,000. If this be so, what has become of the bugs that threatened to poison and destroy all the potatoes? I believe by this time, Mr. Editor, you, like myself, have become satisfied that this bug or insect theory of potato-destruction is one of the humbugs of the day. If you think otherwise please say so, that we may know where to find you, before we plant again.

REMARKS.—Well, Mr. Star, we are not entirely satisfied that *the bugs* do not have something to do with the disease in potatoes, after all. At

any rate, we have a good deal of respect for the opinions of men whom we know, and who have bestowed much time and money upon their investigations. The opinion of a person so watchful and observing as yourself, checks us in giving full belief to the *bug theory*; so that while our opinions are thus balanced, we hope they will not influence your *planting*, or that of any other person, the coming spring.

A DISCOVERY OF OLD TIMBER IN THE OCEAN.

Not long since I had the pleasure of reading in your instructive journal an article on the *value of wood and the planting forest trees*. It makes me avail myself of the present opportunity to send you a short reminiscence for your monthly. The accompanying strip of bark, from an English oak, was taken from a log twenty feet long and two to two and a half feet in diameter, at one of the Liverpool, England, timber-yards, visited in the year 1845, where was seen a vast number of logs, say a ship load, brought from the coast of Scotland. These logs having been fished up at a distance of two to three miles from the shore, in open sea. The time is not known when the ocean had so invaded the earth as to make these depositories.

This timber was of the most desirable character to a people who so much admire the wood, and indeed we are assured its value paid largely to the fortunate discoverers. It was used at prices of rosewood and mahogany, and in furniture, for panel-work. It was patronized by the nobility, speaking well for both the enterprise and patriotism of the nation.

A READER AND SUBSCRIBER.

January, 1859.

MOWING MACHINES.

"Facts are stubborn things." A working man informs me, that he has cut the present season, with one of Allen's mowers, 325 acres of grass, yielding on an average, at least, one and a half tons to the acre, amounting to 450 tons, besides many acres of second crop, yielding one ton to the acre. This has been done on an average of time to the acre not exceeding 50 minutes. The machine has been moved by the same pair of horses, which he has used for three years, for this purpose. He has driven them himself, with no assistant near. On some days has cut ten acres at least, with no re-sharpening of the knives.

I have repeatedly seen the grounds on which this implement has operated, and know no reason to question the correctness of the statements. If these facts do not prove that mowers can be advantageously used, where there is grass enough grown to justify their use—say on farms where there are fifty acres or more to be mown; or in neighborhoods where several can produce as much as this by combining together—then I will admit my notions of the labors required in carrying on a farm are erroneous. I do not say that other machines may not be used to equally good advantage. I only speak of what I have witnessed.

ESSEX.

Dec., 1858.

PEAS IN POTATOES TO PREVENT ROT.

May 11, I planted in the garden twenty hills of pogie potatoes; holes were made in the potatoes with a penknife, and from four to six peas were thrust into each potato. The soil was a black, moist loam; no manure was put into the hill. September 4, the potatoes were dug. Every hill had potatoes in it affected with rot, fully as much as potatoes in the same garden, planted in the ordinary way; nor was there any difference in yield in favor of the experiment. The pea vines, which were quite scanty produced very few and inferior pods.

Melrose, Mass., January, 1859.

D.

DISEASE AMONG CATTLE.

In looking over your paper of January 8th, I noticed an article headed "*Fatal Disease among Cattle.*" About the year 1850 I lost seven head with this same disorder, and for the benefit of those who may have cattle similarly afflicted, I send the following receipt:

Take $\frac{1}{2}$ pint of vinegar, 1 teaspoonful pepper, 1 teaspoonful salt, and mix and stir well together; turn up the head and turn this into the ears. I have never known this to fail if applied in season. I have had several taken since I first adopted this remedy, and have found it a sure cure.

PHILIP JUDKINS.

Carthage, Me., Jan. 10, 1859.

BUNCH ON A HORSE'S LEG.

To a Subscriber in Millbury.—I had a bunch form on the inside of the leg of a young horse, caused by the pole striking against the inside of the leg, which I removed by using the Mexican Mustang Liniment.

A. W. P.

Sutton, Mass., Jan., 1859.

MILK AND BUTTER AFFECTED WITH THE FLAVOR OF WILD ONIONS AND LEEKS.

Can you inform me if there is any way to take the taste out of milk and butter where the cows have eaten *wild onions* or "*leeks?*" I have a pasture which is connected with a piece of woodland, where they abound in the spring of the year, and the milk is rendered useless only for the pigs.

SUBSCRIBER.

Danville, Vt., Jan. 8, 1859.

A. P*****k, Saugus, Mass., need not keep back his light for the reasons he gives. Let it shine, and illuminate our columns.

SCIENTIFIC AGRICULTURE.—Mr. Henry C. Vail, who has had much experience as an agricultural instructor and lecturer, is now located at Springfield, N. Y., where he receives pupils for a course of agricultural instruction, in which they are indoctrinated in the connexion of the sciences with the successful cultivation of the soil. Mr. Vail claims for his system of instruction that it is simple, thorough and efficient, and that it has the approval of the best cultivators and scientific men.

STATE BOARD OF AGRICULTURE.

FOURTH DAY.

Prof. J. W. P. JENKS, of Middleboro', was appointed Zoologist to the Board for one year. A committee was also appointed to transfer the State Farm to the Board of Trustees of the Institution.

The following resolutions presented by Mr. BROWN, of Middlesex, were pretty fully discussed, and severally laid on the table.

Resolved, That the Legislature be requested to pass an act requiring each county society receiving a portion of its bounty, to appropriate one-third of the whole amount received, to the support of agricultural meetings and discussions in various parts of each county.

Resolved, That, in the opinion of this Board, whenever any article, stock, implement, or anything else, has once received the highest premium in its class, of any society, it should never receive another premium from any incorporated society within the limits of the State.

Resolved, That it is the opinion of the Massachusetts State Board of Agriculture, that the establishment of more than one agricultural society in each county of the Commonwealth, and receiving its bounty, is *not* conducive to the agricultural interests of the State.

The committee on the *Dog Law* were directed to prepare a new draft of that law, and lay it before the joint committees on agriculture, and explain to them the necessity that exists for its modification.

A committee previously appointed to consider the subject of the distribution of agricultural tracts, made a majority and minority report. The committee was charged and further instructed to carry out the views expressed in the majority report.

A committee was appointed to petition the Legislature for the sum of \$3000 to aid in scientific and practical investigation, and to promote the general interest of agriculture, enlarging the museum, &c., &c.

Committees were appointed to inquire whether anything can be done to avoid collision in the time of the exhibitions of the several societies; to recommend some uniformity of action on the part of societies in awarding premiums; and to consider the propriety of instituting meetings and discussions to be continued one or more days and evenings.

Manures—Messrs. Fisher, White and Brooks.

Renovation of Pasture Lands—Messrs. Felton, Lewis and Lathrop.

Market Fairs—Messrs. Tracy, Sutton and Davis.

Root Crops—Messrs. Brown, Gardner and Atwater.

Fruits and Fruit Culture—Messrs. Wilder Bull and Durfee.

Farm Fences—Messrs. Sewall and Davis.
Cattle Husbandry—Messrs. Lathrop, Tracy and Brooks.
Sheep Husbandry—Messrs. Grennell, Bushnell and Knox.
Diseases of Vegetables—Messrs. Bartlett and Lewis.
Improvement of Horses—Messrs. Atwater and Marston.
Grain Crops—Messrs. Bushnell and Bull.

FOURTH LEGISLATIVE AGRICULTURAL MEETING.

[REPORTED BY JOHN C. MOORE, FOR THE N. E. FARMER.]

The meeting of this Society in Representatives' Hall, last Monday evening, was well attended. HON. MARSHALL P. WILDER was called to the chair.

The subject for discussion was,—"*Fruits, and the Culture of Fruit Trees.*"

The Chairman said it gave him great pleasure to make a few remarks on the subject of discussion, which was one of the most important that could be debated. Fruits, as articles of market value, were among the most important of the products of the farm, and as much so to the country as to the Commonwealth. Their cultivation had made great progress among us within the past fifty years. The crop in 1835 was valued at \$700,000. In 1845 its value was \$1,300,000. In 1860 it could not be less than two millions of dollars—more than the value of the wheat, oats, rye and barley in the State. Such had been the results of pomological science in Massachusetts that her exhibitions sustained the highest rank. One gentleman who had had opportunity of judging said that he saw more choice fruit at one of our exhibitions here than he saw at twenty in Europe, where, as in Germany, the greatest encouragement had been given to pomology by the government. But great as was our credit here, it was eclipsed by that of California and Oregon Territory, correspondence from which regions showed that they were blessed with wonderful natural facilities for the growth of fruits of all kinds. Col. Wilder read a letter from a correspondent at Munroe, Oregon, stating that he had forwarded a box containing an apple forty ounces in weight and twelve others averaging a pound and a half each! Another correspondent from the same region informed him that ten millions of nursery trees had been sold in Willmet Valley; and Col. W. added that at Washington, a few days ago, he saw a pear from that place which weighed four pounds! Grapes, when their value was considered, either as an article of luxury or commerce, had important claims on attention in respect to the best sorts to cultivate, and best modes of cultivat-

ing them. The pear crop in this State was valued at \$100,000 per annum, and also demanded a full share of attention, with respect to kinds best suited to our soil, and to the most approved manner of cultivation. We had among us many varieties of pears adapted to our climate and soil, and of these varieties the Bartlett, Vicar of Winkfield, and others which he named, were well adapted.

The following were recommended as the *six* best varieties of apples:—The Williams, Early Bough, Gravenstein, Fameuse, Hubbardston, Nonsuch and the Baldwin; and if *twelve* varieties were desired, the Red Astracan, Rhode Island Greening, Ladies' Sweet, Porter and Talman Sweet might be added.

For pears on their own roots the following were recommended as the best *six*:—The Bartlett, Urbaniste, Flemish Beauty, Belle Lucrative, Nonodaga and Doyenne Boussock; and if six were desired on quince stocks, the Chairman recommended the Louise bonne de Jersey, Urbaniste, Duchesse d' Angouleme, Vicar of Winkfield, Beurre d' Anjou and Glout Morceau.

With regard to the conditions of proper cultivation of fruits, no great success could ever attend the labor of producing them unless it was conducted with a care equal or superior to what was spent on any other kind of production. One of the primary and most essential conditions had proved itself to be thorough draining, as through its operation the more troublesome diseases and parasitical affections were obviated. This thorough drainage, Col. Wilder insisted, was an absolute associate of success. He then made a few remarks on the great necessity of keeping the soils of orchards in a rich condition, by manuring, and of planting the various descriptions of trees in the soils best suited to them. He repudiated the fashion of adopting too many foreign trees; for, as a general principle, trees and plants flourished better on the soil of their origin than they did in localities foreign to them. Col. W. recommended raising seedlings, as on them we would ultimately have our surest dependence for good, reliable fruit trees. We had doubtlessly a number of fine fruits already native to the soil—at the head of which stood the Baldwin apple of which 50,000 barrels were last fall exported, from this city. At a late meeting at Rochester, N. Y., the Baldwin had three marks of merit to one for any other kind, and the others which received the next highest commendations were the Rhode Island Greening, the Russet and the Tompkins' County King. Col. Wilder went on to give the statistics of apple and peach culture in the West and South, showing that it was much more extensive than was generally believed. He concluded by saying that he hailed with pleasure

the wide-spread interest now manifested in relation to the cultivation of the grape. The time, he said, was within the recollection of some present, when the Catawba and the Isabella were first brought into notice. Hundreds of cultivators were now raising seedlings, and the day would soon come when our markets would vie with those of Italy, Sicily, and other grape-growing countries, where this luscious fruit is not only a luxury to the opulent, but the food of the humblest peasant. Our native wines were attracting attention in Europe, and at a late convention in Belgium, our Catawba was pronounced superior to the best varieties of Rhine wine. Our own Concord grape, also, had attained great estimation among wine-growers, as had been testified to by Mr. Longworth, of Cincinnati. We have been compelled to give merely the substance of Col. Wilder's remarks.

Hon. B. V. FRENCH, made a few remarks in favor of draining the soil for the production of the finer fruits, as the higher the culture the more perfect the produce. His subsequent remarks were very practical, and of great value.

Mr. BULL, of Concord, had spent much of his time in cultivating the grape, and had not been rewarded for his labor, because experience taught him that our imported varieties were not to be depended on, and suggested that our native varieties would have to be resorted to in order to produce a grape suited to the circumstances of safe cultivation. The carrying out this idea produced the Concord grape, and others from it which he thought to be of greater value; and a continuation of the same process would result in the obtaining of a great variety of grapes, each suited to the soils and circumstances of the Commonwealth. As to the field culture of the grape, if wine-making was all that was required, it was ready for adoption; but if it was desired that the field grape should be a good table grape here, experience and research, *and time*, must bring it forward. The combination of delicacy of aroma and hardiness in the meantime was not to be found in openly cultivated grapes, although the day was close at hand when it would be so. Speaking practically of the cultivation of the grape, Mr. Bull commended the use of sulphur as a preventive of mildew in the case of the imported varieties, as the absence of it aggravated the mildew; but it was better to have a grape that would not require such artificial cultivation—that would be hardy under any common circumstances—such a grape as would not demand unusual attention on the average of soils, one that might be treated in the commonest manner. The Concord grape had proved itself of this kind, and Mr. Bull hoped that he might be in a position to be the instrument of restoring to

many places the healthy grape, in place of the diseased one. Mr. B. was not in favor of pruning close, but commended what is called the *spurs system*, and he found it the most profitable and its results the most productive. Other practical remarks were made which were too elaborate for our space. He wished that all grape growers would commence to grow from seed, as by that process they would best arrive at their main purpose—improvement.

Mr. SHELDON, of Wilmington, made a few observations on the evil of opening apple trees too much on the top by pruning, which he thought was too much talked of and practiced to be profitable or prudent. He objected to planting fruit trees too far apart, and recommended 30 feet, as that distance was more favorable to the protection of an orchard from heavy winds than any other—always providing for a sufficient ventilation. He disapproved of all croppings of orchards; but thought if it was decided on, the squash was the best crop that could be adopted. The best apple he knew was the Baldwin, for all purposes—shipping included—and he suggested a monument to be erected on the spot where the first Baldwin tree grew in Wilmington. The spot was well defined, and he hoped the suggestion would be carried out, as nothing had proved more profitable to Massachusetts than the Baldwin apple. Mr. Sheldon stated that the original tree had been destroyed by lightning.

The CHAIRMAN confessed that he had been lax in his duty as a member of a committee appointed to attend to the matter of this monument; but Mr. SHELDON excused the presiding officer, on the ground that he had always over-worked himself in the cause of agricultural and horticultural progress.

MESSRS. BUCKMINSTER, WETHERELL, DAVIS, and LAKE, of Topsfield, severally made some valuable practical remarks. The latter gentleman went in for thorough draining as the primary condition of successful fruit-raising. He commended the Seckel and Winter Nelis and Easter Beurre as being among the best pears we could grow, and gave his preference to the Rebecca grape, the Delaware, Diana, Clinton and Concord.

The questions of hybridizing and pruning were incidentally touched upon. With respect to the former no rule of management was decided on as the best, nor was the system apparently approved, as the fear seemed to exist that the importation to a hardy rough grape of the qualities of a finer one would give it also a proneness to the diseases which infested our finer sorts. As to pruning, the general idea was that beginning in time, and using no implement more formidable than the pocket-knife was the best mode of

proceeding; but that when it was necessary, the best time to prune large limbs was in September.

The subject for next Monday's discussion is, "*Sheep Husbandry.*"

ECHOES.

A good ear cannot distinguish one sound from another, unless there is an interval of one-ninth of a second between the arrival of the two sounds. Sounds must, therefore, succeed each other at an interval of one-ninth of a second, in order to be heard distinctly. Now, the velocity of sound being eleven hundred and twenty feet a second, in one-ninth of a second, the sound would travel one hundred and twenty-four feet.

Repeated echoes happen when two obstacles are placed opposite to one another, as parallel walls, for example, which reflect the sound successively.

At Ademach, in Bohemia, there is an echo which repeats seven syllables three times; at Woodstock, in England, there is one which repeats a sound seventeen times during the day, and twenty times during the night. An echo in the villa Smionetta, near Milan, is said to repeat a sharp sound thirty times audibly. The most celebrated echo among the ancients, was that of the Metelli, at Rome, which, according to tradition, was capable of repeating the first line of Eneid, containing fifteen syllables, eight times distinctly.

Dr. Birch describes an echo at Roseneath, Argyleshire, which, it is said, does not now exist. When eight or ten notes were played upon a trumpet, they were returned by this echo upon a key a third lower than the original notes, and shortly after upon a key still lower. Dr. Page describes an echo in Fairfax county, Virginia, which possesses a similar curious property. This echo gives three distinct reflections, the second echo much the most distinct. Twenty notes played upon a flute, are returned with perfect clearness. But the most singular property of this echo is, that some notes in the scale are not returned in their places, but are supplied with notes which are either thirds, fifths, or octaves.

There is a surprising echo between two barns at Belvidere, Alleghany county, N. Y. The echo repeats eleven times a word of one, two or three syllables; it has been heard to repeat thirteen times. By placing oneself in the centre, between the two barns, there will be a double echo, one in the direction of each barn, and a monosyllable will be repeated twenty-two times.

A striking and beautiful effect of echo is produced in certain localities by the Swiss mountaineers, who contrive to sing their Rans de Vaches in such time that the reflected notes form an agreeable accompaniment to the air itself.—*Prof. Silliman.*

INJUSTICE IN FLOWAGES.—In another column may be found a second article from Judge FRENCH's forthcoming book "*On Drainage,*" to which we wish to call the especial attention of the reader. There is no subject, in our opinion, that so imperatively calls the attention of the

Legislature of this Commonwealth, as that of flowages. All the mill acts ought to be repealed, and an entirely new form and spirit of legislation enacted, more in accordance with justice and the common rights which every where exist between man and man. We hope that some enterprising and fearless champion of the "Rights of Man" will be found in our present legislature who will devote himself to this work, and institute such proceedings as will call public attention to the outrageous partialities and inequalities that now exist, and result in the enactment of laws on the subject more in accordance with common sense and common justice, and the spirit of the age.

For the New England Farmer.

"MILCH COWS AND DAIRY FARMING."*

I have just completed an examination of Mr. Flint's book with the above title, and cannot forbear to say a word in its praise.

In the first place, its size and style both commend it. Very few agricultural writers exhibit so much literary taste as is to be seen in this work. The paper and print are also superior. This makes one feel comfortable in reading it, and banishes the suspicion of its being like "Peter Pindar's razor," made only to *sell*. He, however, who gets up a book with mean type and cheap paper, having a view to profit, in my judgment commits a blunder.

Many of the cuts are very good and some are very poor. But the general execution of the work makes ample amends for trifling imperfections in this particular.

It has come at a time, too, when such a work was very much needed. A great deal has been written within a few years, in relation to the subjects of which it treats, and a very large proportion of what has been written, is utterly worthless. To find the valuable part, would be a greater labor than to extract a "kernel of wheat" from two bushels of chaff. In the transactions of hosts of Agricultural Societies in different States, in newspapers, in periodicals, articles upon the subject are everywhere scattered, which have accomplished their purpose, and will never be worth bringing again to the light. Many writers have a particular object in view, and their statements are neither valuable nor trustworthy. Cattle breeders are able to find no defects in the breed which they favor, and no merits in any other. Stock speculators praise those only, which for the moment will yield the largest profit. Men, therefore, who were really desirous to get correct information on this branch of farm economy, were at a loss where to find it.

This work of Mr. Flint supplies the deficiency. It may be regarded not only as comprising the opinions of the author, which years of experience as Secretary of the Board of Agriculture have made valuable, but also as a compendium of well digested and reliable public opinion. By this is meant, the opinion of a very large majority of those, who have given so much attention to the

* MILCH COWS AND DAIRY FARMING. By C. L. Flint, Secretary of the Board of Agriculture.

subject as to be competent to judge, and whose judgment is of value, because it is unprejudiced and honest. The man who has devoted a good deal of study and thought to the subject, will detect nothing new in it, but he will find the results of his own investigations and convictions much better expressed, probably, than he could express them himself.

The chapter on the "Dairy Husbandry of Holland," which is an elegant and finished translation from the German, and Mr. Horsfall's statement in the appendix, give increased value to the work. No farmer whose money does not yield him more than 100 per cent. interest, can invest the amount of its cost half so well, as in the purchase of this little book.

UNUS.

For the New England Farmer.

WHAT SHALL WE EAT?

Truly this is a question which deeply concerns every individual, notwithstanding a person may subsist for a time, at least, on a meagre diet to all appearances, as well as on the most sumptuous living. Physiologists and reformers, from time immemorial, have expended much brain and eloquence to prove that one article of food is wholesome, another pernicious, until even at this late day and generation, the question, What shall we eat? is as perplexing and difficult to answer as it would have been to the sons of Noah, the day when the Ark first rested on Mount Ararat. In view of these facts the celebrated Dr. Graham labored with a zeal worthy a reformer, to prove that mankind were not carnivorous, and therefore animal food was the slow poison that brought on our infirmities, and consequently shortened human life. Many were his proselytes, who abstained from animal food, at his suggestion, believing that they might attain to the age of Methuselah, by adhering to his physiology, when, lo! the Doctor died in early manhood, perhaps a victim to his own delusion, not having arrived at the scriptural age of three score years and ten.

Other reformers have advocated different views. Vegetarians have not been wanting, who maintained that a vegetable diet was the proper food for man, or that he was graminivorous, and should subsist on roots and herbs; in fine, that man, like the ox, should eat grass and ruminant. So even at this day we may use the language of the poet:

"Who shall decide when doctors disagree?"

Now it is evident that mankind are so differently constituted, that no rule on dietetics will apply in all cases; what is poison for one, is an antidote for another, and vice versa. The truth is, people of limited means should consult economy, and if upon trial it is found that six dollars in flour will support life as long as ten dollars in meats, and with it good health besides, then, certainly, animal food is not economical. Nevertheless, it may be that the staff of life would not be sufficient nutriment in all exposures and at all seasons of the year. The Esquimaux Indian of Northern Greenland, throughout the long, dark winter, subsists chiefly on walrus beef and seal; Dr. Kane, in the same inhospitable region, found the greasy Esquimaux's diet far preferable to the variety usually carried on ship-

board, which goes far to prove the assertion of physiologists, that the fat of animals when taken into the stomach becomes fuel for the body, and shows conclusively, why the Esquimaux is so indifferent to the cold, and why Dr. Kane and his party could endure an Arctic winter in latitude eighty degrees. Now it is almost certain that such a diet in the tropics would be fatal in a short time. In this latitude, we, in a measure, experience the Arctic winters, and reasoning from analogy, should in some degree adopt an Arctic diet. Fat meat to warm the body when the thermometer is at zero, will not be amiss; but in summer, when the south winds blow and the tropical season comes, and with it tropical diseases, the diet should be very different.

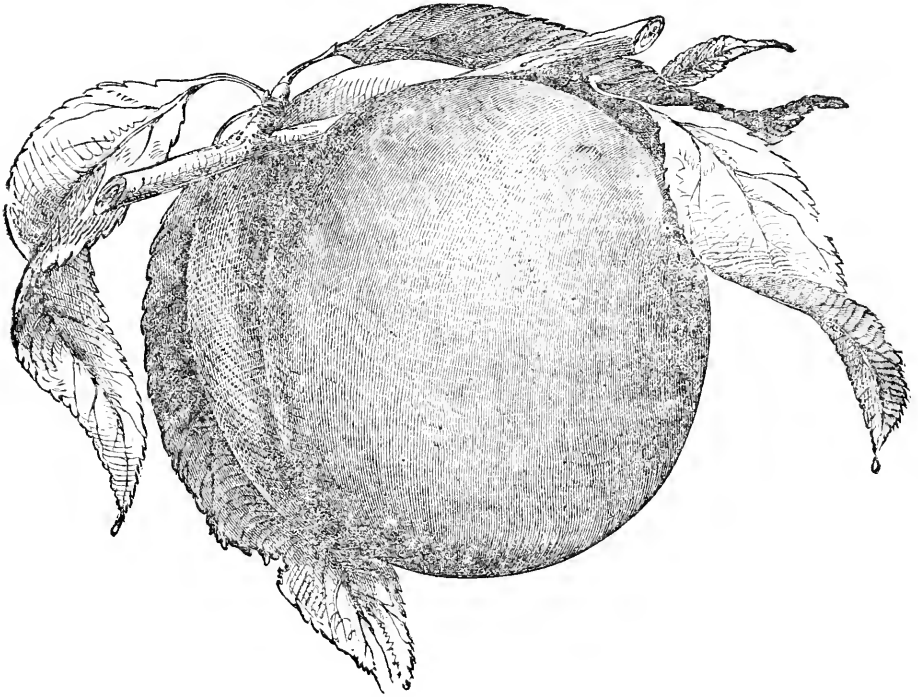
In summer we plant shade trees around our dwellings, open the windows, dress in cottons and muslins, and fan ourselves, in order if possible to keep cool; now patronizing the butcher at this season of the year is like dressing in furs in dog-days. Am I wrong then? Why has Nature so abundantly supplied our wants, and scattered her blessings in such profusion? Why has she so generously supplied the inhabitants of the Arctic Circle with the whale, the seal and the walrus, whereby he may obtain that fuel for the body, so essential to enable him to endure the severity of that climate? Or why in more genial climes has she planted the date, the cocoa-nut, the banana and the plantain? Is it not evident that whatever food is necessary to give health to the body may be found in our very midst, planted and nurtured by the hand of Nature, ever wise in its dispensations, ever beneficent in its designs?

Stow, Jan. 1, 1859.

H. FOWLER.

REMARKS.—A sensible, practical view of the case. The reader will please remember that we have admitted into these columns several articles commenting with considerable severity upon our habits of eating and drinking—not because we adopted as truths *all* that was said, but because we thought such articles would not fail to attract attention, and prepare the way for investigation, and perhaps, reformation, in some particulars.

FARMERS' CLUBS.—We gladly acknowledge the receipt of valuable suggestions with regard to the best modes of *bringing the subject of agriculture more directly home to the people*, and shall consider it a favor to receive the opinions of our friends in this matter, in and out of the State. There is evidently a new desire awakened in New England to conduct the business of farming with more system and intelligence, and this desire should be met with a corresponding interest on the part of the agricultural press, and by the active men of agricultural associations. The *Massachusetts State Board of Agriculture* has taken an important step in this direction, which they will soon place before the public. The views of others, communicated to us, may aid in this new movement.



THE CRAWFORD EARLY PEACH.

This is one of the most splendid, as well as one of the most excellent, of all early yellow-fleshed peaches, and is scarcely surpassed by any other variety in size and beauty of appearance. We have raised them so that three would weigh a pound. "As a market fruit," Downing says, "it is perhaps the most popular of the day, and it is deserving of the high favor in which it is held by all growers of the peach. It was originated by WILLIAM CRAWFORD, Esq., of Middletown, N. J. The tree is vigorous, very fruitful and hardy." The fruit from which our engraving was taken, was grown by CHARLES D. SWAIN, Esq., of Roxbury, Mass.

The leaves of the tree have globose glands. Fruit very large, oblong, the swollen point at the top prominent, the suture shallow. Skin yellow, with a fine red cheek. Flesh yellow, melting, sweet, rich and very excellent. Ripens about the last of August. Flowers small.

TO CORRESPONDENTS.—We are under obligations to our correspondents for many articles that we have not yet published, but for most of which we shall find space soon. The circle of correspondence is still widening, and if we had dou-

ble the space to fill, we should scarcely find any difficulty in doing it. The writing and publishing a good article, is like that charity that blesses twice; it is of more benefit to the *writer* than would be the reading of a dozen articles, and then the article goes forth to benefit thousands of others.

For the New England Farmer.

EXPERIMENTS IN RAISING CORN.

In the spring of 1857, I had but five acres of ground to plant to corn, and, not being very badly hurried with work, I concluded to try an experiment, in order to test the different ways of applying manure. My field was an oblong, forty rods by twenty, and I divided it into five plots, each four rods wide. On the first I put twenty loads of long manure, and plowed under to the depth of eight inches. On the second plot, ten loads of fine barn-yard manure, on top of the ground after plowing, and then thoroughly dragging before marking. Plot third, manured in the hill, with two quarts of very fine stable manure. Plot fourth, manured in the hill with one quart compost, made of two parts muck, two parts hog manure and one part each of lime and ashes. Plot fifth, without any manure. The kind of corn planted was the yellow smut, or red blaze, the kernel of which is large and flat, and ear good size. It was

planted on the twenty-fifth or twenty-seventh of May, dropped dry, and plaster dropped on it before covering, and then plastered again as soon as up.

When I could see the rows, it was cultivated both ways, and in a few days cultivated again and hoed, which was all that was done for it until it was large enough to hill, when it was plowed both ways, two furrows in a row, and hilled up a very little. It was furrowed three feet apart, making just 22 rows on each plot or acre. As soon as it was ripe it was cut up at the hill, and well set up in small shocks, so that the corn might dry as soon as possible, and the latter part of October it was husked, each plot by itself, and accurately measured in the ear as it was put in the bin. The poor corn I made no account of. The following is the result:

Plot 1, 84 bushels of ears.	Plot 4, 95 bushels of ears.
Plot 2, 90 " "	Plot 6, 68 " "
Plot 3, 99 " "	

From this I conclude, that, for present profit, manuring in the hill is the best, as the plot manured with barn-yard manure in the hill gave 15 bushels more than the long manure plowed in, and 31 over the one without manure.

The result is also in favor of spreading the manure on top of the ground instead of plowing under for the first crop; but how this will affect the succeeding crops remains to be seen. This year it was sowed to oats and I have kept them in separate parcels, and as soon as I get them all thrashed, I can tell how much each plot produces and their weight per bushel. It is now sown to rye, and this crop will in a measure determine which method will give the most permanent benefit.

JAMES BAKER.

Oak Hill, Jan., 1859.

REMARKS.—We accept the proposition made in your private note.

TRANSACTIONS OF THE NORFOLK AGRICULTURAL SOCIETY.

This handsome pamphlet of 120 pages presents one feature, such as we have never before witnessed, capable of being imitated in every society of the Commonwealth. The supervisory committee framed a series of questions, embracing the essentials of farm management, and addressed them to intelligent cultivators. In this way they elicited the actual experience of the best cultivators of the county. Several of these papers contain the essence of good farming. There is one gentleman, page 38, who states how he has grown, year after year, crops of Indian corn, amounting to one hundred bushels to the acre, no mistake, and no fictitious measure. This is good doings, better by one-half than most farmers do. We venture the assertion, that the crop usually raised throughout the State does not exceed forty bushels, fair measure. We think there is great need of some uniform rule of harvesting, curing and measuring this crop, so that the crops in different sections can be compared one with

another. We hold that corn is not fit to be measured, until it is dry enough to be ground, and that the statute should define the number of pounds to constitute a bushel at this time.

One gentleman (p. 35) speaks of growing three or four hundred bushels of currants to the acre, in his orchard, in addition to the fruit of the trees. This is a valuable crop indeed, for we presume such currants will readily command half a dollar a bushel. They are a palatable and wholesome berry.

We are pleased to see that these Norfolk farmers stir their soil from seven to ten inches deep, and that they are not sparing of their manure, applying from eight to twelve cords to the acre. No man can expect a full crop, who feeds skimping. The liberal donor shall be rewarded accordingly. We think we should prefer Mr. Robinson's instructions about draining and seeding land, to those of old Father Elliot, who lived more than one hundred years ago. We think we trace on many of the pages of this volume, the industry and good sense of our old friend Sewell—and have no doubt he will do as much good in his day and generation, by his labors on the farm, and among farmers, as he ever did in the pulpit.

AN EXPERIMENT IN DRAINING.

When we witness the change of a sterile soil into a fertile one through the influence of draining, it is conclusive evidence of the value of labor so applied. Such has recently come to our notice, and we shall recall it for our readers.

It not infrequently happens in hilly or gently undulating districts, that intervals and damp, springy soils abound, requiring draining before it can be brought into profitable cultivation. The instance in question, was a field of fair surface, quite free from stone, but receiving from more elevated land a continual supply of clear, cold, soft spring water, which ran over nearly the whole surface. The owner, faithless of reclaiming the lot, was yet desirous of collecting the water to supply a reservoir for cattle. This was mainly accomplished by cutting a drain across the slope of land near the upper side of the field, for about a hundred rods in length, which did so much for draining the surface that other ditches were cut completing the work. The drains were finished with the flat stone usual in such districts, carefully laid and covered with a good coat of straw, before replacing the dirt. Now of the change produced.

A crop never grew upon this lot from the time it was cleared until after it was drained. Water grasses and weeds were the only product; but since draining, it has produced annually over two tons of good hay per acre, without any manure. The appearance of the soil is wholly changed, from a tenacious blue clay, adhering to one's boots like tar—it has become a clear, black, clay loam—just such a soil as always produces remunerative crops to the farmer.—*Country Gentleman.*

FIFTH LEGISLATIVE AGRICULTURAL MEETING.

[REPORTED BY JOHN C. MOORE, FOR THE N. E. FARMER.]

The meeting on Monday night was very respectable in point of number, and included many of our most enterprising farmers throughout the State. The subject for discussion was, "*Sheep and Sheep Husbandry.*"

Hon. RICHARD S. FAY, of Boston, occupied the Chair. He apologized, because of ill health and engrossing avocations, for want of preparation in introducing the subject. *Sheep husbandry* was a most important item in the husbandry of the State. Referring to the system of stock keeping, and the proposition laid down at a former meeting—that no farm could be properly managed unless it kept a stock capable of consuming its produce—he took up the question of what was the best kind of stock to keep, especially with reference to the progressive improvement of the farm. The prominent question is—What shall we do to renovate our worn-out pastures? Cattle had been tried, and the consequence had been failure; for in connection with cattle culture, the true American system was to take all out of the farm and return nothing to it. In the mind of the speaker, sheep husbandry was the best means of renovating the soil. Top dressing was out of the question; for the pastures would have to be brought to a reasonable state of fertility before this could be done with effect. The proneness of cultivated grass lands to go back to a natural state was also a consideration to be thought of, and the means of keeping them in good condition another. Sheep grazing would do this more effectually than any other, as the excrement of sheep, in its nature, and in the manner it was distributed over the soil, restored to pastures what they had lost from feeding, kept down the natural and coarser grasses, and retained the fertility of the lands in a greater measure than by the use of any other description of grazing stock. Mr. Fay said he possessed 200 acres, which, ten years ago, would have starved ten cows to death. It was a matter of too much expense to cultivate it—in fact, it was no more in his estimation than a piece of waste land. It was of no use, only as it was liable to call for a tax. On 100 acres he put 150 sheep, four years ago, and now, on the same pasture, there are fifteen to twenty cattle grazed six months in every year. This was through pasturing with sheep. The land was rocky, and could not be brought into cultivation through any other means.

As to winter-keep of sheep, it was an advantage to the farmer, although it was thought to be different. They required less care, did not demand housing so much as other stock—they

requiring only a yard, hay-rack, and a shed during storms; they were less liable to disease than any other stock; in fact, all they demanded was the simple attention of feeding, and they improve in condition in the same ratio as cattle feeding for the shambles. Sheep consume two pounds of hay, per day, or its equivalent. Eight pounds of roots would be an equivalent. As compared with cattle, sheep produce much more fertilizing manure than any other kind of stock. Spengel, a German chemist, said that 1000 sheep would produce as much manure in twenty-four hours as would put an acre of land in the best condition. This looked rather strange to Mr. Fay when he first saw it, and he determined to look into it. This would give fifteen well-manured acres out of as many tons of hay—a rather startling statement. Professor Johnston, in an article on the comparative value of manures, ratified it by stating that sheep droppings were as 12 to 7 in fertilizing qualities, compared with the excrements of cows—nearly one-half more. In conjunction with other stocks, and not at all to displace them, all farmers ought to keep sheep. Their droppings are as good as guano, and few farms were independent of the use of such manures—for few were without spots where it could be top-dressed by the use of sheep, when any other means would not prove half so effectual. Sheep, also, had always a ready market, which was another advantage they had over hay, grain or other produce.

As to the objection against sheep on account of dogs—their number in this State had dwindled from 550,000 to 120,000! It was a matter of shame to think that dogs were so allowed to mar such a useful branch of rural economy. In old times, a premium was offered for the heads of wolves, for the reason that they destroyed the domestic cattle and sheep; and now when dogs were so much worse, and the fact was made plain to the Legislature, it was as good as laughed at—for the law passed last session was of no consequence. Had it passed as originally presented, the bill would have added to the value of the sheep stock, in a few years, \$1,000,000. Everybody was protected in their rights but the farmer. If a man established a nuisance alongside his neighbor's property, he was liable to punishment; but a man who was not worth a cent, but who owned an untaxed dog, was suffered to keep his sheep-killing nuisance with impunity. The option of cities and towns to adopt the existing laws was fatal to any idea of its ever being useful. Mr. Fay hoped that means would soon be taken to cure this evil.

As to wool, New England manufactured 40,000,000 of pounds, when Massachusetts, with lands adapted to the support of half a million of

sheep, only produced the paltry quantity of 400,000 pounds. In England there were about 44,000,000 sheep; while in the United States, where cheap land and other facilities were superior, we had only 15,000,000. The fact appealed to our patriotism. Gentlemen here wore broad-cloth coats and pants, and not a thread of them were grown within three thousand miles of where they were. Mr. Fay concluded by appealing to the gentlemen of the Legislature to furnish farmers such protection as would protect their interests, and, as he had endeavored to show, those of the common country.

Mr. MARSH, of Danvers, spoke experimentally of the improvement made by sheep-grazing on lands that were not otherwise capable of being well treated, and recommended that farmers should give at least some attention to sheep-keeping, if the dogs would let them. In fifteen months he had sixty head nearly destroyed by dogs. He concurred in what had been said by the president on this subject, and also regarded the superiority of sheep-droppings over all other kinds of manure—even although they were fed on the coarsest of hay. In answer to a question put, Mr. Marsh said that in winter, sheep required more water, according to their bulk, than neat stock. A disease had appeared among his flock which had induced him to change them entirely, and it had not since made its appearance, and this step he would recommend. He said that emulation was rapidly inducing farmers in his neighborhood to procure sheep; and if facilities were favorable, their culture would be much more general.

Mr. JOHN D. G. WILLIAMS, of Bristol county, said that he had experience of the value of sheep in improving land; and held them to be a profitable article to keep. From 12 sheep he had in value in lambs, wool and premiums \$116,80. He had received for a cross of the South Down \$6 a head for three months' lambs, which he held to be a fair price. Dogs were a great nuisance, and it was time that the Legislature should put about as much value on sheep as they did on dogs. One of his neighbors had lost his whole flock, thirteen, in one night, and instances were numerous of similar depredation. This evil must be cured.

The PRESIDENT here read a humorous account of what the author called the Disease of Dogs, as it afflicted sheep—which recommended as a cure good wholesome laws, strictly and properly executed.

Mr. JOHN W. PROCTOR, of Danvers, spoke next. His observations were confined to sheep as improvers of wild pasture land, and described an experiment by Mr. Marsh, who had previously spoken, on land which, ten years ago, would not

support one cow, whereas, five years after being fed by sheep, it could support five cows, and received the best premium the Essex county could give. Several other gentlemen had tried the same description of experiment, and all had been similarly successful.

Mr. SANFORD HOWARD, of the *Cultivator*, agreed in the opinion that sheep formed a most important feature of our agricultural prosperity. As to dogs, they were kept as numerous in Europe, in sheep countries, as they were here; but probably the greater safety of the "wooly people" was owing to farmers keeping dogs whose nature was to protect, not to destroy sheep. Mr. Howard coincided with the several speakers with regard to the fertilizing qualities of sheep, and their value as stock, on poor lands. He then briefly alluded to the question of what kinds of sheep should be kept in the different sections of the country. In the neighborhood of cities, where mutton was high priced, the kind easiest fed would of course be chosen; where the object was to improve hilly pasture, the production of wool would be an important consideration. The character of the soil, and circumstances, would regulate choice; but, if he should give an opinion in the matter of sheep for mountainous district, he should speak in favor of the black-faced mountain sheep of Holland and Wales.

Mr. Howard continued to make some valuable practical observations on stall-feeding sheep—urging, however, the importance of proper feeding, even although they were capable of being sustained on the coarsest kinds of food. He also spoke of the property sheep had of improving the grasses of meadows on which they were fed in course of a rotation system of husbandry.

Mr. WETHERELL made some very pointed remarks on the great evils arising to sheep culture from dogs, and urged a determined effort to procure a law that would operate as a sufficient protection. Mr. W. referred to an instance within his knowledge, wherein a few sheep had caused a great improvement on a farm.

Mr. MARSH also joined in the demand for a more stringent law against dogs; for it was notorious, that, when a dog once tasted the blood of a sheep, there was no limit to the extent of his depredations. It was of little use to hunt after these depredators; the better way would be to find means to prevent their existence, which a heavy tax would be most likely to do, were it made imperative on all dog-keepers.

The PRESIDENT spoke of the fertilizing properties of sheep manure in the matter of grasses, which showed a large per centage over other manures. He also said that the profit of sheep, per annum, as represented to him by a competent authority, was equivalent to the annual value

of the flock, independently of the other advantages which had been specified.

Mr. WILLIAMS gave evidence much to the same effect; approved of raising sheep for lambs; held a cross of the native and South Down to be the best for this region; and said that the average price of lambs in Bristol county, in June, was about \$4. In the richer valley lands the price of lambs might reach \$5 per head.

The subject for next Monday evening's discussion is, "*Fruit, and How to Raise it,*" when Hon. SIMON BROWN, of Concord, will preside.

[NOTE.—By an unfortunate transposition of the reporter, the list of PEARS recommended by Col. WILDER at the meeting when the subject of "*Fruit and Fruit Trees*" was discussed, was not properly printed in last week's *N. E. Farmer*. The following is a correction:

Best six pears on their own roots—Bartlett, Urbaniste, Vicar of Winkfield, Buffum, Beurre d'Anjou and Lawrence.

For the best twelve, add—Rostiezer, Merriam, Doyenne Boussock, Belle Lucrative, Flemish Beauty and Onondago.

Best six on quince roots—Louise bonne de Jersey, Urbaniste, Duchess d'Angouleme, Vicar of Winkfield, Beurre d'Anjou and Glout Morceau.]

For the New England Farmer.

CHESHIRE COUNTY MASS MEETING.

MR. EDITOR:—I attended another of the Cheshire Co. Agricultural Meetings on Friday, the 4th. The meeting was appointed at one o'clock. Col. READ, of Swanzey, joined me at Marlboro', where he had been waiting for the train three hours. The colonel is a man of energy, and has done his duty in this matter faithfully. At Keene we were joined by SAMUEL WOODWARD, Esq., Editor of the *Sentinel*. We reached the hotel of mine host of the Walpole House, a little after 4 o'clock, where we found about fifteen or twenty of the citizens awaiting our advent. The people assembled in the afternoon, and organized for the evening by the choice of I. HOWLAND, Esq., as President, and Mr. STEARNS, Secretary, and adjourned to six o'clock. Just before the meeting, Mr. T. BREED, editor of the *New Hampshire Journal of Agriculture*, came in. He is an energetic, intelligent man, full of life and animation, and added another good fellow to our party. Soon after six the President opened the meeting by appropriate remarks, and then Col. Read made one of his straight-forward, business-like speeches. Then your humble servant occupied the floor for about an hour, and was followed by Mr. Breed. He spoke with special reference to the importance and advantage of sustaining an agricultural paper in New Hampshire, adapted to the wants and circumstances of their State. They were more engaged in stock and sheep raising than were the people in some other States, and they wanted to discuss these subjects, and other matters of local importance, which they could not expect to find in papers of other States. They should have a paper which was in some sort common property, upon whose pages they could meet. He did not wish them to drop the *New England Farmer*, or any other paper, but to take the *Journal of Agriculture* in addition. At the close it was announced that in two weeks

there would be a similar meet.

Thursday, the 17th inst., and on the Friday, at Marlow, at which meetings BROWN, editor of the *New England Farmer*, expected to be present and address the meetir

Yours truly,
J. REYNOLDS.

Concord, Feb. 7.

REMARKS.—Our correspondent sent us a full and interesting account of this meeting, but it came after our paper was nearly made up, so that we have been obliged to sadly abridge it.

For the New England Farmer.

EXPERIMENTS IN FATTENING SWINE.

MR. EDITOR:—I send you herein the result of a few experiments in pork-raising in our village. It is not pretended that there is anything very unusual in the cases mentioned. If it should appear, however, that frequent feeding and full-feeding of spring pigs is the surest and readiest way to turn a penny in raising pork, I shall not be disappointed. Nothing, I apprehend, is more common or more unprofitable than to buy shoats in the fall, weighing in the neighborhood of one hundred pounds, and in a year to turn out three hundred and fifty pound hogs, and not much more.

Last June, Mr. DANIEL NORTON, Jr., of this town, purchased two spring pigs for \$4 each, said to be of the Chester county breed. They were taken from the sow about the last of June, being then two months old. They were slaughtered December 2nd, when one of them weighed 320, the other 310 pounds. These pigs had the skim milk of one cow about three months, and of two the remainder of the time. But they had as much Indian meal as they would eat. They were never fed less than three times a day, often four and sometimes five. Pigs recently from the mother, may safely and profitably be fed frequently. The digestive powers are most active in the *young* animal, as matter of theory even; in practice it is found emphatically so; and if the animal is fed always, the growth is never stunted and the animal does about all it was made to do, in a short time. These pigs were seven months and four days old when butchered, and weighed, as above stated, 630 pounds.

Mr. Abel Goodhue bought a pig on the 14th of June last, then weighing 30 pounds. He was killed Dec. 12th, and dressed off 250 pounds. It was a cross of the Suffolk and Essex breed. This pig had the skim milk of one cow only, and twelve and one-half bushels of meal. This was his entire keeping, with the exception of from two to three bushels of potatoes, in addition to slop from the house. Here was a gain of just about *one and a quarter pounds a day*: another proof of the advantage of the fast-feeding of young animals—and none probably doubt that the meat is sweeter through all its stages.

I add the following, not as an example of rapid growth, for it goes to show, like the cases before cited, that the gain is less rapid as well as more expensive, as the animal advances in age; but on account of the accuracy with which the experiment was conducted. It is really to be wished that all engaged in the fattening of

swine or neat cattle, would keep accurate accounts for the benefit of others.

Mr. Samuel Proctor purchased from a drover a shoat, in April last, I think on the 3d. then weighing 120 pounds. The cost was \$10.20: He was butchered Dec. 29th, and weighed 353 pounds; this was eight months and twenty-six days from the time when his live weight was 120 pounds, as before stated. Mr. P. fed out 24 bushels of Indian meal and one-half bushel of rye meal, which was his entire living, with the exception of slops from the house, (no milk at all,) and a few potatoes, not exceeding three bushels in all. The entire cost of the animal and his keeping, (not reckoning the potatoes,) and allowing for the butchering, was \$34.73, and is made up as follows, viz:

Cost of the shoat, April 3.....	\$10.20
One bushel meal bought same day.....	.84
One bushel meal.....	.90
April 28, one bushel meal.....	.90
May 6, do. do.86
May 15, do. do.86
May 24, do. do.88
June 2, do. do.88
June 9, do. do.90
June 17, do. do.86
June 25, 6 bushels, at 90c.....	5.40
Aug. 4, one bushel.....	1.06
Aug. 11, one-half bush. rye meal, given in small quantities, mixed with Indian.....	.54
Aug. 14, one bushel Indian meal.....	1.10
Aug. 25, do. do.	1.06
Sept 17, do. do.	1.06
Sept 30, do. do.	1.06
Oct. 11, do. do.	1.06
Oct. 23, do. do.	1.06
Nov. 6, do. do.	1.00
Nov. 8, do. do.	1.00
Add for butchering.....	1.25
Total.....	\$34.73

The meal was purchased as often as wanted, and the date of the purchase of each bushel shows pretty nearly the amount in the different stages of the animal's growth.

Mr. P., as the result of his carefully conducted experiment, knows that his pork has cost him just about ten cents per pound, not reckoning anything for time spent in feeding—or rather, perhaps, offsetting this against the manure, which should certainly be done.

Essex, Dec. 21, 1859. DAVID CHOATE.

REMARKS.—We are greatly obliged to Mr. Choate for the above; such precise statements are always valuable.

For the New England Farmer

SPONTANEOUS COMBUSTION IN MANURE.

Will you or some of your readers of the *Farmer* inform me on a few things? The last of October my large and nearly new barn and sheds, with all their contents, were consumed by fire. We have and do now think it was the work of an incendiary. There was a cellar to said barn; fifteen feet on the west side was partitioned off by a stone wall, which made a pit for manure, fifteen by forty feet, and every year till the last I kept hogs and let them run under my stable in the cellar. I have used common brakes for bedding, (as they grow among us plentifully;) we put into the pit all the leaves, old shoes, boots, &c., that we have, and cover them up in the manure. After the fire

we found the manure all on fire and put it out, as we supposed; the second day we found it on fire again; the third day it was still burning. I went with my hired man and dug down some two feet and found at the bottom a large bed of fire. Now the question is, is it probable or is it possible, that the barn took fire from spontaneous combustion? If so, my advice is for every one to see that their manure is shoveled over often, or otherwise keep hogs in the cellar, although in my opinion they will not do quite as well as when kept out in a good dry place.

One more question:—Can any man take one or any number of swallows, and put them in the mud, a hollow tree or log, or in a sand-bank, or in any other condition whatever, and keep them alive through the winter? My opinion is that it can't be done without food. G. V.

REMARKS.—We do not think the barn took fire by spontaneous combustion, under the circumstances mentioned.

For the New England Farmer.

THE WEATHER OF 1858.

FROM MY WEATHER JOURNAL.

The most noticeable feature of the weather of 1858, was the remarkable mildness of the winter season. During a large portion of *January*, at least two-thirds of the month, the ground was entirely bare in this part of the Connecticut valley, and for *seventeen* days in succession no snow fell. Towards the close of the month of *January*, the frost left the ground, the roads generally became settled, and the ponds were free from ice. Farmers might have plowed, and to my knowledge, *did plow*, without difficulty from frost, there being four days, commencing with the 25th, in which the temperature ranged from four to eighteen degrees above the freezing point. Violets in blossom in the gardens, fully exposed to the weather, were not uncommon; and other plants were reported in flower by the newspapers, including the strawberry; but the violets I saw myself in full, bright bloom.

The first ten days of *February* were as mild as any consecutive ten in *January*, the temperature sometimes rising to 50° in the shade, in the open air; and the remainder of the month, though considerably colder, deserves to rank only as quite mild winter weather.

The first two weeks of *March* were more winter-like than the same length of time in either of the preceding winter months, producing a temperature of 12° below zero—6° lower than any in the winter months—and about a week or ten days of poor sleighing. This was nearly all the sleighing of the season, and the greatest depth of snow on the ground at one time was not more than five inches. In short, the weather of *March* was about as ordinarily for this month, and before the close of the month the frost generally left the ground. During the last days of the month, farmers began to plow, and only now and then a mud-hole could be found in the roads. No snow fell here after the 20th of the month, and at the end of the month none could be seen, not even on the most elevated points of *Hampden* and *Hampshire* counties.

April continued mild, even more than usually warm, and marked by no very severe changes. At the close of the month the buds on the trees were very forward in their incipient stages of development; but *May* was cold and advanced the season but little from where *April* left it. Apple trees were not in full bloom till the 25th, and vegetation in general was proportionally backward. Cloudy weather was the predominant feature of the month.

June strove hard to make amends for the failings of *May*, and at its close had brought vegetation up to rather more than its usual stage of development at this season. The month was rather too dry, but otherwise exceedingly fine for the farmer, though towards its close the heat was extreme. Thermometer in this vicinity ranged from 90° to near 100°, in the shade. At the West, and particularly along the valley of the Mississippi, the month will be long remembered on account of its disastrous freshets.

July was mild in respect to heat, and although there was a scanty supply of rain, growing crops suffered but little in lack of it.

August was cool, with a large proportion of northeast wind, equal to one day in three throughout the month.

September and *October* were golden months; and, besides bringing in an abundant harvest, brought a remarkably large share of sunshine and clear weather. Indeed, I think that it is a rare occurrence to have two as fine months in succession, as were *September* and *October* of 1858.

November was cold, cloudy, and gloomy, with much wind; and squalls, snow flurries and severe frosts were noticeable and characteristic features of the month.

December was a moderately cold winter month, but in connection with the other two winter months of this year, *January* and *February*, does not alter the general character of the winter. An absence of snow was also noticeable in this month, only about four inches falling in all. The greatest fall at one time was between two and three inches; consequently there was comparatively no sleighing during the month.

Jan. 4, 1859.

J. A. ALLEN.

REMARKS.—The above is a literal extract from the "*Journal of a Farmer's Boy*," who has always worked on the farm, and enjoyed no special advantages whatever. It is succinct and expressive, and is pretty good evidence that he will soon become one of our best agricultural writers.

For the *New England Farmer*.

PRESERVATION OF MANURES.

When I was a boy, my father and several of his neighbors who were regarded as good farmers, used to keep the droppings of their cattle as thrown out of the barn windows, where the rain fell upon them from the eaves, and worked and soaked them so completely as to remove nearly all the stink. But a different practice has grown up on these farms within the last twenty years; and nearly all of these owners let these droppings fall into cellars, where they are inter-

mingled with muck gathered from meadows and swamps, and worked over by swine. In this way the quantity of manure is increased three-fold, and although it smells a little when handled, this smell soon ceases to be oppressive, because it is believed to be a valuable ingredient of the manure. I think it is called in my children's school-books, ammonia; but whatever it may be, I think the manure none the worse for it. Whoever by the farm would thrive, must not be afraid of soiling his hands or his trousers. I should just as soon think of meeting a sweet-scented currier who worked daily in his shop, as a clean farmer. No man should be above his business, and that business which emits the strongest stink is likely to produce the cleanest chink of dollars in the end.

AN OLD SCHOOL FARMER.

January 22, 1859.

EXTRACTS AND REPLIES.

FARMERS' CLUBS.

In accordance with a suggestion in the *Farmer* of Dec. 11th, a few friends of agriculture met and organized a farmers' club in Calais. The constitution published in your paper was adopted with slight amendments.

The organization being a new one in this section, a question arose as to the duties of the standing committee. Will you inform us, through the *Farmer*, whether the secretary should report the substance of the discussion, or whether that duty belongs to the standing committees, and oblige a subscriber.

A. M. F.

Calais, Me., Jan., 1859.

REMARKS.—The most difficult post of duty in the *Farmers' Club* is that of Secretary, as he ought to be a pretty good reporter. The discussions and essays should be reported and entered in a substantial record book, and become a part of the annals of the town.

MAKING BUTTER IN WINTER.

Having noticed an article by a subscriber under date Jan. 11, 1859, in regard to making winter butter, I would say in reply, that the reason why butter does not come quick in winter, is that the milk is set in a cold place where it attains to nearly or quite a freezing point. To remedy this, the only way that I know of is to take the cream when it is found it will not come, and seal it, and set it away till cool, when it will be found that the cream part of it will rise, which skim off and churn in the usual way, and you will find no difficulty in fetching your butter.

Middlebury, Vt., Jan., 1859.

W. D. H.

REMARKS.—If milk can be set where the temperature is 55° to 60° the cream will rise readily, and if kept in that temperature, may be churned into butter in less than fifteen minutes.

AYRSHIRE STOCK.

I listened attentively to the recent discussion at the State House, of the question, "*What breed of animals is best adapted to general farming purposes in New England?*" And although I was strongly inclined to the belief that the advoc-

cates of the Ayrshire had the strongest side of the argument, I am clearly of the opinion that it was not expedient to pass any vote to this effect, as was proposed. I was therefore gratified when this proposition was laid upon the table. I think that the best hopes of stock are to be found in the association of first class, pure-blooded Ayrshire males, with the best Yankee females. The primary object of keeping stock being for the milk they give, I think the prospect for quantity and quality is from Yankee cows. I use this term as expressing my views more clearly than any other. I was somewhat astonished that so little was said in favor of the milking qualities of the Devons. I had supposed that the venerable farmer of Framingham had sounded his trumpet so often and so loud, that the reverberation of the sound thereof would not cease while he lived. So true is it, that "the fashion of this world passeth away, and the memory thereof shall be no more forever." ESSEX.

Jan. 25, 1859.

REMARKS.—The above was not received until several days after its date, or it would have been given in our last.

HAMPDEN COUNTY AGRICULTURAL SOCIETY.

On looking at the constitution of this society, (p. 113,) it appears that five of the officers constitute a quorum for the transaction of business, to wit: President, Vice President, Treasurer, Secretary and a Director, all of whom can be found in the city of Springfield—so that although it is a county society, having officers in every town, it can be governed and controlled by a single town. This strikes me as a singular and questionable provision. It becomes the more worthy of notice, as there seems to be a disposition to make this society the controlling centre of a State Society. I admire the energy and efficiency of a concentrated government; but do not believe the yeomanry of Massachusetts are ready to go for it, to this extent, be it never so good. My views are republican, and I do not like aristocracy in any form—and least of all, in the government of farmers. *

Feb. 1, 1859.

WHAT AILS MY COW?

Nov. 12, 1857, she dropped a seven months' calf; her milk came, and she did as well as ever. When seven months in calf again, she did not appear well for several days, and I thought she would do as she did the year previous, but she did not—she got better, and was hearty and well to all appearance. It is now some days past the time for her to calve, and there is nothing that any way indicates it. She discharges large quantities of matter but still appears in good health. What can be done for her?

CONSTANT READER.

West Roxbury, Jan., 1859.

REMARKS.—We have not the skill to recommend anything but a warm and convenient stable, plenty of nourishing food and kind treatment, all of which she probably has now. Perhaps some of our friends can.

A CORDIAL INVITATION.

If you should make New Jersey in the way of some of your agricultural tours, I should be most happy to receive a visit. I think I can show you some good farms as well as farmers (to say nothing about the bad.) I. W. BLACK.

Sykesville, N. J., Jan., 1859.

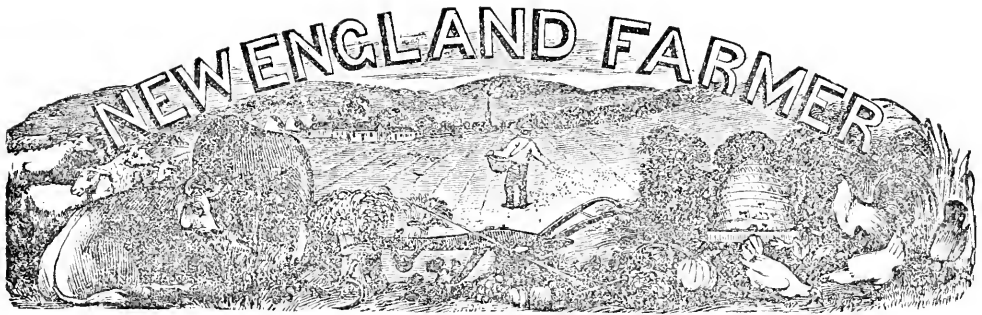
REMARKS.—It certainly would give us pleasure and profit to make some rural rambles with you through a portion of your State, and we shall bear you kind invitation in remembrance.

LADIES' DEPARTMENT.

LADIES' WEARING APPAREL.

Flannel is the proper clothing for the skin, preserving the natural heat of the body from being a non-conductor, in winter, and protecting the skin from the danger of a chill after perspiration in summer. However fine and thin the material for this under-garment may be in summer, still it should be woollen—in colder weather to be exchanged for one of a thicker and warmer quality. Beyond this, there should also be a sufficiency of upper garments proportioned to the season; it is not desirable that, even in winter, they should be heavy, but always warm. There is still existing a pernicious practice of wearing thin-soled boots and shoes. If intended for walking out, all boots should have soles of tolerable thickness; in damp weather, the soles should be very thick, or overshoes of some description should be worn with them. The foundation of many a consumption has been laid by a young lady walking or standing in the damp, with her feet ill-protected by mere gauze-like stockings and thin summer boots or shoes. Even in the house, this important part of a lady's dress appointments is by no means, as a general fact, sufficiently attended to. In cold weather, thin-soled slippers are not at all a sufficient protection for the feet in walking on uncarpeted passages; and the "unaccountable" colds that so often attack ladies in winter are often attributable to this cause. The covering for the head should be light, cool, and open, to admit the air. Close night-caps are an evil, and have long been discarded by persons of sense; but if ladies are disposed to wear them to keep the hair tidy, they should be loose and transparent.—*Springfield Republican*.

TO CLEAN GLOVES.—Lay them on a clean board, and first rub the surface gently with a clean sponge and some camphene, or a mixture of camphene and alcohol. Now dip each glove into a cup containing the camphene, lift it out, squeeze it in the hand, and again rub it gently with the sponge, to take out all the wrinkles. After this gather up the cuff in the hand, and blow into it to puff out the fingers, when it may be hung up with a thread to dry. This operation should not be conducted near a fire, owing to the inflammable nature of the camphene vapor. The receipts given in all the books we have consulted for cleaning gloves are barbarous. *Scientific American*.



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. XI.

BOSTON, APRIL, 1859.

NO. 4.

JOEL NOURSE, PROPRIETOR.
OFFICE...34 MERCHANTS ROW.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

CALENDAR FOR APRIL.

'Tis the glorious Spring, as she passes along,
With her eye of light and her lip of song,
While she steals in peace o'er the green earth's breast;
While the streams spring out from their icy rest,
The buds bend low to the breezes' sigh,
And their breath goes forth to the scented sky;
Where the fields look fresh in their sweet repose,
And the young dew's sleep on the new-born rose.



PRIL ushers in the round of MONTHS in which the farmer finds the duties of his occupation the most pressing.—The ice and snow has mainly disappeared, cold winds are tempered by blowing in to us

from milder regions, and the earth, warmed and softened by longer visits from the sun, unlocks itself and grows light, and porous and genial, inviting the husbandman to scatter his seed in generous hope, and wait in the same spirit for the fruition of the Harvest,—cultivating in the meantime with diligent and assiduous care.

In sunny and sheltered places, the earth assumes her wonted green, and fresh flowers unfold themselves, look out into the peaceful glen where they were born, bathe in the warm rays of the sun, and shed their rich fragrance all around the place of their nativity. And though all alone, they bud and bloom, and exhale their sweet odors, and perform all their duty, just as precisely as though cultivated and tended with unremitting care, in a well designed and expensive garden.

As the sun takes a broader sweep over the earth, its rays penetrate the soil, impart unusual

warmth and cause free evaporation; the cold surface water is thus taken up and scattered abroad, returning in gentle rains filled with the elements of fertility which they have sifted from the atmosphere, and which now find their way down the light and porous soil to supply the roots of plants which are about ready to commence their new work for the year. Vegetable life is re-animated, and shows returning signs of vigor and activity everywhere. The buds are swollen, and the tree tops thickened up long before leaves or blossoms have shown themselves.

And so it is in the animal kingdom. The birds, our last summer friends, begin to return; the Warbling Sparrow began his cheerful songs in March, singing all through the middle of the day in the piles of brush, and gathering its insect food from the rough bark of the wood. The Blue Jay screams from the tall elm, while the Crow, poised on the topmost shoot of a hundred foot pine, calls to his fellows in the distant wood, to come and partake with him of a breakfast which he has just discovered. The Bluebird, every morning, looks into the boxes in the garden, and seems to take into grave consideration the expediency of domiciliating herself another summer in the old quarters,—while the Robin flits from tree to tree, lifting a straw from this old nest and a twig from that, and then pouncing upon some hapless worm that shows its head above the surface for a moment's sun.

Mr. Beecher has been a close observer of the varying seasons, and makes a capital application of what he has seen. He says:—

“APRIL! The singing month. Many voices of many birds call for resurrection over the graves of flowers, and they come forth. Go, see what they have lost. What have ice and snow, and storm done unto them? How did they fall into the earth, stripped and bare? How do they come forth opening and glorified? Is it, then, so fearful a thing to be in the grave?

“In its wild career, shaking and scourged of

storms through its orbit, the earth has scattered away no treasures. The Hand that governs in APRIL governed in January. You have not lost what God has only hidden. You lose nothing in struggle, in trial, in bitter distress. If called to shed thy joys as trees their leaves; if the affection be driven back into the heart, as the life of flowers to their roots, yet be patient. Thou shalt lift up thy leaf-colored boughs again. Thou shalt shoot forth from thy roots new flowers. So be patient. Wait. When it is February, APRIL is not far off. Secretly the plants love each other."

APRIL is, in a great degree, *the Month of preparation*. Plans not entered upon and started now, will rarely come to maturity. All the work of the planting season should be mapped out and kept constantly in view, for *working by a plan* is as important to the farmer as to the man who is to build your house. The work may be done without a plan, but the uncertainties, changes and alterations incident to such a course, are anything but comfortable and economical. As a general rule the farmer has not been accustomed to anything like a rigid plan, and it may at first seem an irksome and unnecessary restraint to have one; but when he enters upon his field, and finds at a glance just how much land he wishes to plow, how deep, and there is no delay as to whether he shall back furrow or go round it; or, if he is to underdrain a piece, and he knows just where to strike when the workmen enter the field, he will realize a satisfaction that he could not without a plan, and his work will go on more systematically and *profitably*.

Give the *Garden* especial attention in APRIL. Some one has said that *the garden is an index of the mind*, and we think has said correctly, "that if you desire to judge of the character of a man's mind, go into his garden. Solomon considered a slovenly vineyard or garden good evidence of a slovenly mind, or a mind void of understanding. Depend upon it, when you see a man's fields and gardens laid out with good order, and taste, and notice the neatness of their cultivation, *that man's mind is like a well arranged library*. A man's plans will appear in his operations. His theory may be judged by his practice."

But the farmer *cannot afford* to be without a garden; he should draw large supplies from such a source for his table, especially during the summer and autumnal months. Fresh vegetables, seasoned with the corn-fed pork from his barrel, and delicious fruits, of varied kinds, with sweet cream from the dairy-room, are some of the compensations to the farmer for his isolated condition.—and then green fields, cerulean skies, babbling brooks, singing birds, lowing herds and flourishing gardens, surround him with more

charms and real advantages than cities can possibly confer.

But we cannot dwell longer on the attractions of Spring. It calls to us from every side—from soft airs, opening buds and expanding flowers—from the springing vegetation, the new life of animals, returning birds, and the new mental charms which every returning spring unfolds.

I come! I come! Ye have called me long,
I come o'er the mountains with light and song!
Ye may trace my step o'er the wakening earth,
By the winds which tell of the violet's birth,
By the primrose stars in the shadowy grass,
By the green leaves opening as I pass.

Mrs. Hemans.

SUGGESTIONS FOR APRIL.

Put *Fences* in order.

Head in *Peach* trees.

See that all your *Drains* are clear.

Do not ruin your trees by *pruning* them this month. Wait till the middle of June.

Put the *Door-Yard* in perfect order.

Get the small grains in early—but do not *plow* until the soil is ready for it; better that the grain should be a little late.

Transplant fruit trees as soon as the frost is out and the ground is warm and mellow. One dozen good trees, well set and well tended, will yield more profit within twenty years, than one hundred trees badly set and indifferently tended.

Set an *Asparagus bed* by all means.


Do not let the cattle run upon the mowing lands in the spring.

In some sheltered and convenient spot, have a good *Kitchen Garden*, where you can go for all sorts of vegetables, and some of the small fruits, nothing will be more economical, and few things will add more to the comfort and happiness of the family.

In a selected place in this garden sow a variety of *Flower Seeds*, and allow the children to pluck the flowers to carry to school, or to look at as they go to church Sunday morning. Set them in a dish or glass filled with cold water, and see how pleasant they will make the sitting-room in a hot afternoon! Or place them on a stand in the sick chamber, to interest and refresh the sufferer.

Purchase a *short-toothed rake* to use in the garden, and you will soon see how easy it is to prepare a bed for the smallest seeds when you have the right implement in your hands.

Finally, whenever the soil is ready for you, be ready to strike the blow that is needed, and have every thing done decently and in order.

 INFORMATION BY LETTER.—We are constantly receiving letters requesting us to give information upon business matters, *by letter* If

the reader will but reflect a moment, he will see how impossible it is for us to answer business letters from a circle of friends so extended as is that of the *Farmer*. We have two or three such before us now, and have every disposition to reply to them, but it would require some hours to collect the information which they require.

For the New England Farmer.

GRAFTING THE GRAPE VINE.

MR. EDITOR:—*Dear Sir*—I noticed a communication in the *Farmer* signed "L—, Bangor," inquiring the best mode of grafting the grape vine; and as I have not noticed any reply to it, I venture to state my experience, although if your correspondent be, as I suppose him to be, Col. HENRY LITTLE, of Bangor, one of the best horticulturists in New England, I might well be doubtful of my ability to give him anything new on the subject.

I have grafted the grape in the usual mode of cleft grafting, and by boring holes in the stock into which the scions were fitted, and succeeded with both modes—with occasional failures—if the grafting was done at the proper season. This is, perhaps, the most important consideration, for if the scions are set too early, the great rush of sap will drown the scions, so that canker and decay ensues. To avoid this, wait until the vine to be grafted has pushed its first leaves to the size of a dime, or a little more, when the sap will be inspissated enough to form granulation essential to the union of stock and graft. To keep the graft from pushing its buds, bury it in the ground in a cool northern exposure, for if the graft begins to grow before it is put into the stock, it is pretty sure to fail.

I have found the best mode of preparing the stock to be as follows; clear away the earth from the stem of the vine, and with a sharp knife make a sloping cut, as in splice grafting, split the stock across the cut about one-third of the distance from the top; pare the scion as in apple grafting—but not too thin—and place it in the stock, so that the bark of both stock and scion correspond; cover with a good body of grafting clay, pressed close to the wood, and press the earth carefully but firmly around, leaving but one eye of the scion above the soil. It will still further ensure success if the scion is split, and one part inserted into the stock, while the other part is carried down over the scarped stock to the bark at the bottom; there should always be a bud at the base of the scion on the outside. This mode is much practiced in cherry grafting, and is probably familiar to your correspondent. Scions may be cut at any time before the sap begins to flow—they should have three or four eyes or buds, and if possible, a little of the two years' wood at the base of the cutting. I consider this necessary to success.

I have found it best, when it is practicable, to take up the vine to be grafted and plant again after grafting. If this is done, you may graft as soon as you can get your vines out of ground, and not one in a hundred will fail.

After all, I do not consider it profitable to graft the vine, unless you wish to cultivate a

weak growing, but good grape, or a tender grape, which you cannot succeed with upon its own root. In such cases, you can sometimes succeed by grafting on hardy and vigorous vines, but the old root is apt to throw up suckers, and, if you do not happen to observe them, they will rob the graft of its nourishment, and before you are aware of it, it dies, and you have got only your old vine again.

I entertain the belief, but have made no experiments to demonstrate it, that the stock of a vine which ripens its fruit early will quicken the ripening of a later kind grafted upon it. If this be true, it would be a resource in cold latitudes where fine grapes cannot be grown, and would repay almost any trouble in grafting.

I have only to add that if what I have written above should be of any service to your correspondent, it will give much pleasure to

Yours truly, E. W. BULL.

Concord, Mass., March, 1859.

For the New England Farmer.

PRESERVATION OF MANURES.

When I was a boy, my father and several of his neighbors, who were regarded as good farmers, used to keep the droppings of their cattle as thrown out of the barn windows, where the rain fell upon them from the eaves, and worked and soaked them so completely as to remove nearly all the stink. But a different practice has grown up on these farms within the last twenty years; and nearly all of these owners let these droppings fall into cellars, where they are intermingled with muck gathered from meadows and swamps, and worked over by swine. In this way the quantity of manure is increased three-fold, and although it smells a little when handled, this smell soon ceases to be oppressive, because it is believed to be a valuable ingredient of the manure. I think it is called in my children's school-books, ammonia; but whatever it may be, I think the manure none the worse for it. Whoever on the farm would thrive, must not be afraid of soiling his hands or his trousers. I should just as soon think of meeting a sweet-scented currier who worked daily in his shop, as a clean farmer. No man should be above his business, and that business which emits the strongest stink is likely to produce the cleanest stink of dollars in the end.

AN OLD SCHOOL FARMER.

FARM AGENCY.—The Hon. B. V. FRENCH has opened an office at 51 and 52 North Market Street, Boston, for the purchase and sale of Farms and Farm Stock, either of Milch Cows, Grade or Pure Blood Durhams, Devons, Herefords, Ayrshires, or Jerseys. Oxen, Sheep, Swine, Agricultural Implements, Seeds, and all that is required to equip a farm or garden, or anything in relation to rural affairs.

Mr. FRENCH has had the most ample experience in these matters, and our friends may find it to their advantage to secure his aid in their operations.

For the New England Farmer.

THE EDUCATION OF FARMERS—COUNTY SOCIETIES—FARMERS' CLUBS.

MY DEAR SIR:—I am much gratified with the remarks made at the second Legislative Agricultural Meeting, held on the evening of 17th inst. inasmuch as it appears to me that the second resolve, introduced in that meeting, if it should be carried out, will do more than any former move has accomplished towards the advancement of terraculture in our Commonwealth. In saying this, however, I will in no way censure or condemn any previous move in the matter. Our agricultural societies have accomplished much, introducing better animals and better systems of cultivation. But have their good influences been as general as the necessities of farmers require? In many of our counties, from being in fixed localities, they have been inconvenient of access to those residing in remote parts. There are, no doubt, many first-class farmers in the State who are deterred from exhibiting the objects of their successful culture from this cause. In the present arrangement, this evil cannot be obviated. Those living in the vicinity of fair grounds can well afford to take in their animals and products, and in this way the rewards and credits are, to a great extent, limited to a comparatively circumscribed area of territory, since the bounty of the State is scattered over a small territory. And yet we don't know that any one is to blame in the matter, further than that a bad management was made in the outset of the matter.

Now will not the people at large be more benefited if these annual fairs are made emigratory, travelling from the centre to remote parts of counties? and thus, instead of letting A, B and C bear off the prizes and honors, place them, occasionally where they shall have the journeying to perform to find competitors in D, E and F. This would awaken a more general competition.

Again, how large a proportion of the farmers in the State are connected with the agricultural societies? Probably not one in ten, and each of these has no doubt some good reason for non-membership. Inconvenience of locality may be one cause. Then another will say, that so much unfairness is used in distributing prizes. The former objection is, no doubt, a serious one. The latter should be met and controlled. Committees should be selected with great care, and then they are very liable to be deceived. But they or the society should watch carefully, in order that no deception is practised, and then, they cannot always detect it. We have heard of a pair of worsted stockings, a piece of diaper, another of flannel, being stereotyped articles for competition, and successful, too, as report said. Perhaps they were entered in the names of different individuals in different years; but would that alter the merits of the article? Now the society has a right to make a by-law allowing them to put a mark on such articles to make them known, if offered a second time, and the individual who offers them should be forever debarred from further competition.

But we have wandered from the main point—that is, that the bounty of the State, as it is applied to our agricultural societies, does not equally reach the merits or demands of the agricultu-

ral population. How shall the want be supplied? We have always been a warm advocate of clubs or town associations. We have known them to exist where they have been magic in their influence, extending it from the valley to the top of the mountains. This is what we like, and would we could see such associations in *every town*. Now cannot the State, in her acknowledged munificence, do something to effect this? A few years ago, she gave, on proper conditions a Webster or a Worcester dictionary to every school district in the State—a noble munificence, whose benefits reach all. Suppose she make one more offer to the people—from the people's money; that they will allow to each town in the Commonwealth that will establish and maintain an association for rural improvement, said association to hold stated meetings for discussions and lectures on subjects connected with its objects once in — weeks, and shall report its progress annually to the Secretary of the Board of Agriculture, the amount of \$— annually, said amount to be applied to the establishing and maintaining an agricultural and mechanical library and museum for the benefit of said associations. When circumstances will permit, let a portion of this fund be appropriated to the introduction of seeds and plants.

Why would not such an arrangement come directly to the root of agricultural improvement, and prepare the way, at least, for a higher standard of agricultural education, which has received so much commendation for the last dozen years? The meetings and discussions would lead to deeper thought, closer observation and more profound research, and with suitable books at hand, earnest study would be applied to master their contents. The whole public, as well as the individual mind, would be brought into vigorous action. Young men would see that there was beauty and science in the old-fashioned and homely profession of their fathers, and no longer sigh to leave the pure air and ever-varying scenery of pastoral life, for the dependent, uncertain ties of other professions. Agriculture, as a profession, aye, and one of the learned professions, too, would begin to arise in its native dignity, and soon other and higher means of intellectual advancement would be demanded, to give it its proper position among the sciences of life.

We have no wish to detract from the merits or usefulness of any of our agricultural societies. But they have been the recipients of State bounty for a long time; so long that it seems as though they are old enough to stand and go alone. Cannot, then, a portion of the funds they are now receiving be appropriated to this new and general object, without seriously injuring their usefulness? Suppose the number of societies that receive funds from the State were reduced to one for each county, and this made migratory to the principal towns, and the amount now given to extra societies were divided on the proposed plan among towns? Would not the whole people be much more benefited than they now are? Or, if it is thought sacrilegious to cut off any of these societies, suppose the funds to each were reduced one-half, and the other half appropriated in the way suggested would not this put the liberality of the State in a more philanthropic and appreciable condition? An-

swer, ye wise men, who are the people's legislators, and for once try the experiment, and see if you do not return to your homes in a full consciousness of a duty nobly performed, and meet your constituents with countenances radiant with joy, uttering from the heart the pure salutation, "well done, ye good and true men."

Richmond, Jan. 24, 1859. W. BACON.

REMARKS.—Capital suggestions—we hope they will be put in practice. Town societies should meet for discussion as often as once a week, from the first of November to the first of April, five months. The association should be as thoroughly organized as is the legislature of the State, and all its business conducted with gravity and decorum. We feel quite confident that *premium paying* has done about all the good it is capable of accomplishing for the present.

STARCH--SUGAR--POTATO.

The embryo of plants receives its nourishment from the sugar contained in the seeds. This article is found in the seeds of all plants,—or rather exists in them in the form of starch, and is converted into sugar by the process of germination, and serves for the nourishment of the young plant.

Starch and sugar are composed of the same elements and in nearly the same proportion,—starch having an additional quantity of carbon. By the application of heat and moisture by which oxygen is absorbed, some of this element of starch is evolved, and it becomes sugar. This is the process in germination, and in the malting of barley. The skin or lower part of flowers, also contains starch, which is changed into sugar for the nourishment of the seeds.

Starch is very abundant in the potato; the tubers of this plant being in large part composed of it. The practice of nipping off the flower buds of potatoes has been frequently adopted by gardeners, which they considered had a tendency to increase the product. The effect of this practice is to check the demand of the growing flower for starch, and by thus preventing the exhaustion of the store of this ingredient, it will be accumulated in other parts, and principally deposited in the tuber, the growth of which will be increased proportionally.

The amount of starch increases regularly with the growth of the plant, and is in greatest abundance at its maturity. It remains about the same till the period when the seeds are beginning to germinate, or the young parts of the plant to grow, and is then converted into sugar. It has been found that 100 parts of potatoes contained in August, 10 lbs.; September, 14½ lbs.; November, 17 lbs.; March, 17 lbs.; April, 13¾ lbs.; May, 10 lbs.

From November to March, inclusive, the starch remains unchanged; and as it is the germination or change into sugar, by keeping in a moist place, that renders seeds unfit for planting, it would seem that the most proper time for spring planting of potatoes should be early in April. As at the time of sprouting of the tubers the starch becomes changed into sugar, it may be supposed that at that time of the year, that is, in May, they might be profitably used for the manufacture of sugar. We know not that any experiments have been made for that purpose.

For the New England Farmer.

ARE TURNIPS A PROFITABLE CROP?

MR. EDITOR:—Various opinions seem to prevail in relation to the turnip crop, and as I have read them from time to time, I am at last tempted to say a few words upon the subject of raising turnips. I have raised, of the various kinds of turnips, for forty-five years. I raise them now, where and when nothing else can be raised. I do not lay out a spot or patch of land for turnips where I can raise corn, for I do not believe they pay; or in other words, I do not believe them a profitable crop. I have never been able to get a good crop of anything after a crop of ruta bagas, and I should like to add to the many questions already put to "W. F. P.," by Mr. Emerson, whether he can show from experience or observation, that a crop of ruta bagas, on, say one acre of land, and three succeeding crops of corn and grass, is worth more than a four years crop—of corn, first, and three years of barley and grass? I do not care to confine him to the crops named which are to succeed the first year. But set acre by the side of acre; set down the expenses of labor and of manure, and show how much is gained by raising ruta bagas. I have raised five hundred bushels of Swedish turnips upon one-half acre, and that was an unprofitable crop to me, when compared with seventy-five bushels of corn to the acre by the side of it. The labor of feeding, any one can settle. I think there are great mistakes made in the estimations of the value of turnips in this part of the country. I admit, however, that when raised they are good feed for stock. The question I would like answered, is, when compared with other crops, are they worth raising?

OTIS BRIGHAM.

Westboro', Jan. 27, 1859.

DRUGGING ANIMALS.—Continual dosing animals is just as useless and injurious to them, as is the constant swallowing of drugs and poisonous compounds to the human system. It is all folly to allow your stables to become hospitals, and to smell and appear like an apothecary's shop. It is much more humane to shoot a horse, or knock an animal on the head at once, than to force down its throat doses of drugs whose quality of action you know little about, having the effect to create disease when it did not exist, and prolong suffering much beyond the time in which nature would herself effect a cure.—*American Stock Journal.*

For the New England Farmer.

AN AUTUMN LEAF.

[I was not intended by the writer of the following touching, truthful and expressive lines, that his name should appear with them. But we cannot consent to any separation. His little introductory note shows how the verses were born, and how they came to meet your eye. We envy the happiness of the person possessed of such a sense of the bountiful and beautiful works of the Creator, and such a power of clothing them with poetic language and feeling. Mr. CANNING is a true poet. His thoughts are not summoned for the occasion, but the occasion itself opens clearly before him, and presents its often minute, but wonderful accompaniments, which fill with tenderness and love, his glowing verses. His descriptions will inspire every one who has husked out corn in the open air, in a balmy autumnal day.]

Gov. BROWN.—*My Dear Sir*.—I took from my vest pocket to-day a bit of paper with the following lines pencilled thereon. They occurred to me while husking corn out of doors, on one of the glorious "*latter days*," last autumn. Thinking they may touch an answering chord in the minds of some of your readers, I take the liberty to write them out for the *Farmer*.

Yours a-field,

J. D. CANNING.

Gill, Ms., January, 1859.

AN AUTUMNAL LEAF.

BY THE "PEASANT BARD."

How beautiful the picture is that nature spreads to day!
For autumn clothes her second-born in fanciful array;
And through the hazy lift the sun a softened splendor sends,
That wraps the scene in quietude,—a sweet enchantment lends.

How like to elves in elfin land yon troop of children go,
Turning the hill-side leaves to find the bright brown nut below!
And every treasure brings a shout, and brings all there to see,
Just as the guest seuds, eddying round, the honors of the tree.

The jay, that in the summer days was scarcely seen at all,
Flits frequent through the pictured bush, and startles with its call,

And seems to warn its feathered mates, with quick and earnest cries,
Beware of Winter's biting breath, and bitter brumal skies!

The squirrel on the mossy log, within the hollow wood,
Clucks loud to tell that he's secured a store of winter food;
His kinsman, clad in "hodlin gray," the hunter fain would see,
With tiny claws goes scratching up the rough, nut-bearing tree.

The duck, within the dented shore, where spreads the mimic bay,

Sits silent, motionless, save when a ripple rounds away;
And seems to watch the colored tints reflected from below;
Or list *Dominion's* coming step, so stealthy, and so slow!

I see the waters of the brook, that in the summer time
Went singing onward down the vale, a kind of "catch-me"
chime,—

Now seem to linger by the bank, and linger by the brae,
As if all loth, from such a scene, to run in haste away.

Can fairy land,—can "land of dreams," such scene enchanting show?

So soft the heavens smile above! so glad the earth below!
As if millennial angels had their banners bright unfurled,
And PEACE, dear PEACE! her censer swung in sweetness o'er
the world!

Why call this world "a wilderness"—a mournful "vale of
tears?"

I think it *beautiful*; and for a better have my fears;

My heart in thankfulness dissolves that I'm alive to see

The beauties autumn shadows forth, that by-and-by may be.

October 19, 1858.

HORSES' COATS.—Lately going to the country to spend a few weeks with a friend of mine, I drove a very handsome horse, and a good one—but he was always annoyed about his coat. It was more like bristles than a horse's smooth

skin, and all the grooming he could get 'wouldn't do it no good.' My friend, who is a great horse-breeder and fancier, made me try giving him a few raw carrots every day to eat out of my hand, saying that he would have a good smooth coat in three weeks.—and he was right, for in that time my horse had a beautiful, sleek, glossy coat, and all from eating a few raw carrots daily. He tells me it is infallible.—*Cor. Porter's Spirit of the Times.*

ADAMS' PATENT WIRE SCREENS.

We were pleased this morning to see the operation of Mr. *Sanford Adams'* Wire Screens for separating the various grains, coffee, rice, beans, &c. He took about a pint each of three sizes of white beans, rye, buckwheat, coffee, and caraway seed, mixed them thoroughly in a peck measure, turned them into his machine, shook them rapidly for a few moments and handed them to us, each separated from the others. The inventor states that these screens will not only sort and sprout potatoes, clean and "size out" beans and peas, but will separate buckwheat from oats, rye from barley or wheat, and from all foul seed.

The machine works on eight-cornered rollers or cogs, and discharges the mixed contents into separate barrels at the same time, each kind finding its respective size. A person acquainted with the business will sort from seventy-five to one hundred bushels of grain per day.

The machine is cheap, small, compact, and so light that a man may carry it under his arm. Any farmer raising much of this kind of produce, would not fail to save all its cost in two or three years—indeed, we hear of one person who used the machine in the city last year, and saved refuse grain and small seeds enough to bring him \$25,00, which was freighted back fifty miles into the country, and used for fattening mutton! When this foul and broken seed was extracted from the good, it increased the value of the latter some fifteen per cent. Such a process is worth going through.

This is one of those simple and efficient contrivances that commend themselves to all upon once witnessing what they will do—and we therefore think well of it.

MANAGEMENT OF THE BARN.

Let the utmost neatness be observed in the management of the barn. No more hay or other fodder should be thrown on the floor at once than is requisite to supply one feed. By throwing large quantities from the mows or scaffoldings, there is an unavoidable loss from the drying of the fibre, which renders it less palatable to the animals, as well as less nutritious. Sweeping the floor daily promotes cleanliness, and conduces to the health and consequently the comfort of animals. The sweeping of the floors should be preserved, as this is the easiest way to save some

of the most valuable grass seeds. The mangers and cribs should be daily cleaned out and frequently washed. "What is the use of being so very particular? I never washed my cattle's manger," said Solomon Shiftless. Very well, Solomon, your cows probably have as keen an appetite for their fodder as you would have if your wife gave you the same plate unwashed for a month from which to take your meals.—*Rural Intelligencer*.

For the New England Farmer.

LEGISLATION---LAND DRAINAGE COMPANIES.

BY H. F. FRENCH, EXETER, N. H.

Under this Act, (namely, the Rye and Derwent Drainage Act,) it became necessary for the Commissioners to estimate the comparative cost of steam and water power, in order to carry out their idea of giving to the mill-owners a steam-power equivalent to their water-power.

"As the greater part of the water-power was employed on corn and flour-mills, upon those the calculations were chiefly based. It was generally admitted to be very near the truth that to turn a pair of flour-mill-stones properly, requires a power equal to that of two and a half horses, or on an average twenty horses' power to turn and work a mill of eight pairs of stones," and "that the total cost of a twenty-horse steam-engine, with all its appliances, would be 1000*l.*, or 50*l.* per horse-power."

Calculations for the maintenance of the steam-power are also given, but this depends so much on local circumstances that English estimates would be of little value.

The arrangements in this case, with the mill-owners, were made by contract and not by force of any arbitrary power, and the success of the enterprise, in the drainage of the lands, the prevention of damage by floods especially in hay and harvest time, and in the improvement of the health of vegetation as well as of man and animals, is said to be strikingly manifest.

This Act provides for a "water-bailiff," whose duty it is to inspect the rivers, streams, water-courses, &c., and enforce the due maintenance of the banks and the uninterrupted discharge of the waters at all times.

Compulsory Outfalls.—It often happens, especially in New England, where farms are small and the country is broken, that an owner of valuable lands overcharged with water, perhaps a swamp or low meadow, or perhaps a field of upland lying nearly level, desires to drain his tract, but cannot find sufficient fall, without going upon the land of owners below. These adjacent owners may not appreciate the advantages of drainage, or their lands may not require it, or what is not unusual, they may, from various motives,

good and evil, refuse to allow their land to be meddled with.

Now, without desiring to be understood as speaking judicially, we know of no authority of law, by which a land-owner may enter upon the territory of his neighbor for the purpose of draining his own land, and perhaps no such power should ever be conferred. All owners upon streams, great and small, have, however, the right to the natural flow of the water both above and below. Their neighbors below cannot obstruct a stream so as to flow back the water on to or into the land above, and where artificial water-courses, as ditches and drains, have long been opened, the presumption would be that all persons benefited by them have the right to have them kept open.

Parliament is held to be omnipotent, and in the Act of 1847, known as *Lord Lincoln's Act*, its power is well illustrated, as is also the determination of the British nation that no trifling impediments shall hinder the progress of the great work of draining lands for agriculture. The Act, in effect, authorizes any person interested in draining his lands, to clear a passage through all obstructions, wherever it would be worth the expense of works and compensation.

Another provision of this Act authorizes proprietors or occupiers of land, injured through neglect of others, to maintain the banks, scour and cleanse the channels of existing drains, streams or water-courses, forming boundaries of such lands, or leading to the outfall, to enter after one month's notice and neglect, and "execute all necessary works for maintaining or repairing such banks, or cleansing or scouring such channels." The Act also provides that the neglectful neighbor shall contribute his share of the expense of such repairs and labor.

It should be observed that this provision only applies to *existing* water-courses and ditches, and not to the opening, or the widening or straightening or deepening of new ones. Its remedies are similar to those in most of the States for neglect of adjacent owners to repair the division fences.

It is not the province of the author to decide what may properly be done within the authority of different States, in aid of public or private drainage enterprises. The State Legislatures are not, like Parliament, omnipotent. They are limited by their written constitutions. Perhaps no better criterion of power with respect to compelling contribution by persons benefited, to the cost of drainage, and of interfering with individual rights for public or private advantage, can be found than the exercise of power in the cases of fences and of flowage.

If we may lawfully compel a person to fence

his land, to exclude the cattle of other persons, or if he neglect to fence, subject him to their depredations without indemnity, as is done in many States, or if we may compel him to contribute to the erection of division fences, of a given height, though he has no animal in the world to be shut in or out of his field, there would seem to be equal reason in compelling him to dig half of a division ditch, for the benefit of himself and neighbor.

If, again, as we have already hinted, the Legislature may authorize a Corporation to flow and inundate the land of an unwilling citizen, to raise a water-power for a cotton-mill, it must be a nice discrimination of powers that prohibits the same Legislature from authorizing the entry into lands of protesting mill-owners, or of an unknown or cross-grained proprietor, to open an outlet for a valuable health-giving system of drainage.

For the New England Farmer.

STEAM PLOW.

MR. EDITOR:—Your able and pleasing correspondent, Wilson Flagg, Esq., seems alarmed at the introduction of the "Steam Plow," should such a discovery be made. He repudiates the notion that the "Illinois State Board of Agriculture" should encourage the use of such a machine, which, in its tendency, would "extirpate the whole class of small farmers in the State." In support of this theory, he compares the hand-spinners and weavers, who should undertake to compete with the manufactories of Lowell and Lawrence.

His article (*Farmer*, Dec. 18,) in its length and breadth, I think is at variance with public sentiment, and I shall venture a few suggestions in relation to it.

If the steam plow should be introduced by "mammoth corporations" (of which there is little to fear,) we cannot see why it would bear unequally on "the small farmer." He has given us no idea of the cost of the apparatus, which may not be very expensive, in a small way, but the outlay of a good plowing team, and the expense of feeding, is by no means a small item with the farmer. Horse power has greatly relieved man, as applied to the mowing, reaping and threshing machines, rake, &c., but how vastly has steam annihilated the horse, yet the horse retains his former value and labor, and is dearer than formerly. This kind of "progress" is demanded by all enterprising people, and the growth of our country is their crowning happiness. I should regret to see it otherwise.

When the sewing machine was introduced, the needle women were in danger. Wailings and regrets were the outpourings of humanity—but Providence opens new sources of labor, the poor needle-woman receives her "loaves and fishes," and by industry and frugality I think she earns full wages, as I do not learn that they have been reduced.

Now what is to be feared from "farm associated capital?" Surely, the argument fails when "Lowell and Lawrence" are made prominent objects

of comparison, with smaller establishments engaged in like manufactures. It is only necessary to refer your correspondent to the supremacy of individual success over them all around you. Stockholders in these mammoth corporations can doubtless give a negative reply.

But let us take a family of Shakers who would seem to present the most consolidated form of "association." Their thrift, skill, economy and integrity are unsurpassed. Does this mammoth corporation threaten destruction to the "pleasant old farm-house," the "delightful groups of trees," a state of "servitude" of families in the "grand manufactory of corn and vegetables?" Do those outside abutters suffer by this great Shaker corporation? Not at all. They never undersell. No form of corporation need frighten the industrious farmer, neither can they depreciate his products.

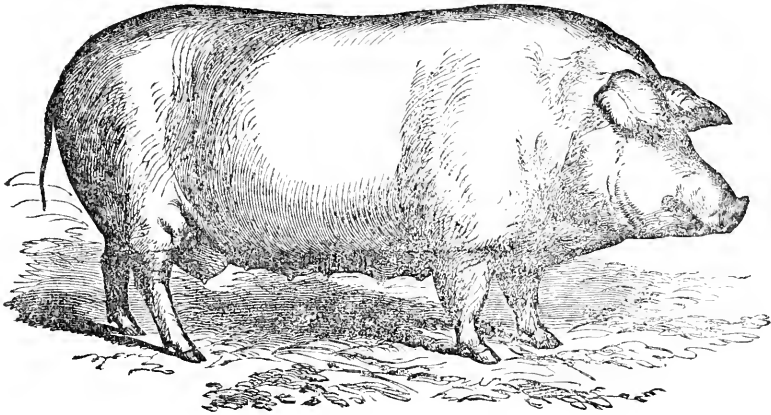
If there is a tedious operation in farming, it is plowing. Now we have all the improvements in agricultural implements, with new forces and powers. Shall we have the steam plow? If it can be worked on a hundred acres, it can be worked on twenty. Would it not revolutionize New England? Would it not improve the pasturing, enlarge the barns, increase cattle, sheep, horses, the dairy, the corn crop, the *wheat crop*, the most expensive and the most needful of all? Give them a "*steam plow*," a bounty of 12½ cts. on winter wheat, a generous bounty on a hundred bushels of corn, till it becomes a well established fact that New England can raise her bread, and your plowing will *tell at home* in your own pockets, and the coffers of your States.

Hang no clogs upon agricultural enterprises. Give them Legislative sanction and support to the utmost, and while we must admit the *plow* to be the *pioneer implement* of all farm operations, the basis of all hope, *let us add any power* that shall "*speed the plow.*" HENRY POOR.

New York, 1859.

MOST PROFITABLE BREED OF SHEEP.—A Canada West farmer, writing on this question to the *Genesee Farmer*, says: "As far as my experience goes, the most profitable sheep *are of no breed*. Buy poor and inferior ewes (of the native stock, if possible.) cross them with the best Leicester or Southdown rams, according to their roughness and other qualities, and they will pay from 50 to 100 per cent. per annum, or more. This is simply taking advantage of the established maxim in breeding, that the first cross is the best. You thus obtain an increase in mutton of from 20 to 30 pounds, and an increase in wool of from 50 to 100 per cent., besides a great improvement in the quality of both."—*Country Gentleman*.

ATMOSPHERIC PHENOMENA.—A correspondent writing to us from Byron, Ill., states that some peculiar phenomena were witnessed in that place on the morning of the 4th inst., at 9 A. M., consisting of several rainbows intersecting one another, and at every intersecting point there was a bright spot resembling a miniature sun. These bows displayed all the prismatic colors, and were exceedingly beautiful. They continued for about three-quarters of an hour, and then disappeared. —*Scientific American*.



CHESTER COUNTY, PA., SOW.

The above is a fine representation of the Chester County Sow Mazurka, bred by THOMAS WOOD, Esq., of Penningtonville, Pennsylvania, and now owned by WILLIAM A. WHITE, of Lancaster, N. H. This breed is distinguished for large size, rapid growth, early maturity and great propensity to fatten; remarkable, also, for beauty and symmetry of form, and docile disposition. No part of the farm economy better deserves attention than that of swine, as they are *manufacturers* as well as producers. More attention ought to be given to breeds, so as to secure those that are symmetrical, of quiet dispositions, and that will gain the largest weight upon the smallest amount of food. See advertisement in another column.

For the New England Farmer.

CANKER WORMS.

Few persons are aware, perhaps, of the extent of the ravages made by the canker worm, and other insects, upon the orchards of New England. In Massachusetts alone, there are estimated to be no less than one hundred different varieties of the class Geometra, (to which the canker worm belongs,) according to T. W. Harris. The apple tree suffers most from these worms, but the cherry, the plum, lime and elm trees, are often the subjects of their devastating attacks. The numerous pomological societies which have sprung up within a short time are proofs of the increased interest which the culture of fruit is demanding from the farmers of New England; and when we consider the fact that 50,000 bbls. of apples were recently shipped from Boston in a single month, the importance of staying the pest which more than any other has hitherto made the profits of fruit growing insecure and hazardous, becomes

sufficiently evident. It seems to be the inevitable result of civilization, that the birds, the beautiful feathered police of Nature, decrease, with the march of its improvements; and hence in proportion as the land becomes more cultivated, the insects, freed from their natural devourers, increase in proportion, and the fruit-grower, obliged to turn from one remedy to another, finds too often, now inadequate the contrivances of man are to effect the object.

In order to understand how to apply the true remedy, let us consider for a moment the habits of the canker worm. Though the greater number of these ascend the tree about the middle of March, they emerge from the ground during the open weather of every month of winter, and of these the largest proportion are females. Having reached some suitable crevice or twig on the tree, each female lays from 80 to 100 eggs, and covering them with a glue impervious to water, dies. In the month of June these eggs hatch, and the young canker worm soon destroy every green leaf on the tree. The great desideratum, it is plain, must be to prevent the worm from getting up the tree.

A contrivance of WM. W. TAYLOR, Esq., of South Dartmouth, meets the object better, in my opinion, than any contrivance hitherto devised by the ingenuity of man. It consists of a simple circular cup of iron, cast in two semi-circular sections, so as to be easily screwed tightly together. Between the cup and the tree, a packing is placed of sea-weed, straw, cotton waste or any other suitable material impervious to insects, but not so to water; over the cup is placed, at a distance of two inches, a screen, or roof projecting a little beyond the outer circumference. The cup is then filled with bitter water, which will not freeze in any temperature, and is delectuous, (absorbing moisture from the atmosphere.) It has also the advantage of being far cheaper than oil, or any of the substances heretofore used in contrivances

having the same object. I have had this invention of Captain Taylor's in practical operation for some time, and the results have been so highly satisfactory that I confidently recommend it to all fruit-growers as a perfect *vade mecum*.

The cups of bitter water are half filled with dead insects which have perished in attempting to swim across, and under them numerous cocoons show that many have found discretion the better part of valor, having been foiled in their attempts to reach a more elevated state of existence. Numerous orchards and trees in this vicinity have been islanded with these bitter waters, which have proved, thus far, better than the sleepless dragons which guarded the famous gardens of the Hesperides, and I am of opinion that if this impassable circle of Captain Taylor had been extended around the tree, in a certain garden that we have read of, the human race might have been considerably better off than it now is, and the world would be something better than a home for the fallen.

Feb., 1859.

R.

REMARKS.—We have examined the device of Capt. Taylor to prevent the ascent of canker worms, and should think it might prove effectual. We know nothing of the cost, or of its practical operations, excepting what is stated by our correspondent above.

For the New England Farmer.

THE WEATHER OF 1858.

[Concluded.]

The whole number of falls of snow during the year was twenty-one, amounting to about thirty-four inches on a level, as near as can be easily calculated, or two feet and ten inches, as follows: In January there were three falls, amounting to six inches; in February four falls, amounting to five inches; in March four falls, equalling nine and one-half inches; in November four falls, equal to nine inches, and in December six falls, equal to four inches.

The last fall of snow in the spring occurred on the 14th of March, and the first in the fall, on the 13th of November.

The number of falls of rain in the year, including thirteen thunder showers, was seventy, occurring as follows: In Jan. four, in Feb. one, in March two, in April six, in May six, in June five, including three thunder showers, in July eleven, including five thunder showers, in August twelve, including two thunder showers, in September six, including three thunder showers, in October eight, including one thunder shower, in November two, in December seven. From December, 1857, to April, 1858, but very little water fell, either in snow or rain, and had such a drought occurred in any other season of the year it must have been strikingly noticeable.

The usual amount of rain fell during the autumn months, and most of the summer months, but in October the springs, and consequently the wells and streams, were remarkably low; hence the query, how is this to be accounted for?

The mean temperature of the year, based upon an average of all the sunrise, noon and sunset temperature, is 45.76°, which I am led, by different methods of observation, to conclude varies

but little from the true mean of the year, (I have not room here to introduce a table that I have made out, showing the mean of the sunrise, noon, and sunset temperature for each month, and the mean temperature as deduced from these.)

The mean temperature of the winter months, (according to my method.) is 25.99°, of the spring, 43.98°, of the summer 68.15°, and of autumn 55.79°.

January, 1858, was fully 18° warmer than January, 1857.

The lowest temperature during the year was 12° below zero, the highest 92° above, and the mean of these two extremes is 40°.

The coldest day in the year was the 5th of March, with a temperature of 2° at sunrise, 6° at noon and 7° at sunset; and the warmest day was the 26th of June, with the thermometer at 71° at sunrise, 92° at noon, and 76° at sunset, and the difference between the mean temperature is not far from 80°.

There were two hundred and twenty days of wind from some northerly quarter, during the year, and one hundred and twenty-three from a southerly point. From the northwest there were one hundred and twenty-six days of wind, from the northeast seventy-three, and from the north twenty-one; from the southwest sixty-four, from the south forty-eight, and eleven from the southeast. During twenty-two days the wind was either imperceptible, or so light and changeable that no regular current could be perceived. Had I room I would introduce a table showing the number of days of wind from the points from which it blows for each month. It also appears that there were one hundred ninety-three days of wind from the west, and only eighty-six from an easterly quarter, which shows that the wind prevailed much more from a more or less westerly quarter, than from an easterly point, and accordingly goes to prove a theory in meteorology that the prevailing wind in the high northern latitudes must be a westerly wind, (or southwesterly.)

There were one hundred and four clear days in the year 1858, days in which the sun shone almost uninterruptedly; one hundred and four tolerably clear—days in which the sun shone the greater part of the time though clouds were abundant; ninety-three cloudy days—days in which the sun scarcely shone; and sixty-four designated as quite cloudy—the clouds predominating.

Wilbraham, Mass., 1859. J. A. ALLEN.

EFFECTS OF PEDESTRIAN EXERCISE.—A celebrated English physician says that pedestrian exercise particularly exhausts the spine and the brain, and is, therefore, the kind of exercise less suited to intellectually hard-working men. And it is on this account that horseback exercise is the medicine it is—the horse having the fatigue and the rider the exercise. To sufficiently jar the liver and other internal organs, for some convalescents, the legs and loins must be overworked. The thorough shake-up which is got in the saddle is without effort, or with the effort of only such muscles as can best afford it; and the student-rider comes back with physical forces all refreshed, besides the exhilaration of movement for the spirits and the change of mind.

For the New England Farmer.

THE USE OF LIME AND ITS PROPERTIES.

MR. EDITOR:—Although not a farmer to any great extent, having most of the time, for twenty-five years past, been grinding grain for farmers, yet I have had the opportunity to study Nature in the development of the vegetable kingdom, and have assumed as a motto, "*that in order for a full development of vegetables, there must be a complete association of mineral principles in the soil.*" As most of our soil, in the New England States, is deficient in the principle of lime, the component parts of which are, "*a mineral gluten, and a mineral alkali,*" and, as it is necessary for the principle of alkali to be present in the *sand* or *silica* of the soil, to enable the spongioles or rootlets of plants to decompose so much thereof as will be sufficient to give its body the necessary stiffness to support the head, and the ripened seed, I have come to the conclusion that *lime* must be added to the soil as one of those principles which go to make up a complete association.

I am very much gratified that the Agricultural papers, and some of our farmers, are advocating what I have inculcated for twenty years—the use of lime as manure or food for vegetables; but yet they do not seem to understand *why* they should do so, or why lime is valuable as a manure. They say, that where they make use of old plastering made of *lime* and *sand*—no matter how old it is—as a manure, they receive great benefit therefrom. Now, what are those wonderful virtues which lie concealed in the old plaster? If you should taste of it, you would not perceive that it contained one particle of alkali, which, when it was first made, was so strong with alkali as to corrode one's flesh. I have asked many with whom I have conversed on this subject, what has become of the alkaline matter that was at first so apparent in the old plaster? Some have conjectured that it has evaporated—gone into the atmosphere, while others could not tell, yet they thought that alkali could not evaporate.

They rightly thought. The most intense heat known to us cannot evaporate it, else it would have escaped with the carbonic acid gas in the process of calcination. Then where has it gone to? what has become of it? Answer—the sand which constitutes a large portion of the plaster had an affinity for the alkali of the lime. An association was the consequence. The alkali and the sand have united in one compound, and is in a proper state for decomposition by the roots of the vegetable kingdom. This is why the old plaster has such wonderful virtues in it to make plants grow—"the silica is rendered soluble by associating with alkali." The lime stone, before calcination, is of no more benefit as food for plants, than granite or any other stone, even when comminuted. The gluten of lime differs from the gluten of clay, and when clay and lime are mixed together, they form a very light and porous soil—the tenacity of the clay being destroyed by the lime; showing at once that lime is of as much benefit to clay soils as to any other kind of soils. Should the farmer see fit to dress his land with an hundred bushels of lime to the acre, the alkaline part thereof would soon all be taken up by the sand in the soil, and would be there

ready for the use of plants, until the whole had passed into the vegetable form; and the glutinous part would combine with other ingredients of the soil, together with such other manures as the farmer does, or ought to apply thereto. It would there be ready to impregnate his crops of grain and grass with the phosphate of lime, that most necessary of all principles to the health, strength and firmness of the bone and muscles of his animals—increasing their size, and of course their value.

Lime ought to, and will yet be considered indispensable by the farmer in growing wheat and the several grasses. Nor should he neglect to apply all the manure he can command; for the more highly he enriches land by animal manures, so much the more he will need a good supply of lime. If he makes his land rich enough to produce 35 bushels of wheat to the acre, he must put in lime enough to produce a *straw stiff enough to support the heads* of the wheat, and keep it from lodging. Then the sap vessels will be kept from *bursting* at a certain stage of its growth, and *forming a rust* on the straw—having strength and firmness enough to *sustain the pressure* of the sap in its flow to the head for the purpose of forming the grain or kernel.

After I have thus far shown the chemical propensities of lime—its nature and action on the soil for the benefit of vegetables and plants—its use in *saving a good crop of wheat*, which, *without it*, would be a *failure*, by being spoiled by the *rust*, or by *lodging*—must I appeal to the interest of the farmer to induce him to use it? Then, if by applying 10 bushels of stone lime, costing \$2,00 at the kiln, to the acre, will increase the yield to 30 bushels of wheat per acre, which otherwise would have yielded only 20 bushels, calling wheat \$1,00 per bushel—allowing \$2,00 more for going after the lime and putting it on the land, you will receive the first year for your money 133½ per cent. as *interest!* Is not that *better than to put it into a bank that may fail?* Then consider the amount of hay you will cut for several years to come, more than you would without the lime, and of a far better quality for your stock—rich in the phosphate of lime.

Farmers of New England, if you wish to compete with the fertile lands of the West—if you wish to excel in your wheat, cattle, horses, sheep, in the staple and fineness of your wool, in the flavor of your butter, and in the quantity and quality of your cheese, sow lime on your lands, on your meadows, on your pastures, not stingily, but bountifully. Sweeten up the soil as your mothers used to do with their sour butter-milk, by pouring into it an alkaline substance to neutralize the sour humor located therein, which now has only a tendency to produce sorrel, raspberries, strawberries, moss and wild cherries; and it will not be long before your farms will assume a more beautiful aspect—a richer dress of wholesome life-giving vegetation. Instead of running over 100 acres of land to fill a 30 by 40 feet barn with hay and grain, you will not, like the man of whom we read, "pull down your barn and build larger ones," but will be necessitated to make an addition of two or three more to hold your crops and your stock. Instead of going over an acre and a half or two acres to get a ton of poor hay mixed with sorrel and weeds, you will be cutting from a

ton and a half to two and a half tons per acre, of good timothy and clover, well filled with the phosphate of lime, of which the bones of your animals are composed.

If what I have said appears reasonable, adopt it; if not, reject it. If it will set many to thinking, it is what the farmers ought to do—think—and not only think, but speak out themselves.

Ripton, Vt., 1859.

SAMUEL DAMON.

EXTRACTS AND REPLIES.

TOP-DRESSING—LEACHED ASHES—GUANO.

Which will be the best for a spring top-dressing for grass on a sandy loam,—well-rotted manure, leached ashes or guano—and which will be the most economical—not in regard to first cost—but as to the effect? (a.)

Would plaster sowed in the spring be beneficial to a piece of lightish soil pasture, which was seeded down last fall with a manure of bone-dust and leached ashes? (b.)

YOUNG FARMER.

North Billerica, Jan. 30, 1859.

REMARKS.—(a.) Nothing compared with a well rotted compost—not a compost that has been greatly fermented, but one well-balanced in all its parts, ripened, mellow, and just in that condition to become soluble, and afford abundant nutrition to the plants as soon as sufficient heat and moisture reach it after being mingled with the soil. Such a compost will afford all, or nearly all, the elements that the plant needs. Leached ashes will not, and guano is so volatile, and its successful use depends so much upon circumstances, that we have no hesitation whatever in recommending the compost in preference to those or anything else.

(b.) On some soils the plaster would be decidedly beneficial, on others not. You can only tell by an experiment.

SPLINTS ON HORSES.

"A Subscriber," who inquires about "Splints" on horses, is referred to an article in the *American Veterinary Journal* for January, copied from the *London Field*, for a full description, cause and treatment, but lest that excellent journal be not at hand, I will make a few extracts:—

"Some animals have an hereditary predisposition to exostosis, (splints,) which appear before they are subjected to work of any kind, but they are generally produced by the animal being put too early to work."

"The best remedy is peristectomy," ("Vets" have some jaw-breakers as well as the doctors,) "which consists in making an incision above and below the bony tumor, then with a seton needle raising the skin from the tumor, passing in a knife with a guarded blade, cutting deeply into the substance of the splint, and finally by passing a seton over it, i. e., between it and the skin."

This is an operation that belongs to the veterinarian, and should not be entrusted to the village "blacksmith" or "butcher." It is a question whether it is advisable to meddle with them

at all, as they cause lameness but a short time, if at all, and may, and often do, disappear entirely.

Nashua, N. H.

V. C. G.

A KICKING COW.

I have a cow, five years old, that is apt to kick in the stall. Will you be so kind as to let me know how I can break her of that habit?

A SUBSCRIBER.

South Weymouth, Mass., 1859.

REMARKS.—If she has always been kindly treated, she certainly shows a great want of good manners in kicking her friends. If our cow, we should approach her gently, quit often, and usually with a lock of hay, a nub of corn, or a potato or an apple in our hand—speak kind words to her, scratch her neck and back, and convince her, if possible, that we desired to be on the most friendly terms with her. If she was a valuable cow for milk, and notwithstanding all these evidences of kindness, persisted in kicking our shins, we would, perhaps, try what virtue there is in punishing—and as a last resort, send her to the butcher.

DISEASES IN FOWLS.

Of late there has been considerable said about diseases of fowls, particularly the hen, but as yet I have not seen anything about dropsy. If any of your readers have had occasion to witness anything similar to this disease, it would be interesting to hear from them, and if they can show its cause and a remedy, it will be very acceptably received by the breeders of fowls generally. I have lately among a flock of more than two hundred lost several by this disease. The body seems to be filled with a yellowish water, in which the bowels are completely enveloped, besides which there are clusters of water-sacks connected together, remote from and independent of the ovaries. Some of these clusters contain from half-a-dozen to twenty sacks, from the size of a pea to that of large grapes. These are also filled with a yellow water, and connected by ligaments of unnatural growth. Will some one who is acquainted with rearing and doctoring fowls give us a remedy, if they are acquainted with the like disease.

PETER A. FOSTER.

Shaker Village, N. H., 1859.

NASH'S PROGRESSIVE FARMER.

Should not this book be taught in our common schools? It contains much useful knowledge that will help the farmer in cultivating his farm. The author has written it in so plain, easy and practical a way, that it is a pleasure to read it.

Take the analysis of a tree, commencing at the roots and tracing it up through the bark, sap, heart and pith to the extremities of its branches. How many are there that know the use of the leaves in the vegetable world around them? The tiny leaf, that trembles in the breeze, is so formed, that one side of it is constantly drawing in the unhealthy and impure air which the animal world is throwing off, and giving vigor and

life to the tree, passing through its laboratory, and is again thrown off, from the opposite side of the leaf, changed from an impure to a healthy air.

In this we see the wisdom of the Creator, and it ought to draw the mind from Nature's works up to Nature's God. With this knowledge the farmer, as he walks his farm, surrounded with trees, decked with leaves and flowers, ought to feel happier with his occupation than he would without this knowledge. What a wide field there is open before him for studying the habits of the animals, the fowls and insects that are around him.

W. A. P.

Barre, Mass., 1859.

REMARKS.—The little volume spoken of above ought to be read by every progressive farmer. It will suggest a thousand things both pleasant and profitable.

SEVERAL THINGS.

A poor farmer in Orleans county, Vt., wants to know if he shall plow in manure or harrow it, when he seeds to grass? (a.)

Is it best to use a roller on dry and gravelly land? (b.)

Will not two eyes be better than one in a hill of potatoes? (c.)

Will it pay to spread manure on dry, gravelly land? (d.)

Would it not be better for farmers if the money expended on fast horses were laid out in premiums on fall crops? (e.) A SUBSCRIBER.

Orleans County, Vt., 1859.

REMARKS.—(a.) Plow in three or four inches deep, and level with harrow.

(b.) Certainly. The more dry and light the land, the more necessity for the roller. Have you not observed on such land, that where the cattle tread in harrowing the seed in, that the seed comes up earliest in their tracks?

(c.) Seeding for potatoes is a mooted and delicate question. We can only say, that we seed lightly with small potatoes, or large ones cut, and that we find no depreciation in the crop.

(d.) By manuring your dry, gravelly land liberally for several years, you will bring it into a moist, rich, gravelly loam—but you must manure freely as far as you go. If it is in grass land, spread the manure as soon as you get off the hay, or, late in autumn.

(e.) Yes. Or better still, in supporting farmers' clubs and other meetings for agricultural discussions.

WHAT AILS THE HORSE.

My horse is five years old, and eighteen months ago it had the appearance of having rubbed the skin off on the inside of the right gambrel joint, about the size of a quarter of a dollar. Since that it has been gradually growing larger in circumference, and projecting in the form of a wart, and a roughness similar to a wart around its edges. The friction caused by the other leg from his laying down, keeps the crown of it raw. It

is now about the bigness of a dollar in circumference, attended with very little soreness, though I perceive on working him hard for a day or two in succession that it is attended with swelling and stiffness. I have been treating it as a wart, but have not been able to find anything that has been of use.

MERRIMACK, N. H.

Jan. 20, 1859.

REMARKS.—Youatt says if the root of the wart is very small, it may be cut asunder, close to the skin, with a pair of scissors, and the wound touched with lunar caustic. But if the pediate or stem be somewhat large, a ligature of waxed silk should be passed firmly round it, and tightened every da

THREE POTATOES.

I send three potatoes; if you are acquainted with their names and qualities, I wish you would inform me through the *Farmer*.

So. Strafford, 1859. W. B. HAZELTINE.

REMARKS.—The three potatoes you were kind enough to send us are the most perfect in form that we ever saw. The eyes are nearly level with the surrounding surface. Give us some account of them, if you can.

JAVA SPRING WHEAT.

Do you know anything about the *Java Spring wheat* raised in your section? A. B. A.

West Georgia, Vt., 1859.

REMARKS.—This wheat was introduced into this vicinity by Mr. STEPHEN DILLINGHAM, of Falmouth, on the Cape, we believe, in 1857. It has given great satisfaction wherever tried. There will be a limited amount for sale this spring by NOURSE & Co., 34 Merchants Row, Boston.

ESSEX CO. TRANSACTIONS.

I wish to procure the Essex County Transactions for 1858.

G. S. JOHNSON.

Montpelier, Vt., 1859.

REMARKS.—Write to the Secretary, ALLEN W. DODGE, Esq., Salem, Mass.

MAINE BOARD OF AGRICULTURE.

We have recently read the discussions of the Board, as reported in the *Maine Farmer*, with much interest. Its meetings were held for several successive days, and a detailed statement of what was done, and doing, in their respective districts, was given by each member of the Board. Such statements are beneficial to those who give them, and to those to whom they are given. If it is known that this will be required, none but those qualified will accept the appointment, lest their own inferiority should be made apparent; and if none but good reports are made, the people will have the benefit of sound instruction.

For the New England Farmer.

WILL GRAIN CHANGE ITS KIND?

Harvard, February 4th, 1859.

MR. EDITOR:—As I have lately seen in the *N. E. Farmer* several articles on the change of one kind of grain to another, I send you the following extract from the "*Boston Gazette and Country Journal*," published July 23d, 1759, thinking it may be interesting to some of the numerous readers of your valuable journal.

JAS. I. WYER, JR.

To the Author of the Grand Magazine.

SIR:—If you have not already heard of the following extraordinary instance of the powers of vegetation, in the transmutation of one species of corn into another, I am persuaded I need make no apology to trouble you, on so important and curious a subject.

This phenomenon was first observed in Sweden, where it was discovered by mere accident. A countryman having sown some oats in his field, and wanting provision for his horses, mowed the young shoots of the grain soon after they were come up. The grain shot forth again, as usual, and the farmer mowed it as before. He did this, at intervals, three times. The winter coming on, no more blades appeared till the following spring, when shooting up as before, they were permitted to grow to perfection, and the crop, to the surprise of the poor husbandman, instead of proving oats, turned out absolutely good rye. This fact coming to the ear of a very ingenious naturalist of that country, Mr. Jop Bern Vergin, he suspected there might be some deception, and accordingly in the year 1750, repeated the experiment, observing exactly the same measures by design as the countryman had taken by chance. The result of this experiment was the same, and his oats produced good rye, as that of the peasant had done before. A circumstantial relation of this extraordinary discovery was soon afterwards sent to their High Mightinesses, the States General, by Mr. de Marteville, their Envoy at the Court of Sweden.

Curiosity, and the desire of further knowledge concerning this surprising phenomenon, induced some of the naturalists of that country to try the experiment again. Among the rest was Mr. Syperstein, one of the Magistrates of Harlem, and the President of the society lately established there for the improvement of arts and sciences. This gentleman sowed a handful of oats on the 21st of June, 1757, and again another on the 26th of July following. The first he cropt at three several times, viz., on the 29th of July, the 8th of September and the 11th of November. The last he cut only twice, viz., on the 13th of September, and the 18th of November. The succeeding winter happening to prove very severe, almost all the grains perished in the earth, through the inclemency of the weather. Five of them, however, remaining alive, shot up in the spring, and produced large and full ears of good rye, which was reaped the 7th of last August.

As the utmost care was taken in this experiment to avoid any mixture in the grain, as well as to prevent any grains of rye from falling accidentally, or otherwise, on the spot of ground sown; this transmutation, however strange it

may appear to the ignorant, or inconsistent with the systems of naturalists, is looked upon here as an indubitable fact.

With a view of prosecuting this discovery still further, Mr. Syperstein has sown a fresh parcel of oats, treating them as before. He has also sown some of the rye produced from the oats, which he has cropped in the same manner as he did the oats that produced it. He proposes also to make several experiments, with a little variation, in order to improve on this discovery.

SLEEPING PLANTS.

The sleep of plants, which was discovered by Linnæus, is caused by the different influences of light and darkness, cold, heat and moisture. The common chickweed (*Stellaria medica*), of which birds are so fond, furnishes a beautiful instance of the sleep of plants. Every night the leaves approach each other in pairs, so as to include within their upper surfaces the tender rudiments of the young shoots; and the uppermost pair but one at the end of the stalk, are furnished with longer leaf stalks than the others, so that they can close upon the terminating pair, and protect the end of the shoot.

The flowers of the Marvel of Peru. (*Mirabilis jalapa*), which are very beautiful, do not open in hot weather until the evening; but, if the weather be cool, or the sun is obscured, they open in the day-time. Another variety of the same plant is called the four-o'clock flower, from opening at that hour of the day.

The scarlet pimpernel, (*Anagallis arvensis*), which is a plentiful weed in corn-fields, is called poor man's weather-glass, and shepherd's barometer, from the flowers always closing before rain; and should the weather be ever so bright, they always shut up at noon.

The flowers of a sort of convolvulus (*Rivea bonanox*) are large and white, expanding only at sunset, and perfuming the air to a great distance, with a fragrance resembling that of the finest cloves. It is a native of Bengal, where it rambles among the forests, and is called the Midnapore creeper.

The common goats-beard (*Tragopogon pre-tense*) grows in many parts of Britain, and is called go-to-bed-at-noon, from the fact of its flowers closing about that time.—*Household Words.*

For the New England Farmer.

TOWN, COUNTY, AND STATE SOCIETIES.

DEAR SIR:—I am glad to learn from the papers that there is in contemplation a re-organization of our Agricultural Societies, which shall render them more efficient. I wish to suggest a plan for this purpose, which has long been in my mind. It is briefly the following:

1st. Let there be clubs or societies in every farming town, for discussion, the support of lectures, the formation of libraries, and the exhibition of the results of their thought and labor.

2d. Let there be county societies, which should include these town societies, and which should hold exhibitions, at which those who had received certificates of excellence at the town exhibitions,

and they alone, should be allowed to compete for the superiority.

3d. Let there be a State Society, which should consist of delegates chosen by the county societies, which should arrange the whole general system for the management of the town and county societies, which should receive the entire bounty of the State, and expend it for premiums, and in other ways, for the advance of agriculture, and which should admit to its exhibitions as competitors for premiums only those who had received diplomas or certificates of excellence from the county societies.

W. C.

Clinton, Mass.

SIXTH LEGISLATIVE AGRICULTURAL MEETING.

REPORTED BY JOHN C. MOORE, FOR THE N. E. FARMER.]

SUBJECT FOR DISCUSSION—*Fruits, and how to raise them.*

The meeting on Monday evening, in the State House, was pretty numerously attended, as the series has heretofore been this season. This may be accounted for by the eminently practical manner in which the discussions are conducted, and the confinement of the observations to the subject under debate. Hon. SIMON BROWN, of Concord, occupied the chair.

The PRESIDENT stated that the subject of growing apples, pears and grapes had been heretofore discussed, and the Committee had desired that some attention should be given to the smaller fruits. The *Strawberry* was one of the most important of these. The kinds grown were numerous; but not above a dozen were desirable to cultivate—in fact, not so many. Among the better sorts for cultivation here were the *Hovey's Seedling*, *Early Virginia*, *Jenny Lind*, *Brighton Pine*, *Jenny's Seedling*, *Walker's Seedling* and the *Wood*. The last of the varieties mentioned was one which ought to be better known; for, without disparaging any of the others, it was among the best; a free grower, produced its fruit on long stems, and continued to furnish it during five or six weeks after the first supply ripened. It was an excellent fruit for family use, and to that it would have to be principally confined, as it would not safely carry to market, it was so easily damaged. It was nearer in flavor to the wild strawberry than any he knew—indeed, no more palatable table fruit could be found. It was easily produced; as much so as were potatoes, and required only such richness of soil as would be required to raise corn, at the rate of sixty bushels per acre. A deep, moist, black loam, in the experience of the speaker, was the best soil for the culture of this strawberry; but some said a yellow loam would suit—a fact he had no practical opportunity of knowing. A general condition of successful cultivation would be found in having the land rich and moist. As

proving this question, Mr. Peabody, of Georgia, had raised the strawberry in great perfection, and the secret thereof was the plentiful supply of water he furnished the vines. The Secretary of the Belmont (Mass.) Club had furnished the Chairman with certain statistics, which he partly quoted. These showed, in one instance, that 3000 boxes had been raised on one acre, which, at 25 cents per box, would realize \$750. The manure per acre, cost \$150; picking, \$150; cultivation, \$150, and marketing, \$150; leaving a profit of \$200. But even this was held to be but moderate profit, as market-gardeners in that neighborhood were in the habit of realizing a larger acreable return for their labor. Another party estimated the number of boxes of strawberries at 4000 from an acre, which, at 25 cents a box, would give \$1000. His estimate was \$400 for cultivation and marketing, and the consequent profit would be \$600! A good crop might amount to 4000 boxes the first year, and 2000 the second one. As to planting the strawberry, the best time to do it was the spring—as early as the late frosts would permit. The rows should be three feet apart, and the plants in the rows one foot separate. Between the rows beets might be planted, the cultivation of which would keep the strawberries clean of weeds. After the beets were harvested, the strawberry vines would run and cover the spaces between the rows, before winter came on. Being well weeded next spring, they would produce fruit plentifully next summer. Some thought it questionable management to let the strawberry plants remain over for another year, on account of the trouble and expense of weeding and the diminished produce, and it was better to turn them under. Mr. Brown was of opinion that such should be the rule, so far as marketing purposes were included; but where family wants were merely to be supplied, he believed it would be well to put up with a little extra labor in weeding, when the plants could be saved, and be reasonably productive, even for four years. Experience had shown him that this could be done and the vines bear moderately well. For his own part, however, he would recommend that the vines should be planted in rows two feet apart, the hills a foot distant in the rows, leaving a space of three feet between the rows to allow room for weeding. When the proper time came, (the close of the second year's bearing,) the weeding path should be spaded, the best runners planted and the old rows turned under.

Raspberries.—Mr. Brown next made reference to raspberries, the varieties of which, he said, were less numerous than the strawberry. Wild descriptions might be cultivated with much profit in gardens, as they were hardy and less liable to

winter-killing than the cultivated kinds. Among the latter was the *Red Antwerp*, commonly cultivated in New England, (which was a little tender in winter;) also the *Pastoloff*, *Knevet's Giant*, and a more recent, and in his estimation, a better one, viz.: *Brinckle's Orange*. This was a valuable acquisition to our list of small fruits. It was of a fine orange color, semi-transparent, clear and juicy, with a saccharine quality that seemed to satisfy everybody, and it was an excellent producer, besides.

Raspberries should be planted in the spring. In preparing the vines the old wood ought to be cut down to the ground, and no more than three canes or sprouts left, as a greater number would be less productive. The tops of the canes should be cut off, also, when they were about four feet high, at which time they should be tied to a horizontal board, fastened to standards, to keep them from damage from storms, &c. The rows ought to be planted four feet asunder, and the hills in the rows three feet apart; and under reasonable conditions of soil and management they would produce bountifully. No more care was demanded by them than that requisite to grow a fair crop of potatoes. The soil ought to be what would constitute a good corn soil; and a requirement would be such exposure as would conduce to natural warmth, without any undue restriction.

Blackberries.—The blackberry, Mr. Brown said, was known through fewer varieties than the raspberry; and the most common descriptions yielded liberally to cultivation. He had grown the common high blackberry, taken wild from the fields, for ten years, and with care in its management had found it wonderfully prolific. It had always a tendency to over-productiveness; and unless the cultivator was careful in denuding it of two-thirds, at least, of the fruit it would strive to set, it would perfect but a small portion of the whole. One-third was as much as the vine could bring to maturity. He had cultivated the *New Rochelle* or *Lawton* blackberry, but had not succeeded in ripening it. In extenuation of this, it had been urged that the unripe berry would make the best of wine; but in that respect, Mr. Brown said he had no experience. The *Dorchester* variety he had not cultivated, but report spoke well of it. The common black or white *Thimbleberry* he had tried, and found it prolific, and the fruit good—none better than this for the tea-table. Its cultivation would well repay very common care, and it could be grown profitably on any good corn soil.

Cranberries.—The great demand for this fine, healthy fruit, made its cultivation a matter of much importance. There were several varieties grown; but the oblong description, which frequently grew an inch in length, in size and fla-

vor, was, in Mr. Brown's estimation, the best. The other most prominent variety was round. On meadows that could be flooded at will, the fruit could be grown profitably, after due preparation. By irrigating the soil the bushes, weeds and aquatic grasses obnoxious to its growth could be killed, when the plants could be put in by the use of the hoe. Attempts made to scarify and burn the surface of a meadow had not proved successful. But the most desirable thing was in the first place to find out on what kinds of soils cranberries could be most profitably grown. Where white sand was found as the subsoil, successful cultivation was the most certain—and this fact ought to bear its suggestive value. Mr. Brown said he had grown the cranberry on high grounds, but owing to the trouble arising from weeds, the removal of which fatally disturbed the tender roots of the plants, they dwindled and died. He described an attempt to cultivate the cranberry along the edge of a meadow, through the use of gravel, sand and mud, as an artificial soil, and as far as he had gone, with very good success. A want of the advantages of irrigation, and a too liberal use of it in some instances, had militated against the production of a sufficient crop to meet the demand, and now the price had increased a dollar or two per bushel as compared with what it was five years ago. From flowages by reservoirs and dams, which destroyed the vitality of the plants, he spoke of a single town which had formerly produced \$5000 worth of cranberries annually, but which at the present time did not produce a single dollar's worth per acre.

Apples and pruning.—Mr. Brown next proceeded to speak of the apprehension of some that too much attention was given to the cultivation of apples; but this charge he thought wrong, as, through carelessness and maltreatment not more than twenty-five out of every hundred apple trees planted ever bore fruit! One great cause of this was the time of pruning as recommended and followed by some. All spring pruning was imprudent—the months of March, April and May being the worst for that process. The physical reasons for this statement were advanced, but want of room hinders their enumeration. The import of the argument was that when the sap is ascending, the pores of the sap wood are enlarged and filled with a thin watery fluid, ready to flow out at every incision made into them; but that after the sap has reached the leaves, it becomes, through their agency, a new article—is thicker, and returns down the tree between the bark and that soft whitish substance next to the wood, and is called the laburnum. This returning sap is what is laid on and increases the size of the

tree from year to year. In March, April and May, the sap is in the thin condition; by the middle of June it has become thicker, is a different substance, and a wound judiciously made during a month from that time will rarely bleed. After a very happy allusion to the domestic, social, and moral advantages of a taste for horticulture, floriculture and pomology, the chairman closed, and invited other gentlemen to speak.

Mr. LAKE, of Topsfield, was called upon, and made some practical observations on the culture of *cranberries*, *strawberries* and *blackberries*. They generally coincided with those of the President. In relation to pruning apple trees, Mr. Lake thought the greatest evil was *pruning too much* by the knife, and through suffering cattle to do the duty without any rule, which was too often the case. Cutting off of heavy limbs was always imprudent, as decay and disease was a general consequence. July and August were the best times for pruning apple trees. Mistakes had been grossly made in the way by pruning pear trees; the nearer their natural condition they could be kept the better and more liberal the produce. In regard to dwarf pears especially, this rule should not be innovated. Mr. Lake went on to demonstrate that fruit grown beyond a certain altitude on a pear, or any other tree, was not so good as that grown lower. Fruit too much exposed to the sun, which was one consequence of too much pruning, was never so good, or so sound, as that grown under conditions where nature had her own way in protecting it from undue injury from storm and hot sunshine. Mr. Lake wound up by attacking the rage for planting what he called fancy sorts of apple and pear trees, and commended only such as were well known for their bearing and hardy properties.

Senator METCALF, of Worcester, spoke of *cranberry culture*—the great ease with which it could be accomplished, and the profitableness of its culture. He spoke of an acre of ground that produced \$500 in value. One person he knew strove to sell a meadow of his for \$500 an acre; but recently, the produce of the same meadow gave him \$700 to \$800 yearly. This was only a small portion of a farm that cost originally \$1700. Cranberry lands in Worcester county were assessed higher than any other lands, on account of their productiveness. Careful cultivation had recently greatly improved the quality of the cranberry.

Dr. CARPENTER, of Warren, spoke of the peach, which, he said, was a native of Persia, and in its native state was very poisonous, on account of its containing much prussic acid. It was also bitter; and cultivation alone had

brought it to its present very improved state. What had been done for it could, he supposed, be done for many wild fruits of native character, which were more permanent in their existence than the peach, which was short-lived.

Mr. HINCKLEY, of Barnstable, made a few observations on cranberry culture on the Cape. The prevailing idea in that district was, that the lands on which it was grown should be flowed during winter, and until June; and wherever facilities were favorable, this had been the practice. So soon as the vine was exposed to the atmosphere, the flower was subject to be attacked by a worm. As soon as this was observed, the custom was to reflow the land, when the worm was killed. This was the secret of success in some instances. One gentleman had taken \$600 worth off a small lot whose facilities for flowage were good. Another had six acres, for the crop of which he had been offered \$1,000; but the worms came, and no opportunity having existed for flowage, they destroyed the crop, so that he had only two or three bushels. In view of these facts, Mr. Hinckley thought that, unless facilities for flowage were always at command, the propriety of growing this crop was questionable.

Messrs. HINCKLEY, LAKE, and other gentlemen, discussed the subject of raking cranberries, as it related to the injury of the plants, or the contrary. Opinions were in direct conflict; one party upholding the fact that damage was the consequence of raking, and another, that the stirring it gave the plants conduced to their healthier growth.

Mr. WETHERELL spoke in favor of taking scions for grafting from young trees, and quoted instances in favor of this position. He also alluded to the matter of pruning; holding that it ought to be done intermediately, between the time of the production of the fruit and the growth of the wood. Further, he wished it to be noted that the rules of pruning as laid down in England were not generally applicable in this country.

Hon. RICHARD S. FAY commended pruning in the months of September (the latter portion of it,) and October, as otherwise disease and decay would almost certainly ensue. His experience extended over some time, and included the treatment of some thousands of trees, and such had been its teachings. As to the cranberry, he thought it could not be safely cultivated unless there was a privilege of flowage always at hand.

There will be no meeting until a week from Monday, when Ex-Gov. Boutwell will preside, and the subject will be—“*Market and Agricultural Fairs.*”

SOAP FOR CHAPPED HANDS, &c.—Take one bar of yellow soap; cut it up small; add to it the gall of a beef; put it over the fire until the soap is entirely melted; (a farina kettle is most

convenient to melt it in;) then add one ounce of fine pulverized saltpetre and one pint of alcohol; pour it into a vessel (previously greased) of a size to make the soap at least one inch thick. When firm enough to cut, before it hardens, cut it into cakes of a convenient size. This soap will be found excellent for taking grease spots out of woollens and silks.—*Maine Farmer.*

For the New England Farmer.

PRUNING APPLE TREES.

MR. EDITOR:—I noticed in the December number of the *Farmer*, a communication from Mr. ELLIS, of Rochester, upon this subject. In your remarks upon that communication you condemn the practice of spring pruning, and say that we ought to know better than to begin to destroy our orchards just as they are coming to maturity. I have been taught from my boyhood to prune in the spring, but if I can find a better time, I am ready to adopt it.

But which shall I follow,—my own reason and observation, or the instruction of the *Farmer*? If we cut off a branch in the spring, before the leaves expand, do we not save the sap for that which remains? Can the tree be in as good condition to heal the wounds made by pruning just after the leaves are put forth as before?

I am aware that some tell us that plants derive most of their nourishment from the atmosphere, inhaled through the leaves; why cut them off, then, just as they are prepared to act?

I have never known an apple tree that was pruned in March or April to bleed. In May, we are too busy to prune, so that I cannot speak from my own experience in pruning, in that month; but I recollect that one of my neighbors gave his apple trees a very thorough pruning last May. I was led to notice these trees particularly, from some remarks made by persons who were passing by, as the trees were near the public road; one said it was too late in the season; he pruned some of his trees last year about that time, and they bled badly; another said it was too early; he thought the middle of June the right time. I think the trees are doing well; they did not bleed, and soon began to heal.

I hope, Mr. Editor, if our lives and health are spared until spring, you will come to Danvers, and I shall be happy to wait upon you, and show you the trees in this neighborhood, which have been pruned in the spring for the last forty years.

WILLIAM R. PUTNAM.

Danvers, Mass., Jan., 1859.

REMARKS.—We do, friend PUTNAM, condemn the practice of spring pruning, most emphatically:—*first*, from repeated experiments through a series of years,—*secondly*, from long and careful observation of the hurtful effects of such pruning,—*thirdly*, because spring pruning, more especially, violates the laws of nature that govern the tree, and *fourthly*, because we have never yet entered an orchard with an opponent of our theory, where we have had a careful examination of the trees and discussion of the subject, but what the reasonableness of the theory has been made

apparent before leaving it. A gentleman having the care of a large extent of orcharding, and who had always been an advocate for *spring pruning*, recently spent an hour with us among the apple trees, where some of them had been pruned at all seasons of the year, and after a most careful examination of a large orchard, he confessed that he had, undoubtedly, been in error, and should prune no more trees in the spring.

You ask, "*If we cut off a branch in the spring, before the leaves expand, do we not save the sap for that which remains?*" Certainly not,—no more than you would save a man's blood to strengthen the rest of his body by cutting off one of his arms. It ought to be remembered that all grafted or budded trees are in an unnatural or artificial condition, and that pruning is only another step away from nature. We prune because branches cross and chafe each other, or because we fancy there are too many of them, or that the tree may be made, to our eye, with a little exercise of art, more symmetrical in its form. But in all this there is danger to the tree, so that if we prefer to indulge our taste as to the beauty of the plant and quality of its fruit, we ought to study the nature and habits of the tree we work upon, and learn, not only how our art shall be exercised, but *when*. We ought to learn what the condition of the sap is at various seasons, and what office the leaves perform in the growth of the tree.

Upon cutting into a vigorous tree any time after the frost is out of the ground, and previous to the 25th of May, a little careful observation will convince any one that the sap during that period is nearly transparent and exceedingly thin and limpid. It runs freely wherever a smooth, clean cut is made into the wood. This follows because the roots have taken up in abundance this watery substance, and the pores of the tree are open to allow it to pass freely through the stem and branches on its way to the leaves. It is not improbable that there may be a temporary expansion of the pores, for the very purpose of affording a quick and unmolested passage of the sap.

In this condition of the tree, what would be the inevitable consequence of cutting off a thrifty limb as large as your wrist? What is there to prevent the sap from gushing out at every one of the tubes or pores which you have cut off? It would be strange, indeed, if the sap should flow up to the wound and there stop, with all the mouths of the pores wide open!

Having traced the sap along to the leaf, let us see, for a moment, what its action is there. According to WOOD, a most accurate observer, its functions are *exhalation, absorption, respiration* and *digestion*, and the result of their combined

action is the conversion of the *crude sap* absorbed from the soil by the roots, into the *proper juice*, for the nourishment and increase of the plant, with its various products. This crude sap consists of water, holding in solution minute quantities of various kinds of solid and gaseous matter derived from the soil. In its passage from the root to the leaves its composition is somewhat modified by dissolving the previously formed secretions, which it meets with on the way.

Exhalation is the process by which the superabundant waste of the sap is given off to the atmosphere, so that the remaining sap is reduced, as it were, by *concentration*, and contains a greater portion of solid matter. It is much like the perspiration in animals. It is to be distinguished from evaporation; the latter depending solely upon heat and the state of the air, and being, in plants, almost wholly restrained by the epidermis or skin of the leaf.

This *exhalation* takes place through numberless little mouths on the upper surface of the leaf, called stomata, similar to the pores of our skin; these mouths are opened by the influence of the light, and closed by its absence, and, therefore, exhalation can only proceed in the presence of the light. A sunflower 3½ feet high, was ascertained by HALES to transpire or send off from 20 to 30 ounces of water daily.

Absorption is chiefly performed by the roots of plants, but when the roots are imperfect, it is evident that the plant must derive its nourishment mostly from the absorption performed by the leaves. Every one knows how plants, when parched and withered by drought, are raised by a shower which does not reach their roots, but only moistens their leaves, as you must have noticed in your corn-fields many times, how rapidly the parched and rolled blades of corn will unfold themselves and assume a lively green, even under a slight shower that could not reach the roots. The under surface of the leaf *absorbs*, and the upper *exhales*. Wonderful arrangement!

Respiration in plants is much like the *breathing* in animals. It is equally constant and equally necessary. It is performed principally by the leaves, and consists of the absorption of oxygen from the atmosphere, accompanied by the rejection of carbonic acid. It appears to be going on constantly during the life of the plant, and the result is the removal of a certain superfluous portion of carbon, in a state of combustion with oxygen, from the nutritive substance of the plant, just as the same deleterious acid is removed from the blood of animals by breathing.

Digestion in plants consists properly of all those changes effected by the leaves in rendering the crude sap fit for the purposes of nutrition.

This consists in the decomposition of carbonic acid by the green tissues of the leaves, under the stimulus of the light, the fixing of the solid carbon and the evolution of the pure oxygen.

Several things present themselves to our mind by which we might illustrate these points,—but it seems to us that the careful reader will now see some of the physiological operations of the tree which he is about to prune. He cannot have failed to see that soon after the middle of March, varying a little with varying seasons—the sap, then more like water than anything else, ascends the stem of the tree and reaches the extremity of every twig or branch, and that wherever any cut or rupture takes place in the pores, the sap will naturally run out.

But when the sap has reached the leaves it undergoes a material change there,—the watery particles being evaporated, and leaving it more solid. This now returns down the tree, *not* through the sap vessels where it went up, but flows between the bark and the soft, woody substance under it, and pausing on the way and increasing the size of the tree. Under these circumstances, if a cut is made into the sap vessels sap does not run from it, because there is little or none there. The wound made at this season,—say from the 15th of June to the middle of July,—should be covered with wax, shellac or paint, and the returning sap, now passing down directly under the bark, will push out the new, green bark around and over it, if not too large, and entirely covers it the first season!

If, on the contrary, the wound bleeds, that is, the sap runs out, it flows down the outside of the limbs or trunk of the tree, undergoes a chemical change as it becomes exposed to the atmosphere, leaves long, black lines on the surface which soon kills the bark, and the tree eventually dies!

It may not be that the tree perishes from this poison alone, but from the want of proper action, as in the case, sometimes, of the amputation of an arm, the muscles on that side contract, the chest falls away, and in some instances the lungs are seriously affected; and this results, we suppose, from a want of proper action, after an important member has been taken away.

It seems to us that the reasons now given for June and July pruning, ought to have weight, and we think they will, if carefully considered.

We have occupied considerable space in reply to our correspondent, because the subject is one of importance to the farming interest. We give, below, an article long since received from another correspondent on the same topic.

BLACK SPOTS ON APPLE TREES.

I have noticed in the *New England Farmer* remarks made in regard to a blight, or large, black spots which come on the trunks and limbs

of apple trees. I have observed these black spots for some years. I have asked many farmers the cause of them, but I found that they disagreed respecting their origin, and the information received from them did not satisfy me.

These black spots on the trunk and limbs of apple trees, where the bark dies, are very injurious to the health and longevity of the tree; they form blemishes which are exceedingly disagreeable, and are often ruinous.

If the cause of these blights could be ascertained, possibly a remedy might be applied to prevent their occurrence. I acknowledge, that I have not been able, as yet, to satisfy myself as to their origin, but am desirous of information on the subject. The way I manage them is thus: I pick off the old, dead bark clean, then if the live bark has not begun to grow over the wood, I take my knife and pare off the bark on the edges till I find the bark alive and healthy. As the tree or limb grows, new bark will continue to form on the edges, and increase on all sides till the whole space is covered. If the old bark is not removed and the edges of that bark on the blight pared off till new and healthy bark is found, it takes a long time for the spot to be covered over with new bark. During the time the new bark is forming, I keep the wood painted thoroughly, being careful not to let the paint touch the bark. If the wood is not kept painted, it very often occurs on trees not in a thrifty condition, that the wood decays so much where these black spots are, that the bark never grows over the spots and then the wood continues to decay till the limb breaks off, or if it is situated on the trunk of the tree a bad hole is made which eventually destroys the tree. So far as I have been able to observe these black spots, they come on the upper sides of the limbs and on the trunks of the trees on the southerly side generally.

APPLE TREE.

For the New England Farmer.

WHY IS CHEESE POROUS?

MR. EDITOR:—I noticed in your January No. of the monthly *Farmer* a request of a "New Subscriber," that you, or some of your readers would inform him of the cause of porous cheese. I would most gladly give him all the information in my power, especially as he hails from the Green Mountain State, my own native place. I cannot but express my surprise, *if he was raised in that far-famed cheese-making State*, that he should not have learned in his childhood, from his own mother, the cause of porous cheese. But to remedy his condition, let him visit some go-ahead farm-house wife, who is in the habit of doing all her work in a hurry, with a slat and a slam; who frequently does her washing, ironing, baking and making cheese in a day, and gets it all done in season to go a visiting in the afternoon,—and when he sits down at the tea-table, if he does not see a plate of porous cheese, it is because there is no cheese of any kind on the table.

To make porous cheese, in the first place, heat the milk very hot, not scald it, then throw in the rennet; be sure to get in enough, and if you want a very porous cheese, put in a great deal *too* much, so that it will come in a very

short time, but don't put in but very little salt, (*not half enough*), and then don't let the curd stand long enough for the whey to drain off, but hurry it into the press as quick as you possibly can; then let it stand in the press until it is pressed enough, or until you can conveniently attend to taking it out—and my word for it, if you don't have a porous cheese to your satisfaction, a slice of which will stretch out by pulling it at each end, like a piece of India rubber, as long as your arm, and on letting go of it, will contract into its original dimensions. The world was not made in a moment, neither can good cheese be made without time and care.

L. D.

East Plainfield, Vt., 1859.

MR. MORRILL'S LAND BILL.

We copy in another column, from a letter of the Washington correspondent of the *Daily Advertiser*, the leading provisions of Mr. Morrill's Land Bill, that the reader may see for himself what the bill proposes to do, and what are some of its conditions. He will observe, we trust, that if Massachusetts accepts the provisions of the act, she must erect one college, at least, within five years, and must do it with money *from her own treasury*! She cannot aid any existing college, purchase lands for sites or experimental farms, beyond the sum of ten per cent. of the interest accruing on the money she obtains from her share of the lands sold! She must also incur "all the expenses of management and superintendence of the lands, previous to their sales," and when she has made the sales and got the money, she must invest it so as to establish a permanent fund, and if all, or any portion of it, "by any action or contingency, be diminished or lost, *it shall be replaced by the State to which it belongs*," so that the annual interest only can be applied, to promote the interests of agriculture. The amount of land which Massachusetts could claim if she should accept the provisions of the bill, would be 260,000 acres,—and this immense tract of land must be guarded from invasion by squatters, managed, superintended, sold, and the money for the same securely invested so that not a shilling of it shall be lost! It is scarcely probable that all this land could be sold to a single party, but in the course of time, to actual settlers, one hundred acres at a time, so that perhaps some twenty-five or thirty years might be occupied in getting it all sold, and the money for it invested! What a splendid commission would be required for such an enterprise. The "Back Bay" and "North Eastern Boundary" are mere babies compared with it. Think of the \$5 per diem, hotel charges and travelling expenses from the good old Bay State to Dacotah, Arizona, Coahuila, or some other equally enlightened and promising region, that would pour out its treas-

ures through a small company of select gentlemen, and all for the benefit of agriculture!

All this *may be* of benefit to the new States, where a college has never yet been established, though we must confess that we cannot clearly see how. But in our judgment, there is not the slightest probability that Massachusetts, through any legislature she may convene for forty years to come, *will avail herself* of the provisions of this act, and place herself under its obligations. We would publish the whole bill if we had room, but beg the reader to read attentively those portions of it that we now give.

For the New England Farmer.

MATTERS WORTH CONSIDERING ABOUT POTATOES.

MR. EDITOR:—If your patience is not already threadbare, I should like to be heard on the subject of the knotty and vexed question of the *cause and remedy of the potato rot*. And I promise to adhere strictly to Caleb's rule of never offering an argument that "did not stand to reason." Neither would he believe one that did not have this support to it—would that we all had the *gumption* of simple Caleb.

If history be true, the potato was brought from Ireland by Sir Walter Raleigh, to Virginia, when it was first colonized, which was about the year 1585; and subsequently it was carried to England, where it met with no great favor for many years, supposing it only fit for the poorer classes of the Irish.

In the "Body of Husbandry," printed in London, in 1758, I find the following:—"The potato may very properly be cultivated in fields. It is better fitted for the great extent and plain fashion of a field, than for the narrow compass and divided beds of a garden. 'Tis but lately our people have informed ourselves properly of its culture; and the more we know of that, the more reason we see to banish it the garden. It is hardly enough to bear the exposure, and it requires no great change in the culture; why then should we limit it to the garden? every particular speaks for its being given into the hands of the farmer, especially when near large towns, though everywhere there will be a great demand."

"We had the plant originally from North America. It is in a manner the food of the common people of Ireland, and is cultivated in Lancashire and some other parts of England, in vast quantities. Our interest is to make it more universal. Ten large potatoes is but a moderate produce from each small root that was planted in spring; when the ground is more favorable, thirteen or fourteen handsome ones; and in counting with the best possible exactness, in a field of Mr. Ryder's, near Thorpe, where every needful caution had been taken, we computed this year, 1746, that there were in general eighteen large and fine potatoes for every small root that was planted. This for a seven months' increase is very great; but nature has in all things provided, that what is most useful, is most abundant."

In almost every subject that is discussed, we

have the right and privilege, where self-evident facts are not at hand, to resort to analogy. Now I would ask with all humility, what farmer is there, from Adam down to the present day, who would be considered a sane man, who invariably chose from his seed the very poorest and most imperfect, to carry on his operations of raising fruits, vegetables and grain, save and excepting the potato?

In England, while the question was under discussion, whether the potato was a garden or field vegetable, the directions for propagation were, to choose for seed the very poorest and smallest of the whole family, the smallest of the tubers. This was the way our ancestors treated this vegetable, which was truly a great gift from God to man. And the only saving item in the direction was, that these little worthless tubers were to be planted the last of February, and by the last of September, they were as reported "on Mr. Ryder's farm near Thorpe." An increase of "eighteen large potatoes for every small one planted."

And what was the first effect of this damning practice of poor seed? the curly leaf of the stalk, and an occasional diseased spot on the potato. The only wonder is, that disease did not take them sooner—seven months' growth is all that has continued them to this day.

Now let us look a little at the question in our own country. We have obtained seed from time to time from England, Ireland and South America, but how have we treated it? God knows we have followed in the footsteps of our illustrious ancestors, by generally selecting the very smallest tubers for seed, but with this exception, instead of seven months, they were allowed only four or five months to give their increase. The long, red potato was brought originally from the La Plata, somewhere about the year 1795. I think my father had that variety from the importers, and it has always been a favorite potato among farmers. But who ever saw them ripen! It is true, they never had a season long enough in this country; four or five months have been the time allotted them to do all their work, but this has been impossible; they occasionally rot, and one end is always watery.

If this country is not always troubled with an occasional disease of the potato, it would be strange, as our seasons are so short; but much may be done to overcome this disease, if not to entirely eradicate it. In the first place, select the first growth of the potato, the large and fair ones, for propagation, and plant as early as our climate will admit, on a soil plowed not less than twelve or fourteen inches deep, sixteen would be better, and well manured. This practice, followed for years, would, in some degree, restore the potato to its original growth and health. To effect the object of deepening the soil, the Canadian horse must be put before a pair of oxen measuring six feet, nine; with a plow that will go deep enough, and amongst the new varieties, there are some that will turn the soil that depth. It is now but a few years since I witnessed a plowing-match of a county society, with all kinds of teams, one horse, small, poor oxen, four year olds, and a committee smaller yet, saying that if any man plowed over *six inches deep*, he should lose his chance for a premium! Well, I walked over this plowed ground with something of the feeling a

man would have in walking over a battle-field, where he saw nothing but waste and destruction.

In selecting good seed, take the large and fair tubers that have had the full length of our season to grow in, which is always short enough. And it is to my mind a self-evident fact, that ripe and mature tubers are better for seed than those half-grown and half-ripe ones, that are commonly used. Is it strange that potatoes raised under such circumstances, should not discover to the microscopist a "mare's nest?" I believe, in every thing that has vitality, there can be discovered in its very incipient stage of decay, myriads of insects so small that the microscope only could discover them, for life and mortality are intimately blended together.

Let any man turn to the pages of the *New England Farmer*, and he will there find strong arguments from strong men that small potatoes are just as good, if not a little better, for propagation, than large ones; then, carry the analogy through, and banish the whole race of first-class animals, and say that "like does not beget like."

What would you say of a man, who, in selecting his seed-corn, while he always throws the small end, the imperfect seed, to his hogs, and saves the remainder, should reverse the practice, and throw the best end to the hogs, and save the imperfect top-end for propagation? How long should we be able to exhibit our noble "King Philip corn;" would it not soon grow into poor Indian? When I hear men talk of propagating from poor, green seed, I can't but think, and with your leave, I will say it, there are more green things in existence, than is good for the progress of agriculture. ALFRED BAYLIES.

Taunton, Jan., 1859.

For the New England Farmer.

MANURES---PLANTING SQUASH SEEDS--- APPLE TREES---HORSE FLOORS.

I like to read the discussions relative to manures. My experience in composting is this: Mix enough muck to take up the liquid; and that under cover in summer, haul out in the fall. During the winter, the frost working amongst it, I think adds one-fourth in value. If more earth is added to the green manure than just enough to take up the liquid, I consider that the time employed is thrown away, for when put on the land it adds nothing to the fertility more than if the manure and muck enough to absorb the liquid is put on. The freezing and thawing pulverizes, thereby putting it in condition to be taken up by the roots of the plants. If you take green hog manure and plant on it, ten to one the seed will not sprout; but freeze and thaw it a few times so that it is fine, and there will be no trouble about germinating the seeds. The air, also, has a beneficial tendency upon it, penetrating and driving out those caustic qualities which are deleterious.

For most plants, manure ought to be more than one year old, and in a fine state. I find that in those places where old manure is used, when the plants begin to start, they grow more evenly. In planting squash and pumpkin seed, the last season, those laid down flat in the hills did better than those planted edgewise; the first

threw off the skin of the seed without injury; in the other way, almost every one was injured by retaining the skin upon the leaves.

Those of my apple trees, where I allowed the limbs to come near the ground, I find stand the cold better, and are not scorched by the sun around the body of the tree. I also notice that the lower limbs bear the largest fruit.

I have done away with stalls for horses, and I find that pens where a horse can put himself into such a position as he wishes to, are more conducive to health. The floors should be perfectly level, and should drain themselves by having herring-bone gutters cut in them, as there is nothing more fatal to the eyes of the horse than the ammonia generated under them. S. P.

Cape Elizabeth, Feb., 1859.

For the New England Farmer.

FALL TRANSPLANTING.

MR. EDITOR:—I notice in the December number of the *Farmer* that a correspondent at Ware favors *Fall Transplanting*. It is a *fact*, that almost all my asparagus roots which were transplanted in the fall of 1857 died; and that 50 two-year old plants, set out the 27th of last July in the same bed, grew well. I do not mention this supposing it the best time, but to show that they may be transplanted so late, in favorable seasons.

The fate of the grape vines transplanted by so many different persons, I thought a strong argument against fall transplanting, for probably they were not all careless in setting them out; and the vines, I think, must have been good, or they would not have kept green so long. I saw all the vines; the roots had a great many small branches to them. It appears to me reasonable to suppose they would recover from the wounds, and start better in the spring, when the ground is getting warm and the plants waking up their energies for the season's growth. I had the list convenient, and have just sent to the people who bought the vines; and I send you a copy showing their replies in answer to the question, "Did their Hartford Prolific Grape-vine live?"

LIST OF VINES AND RESULTS.

No. of Vines.	Replies.
No. 1....1....	Started late and grew a little.
" 2....2....	One leaved out a little very late, and the other did not start, but the vine is still green.
No. 3....1....	Did not start, but stem is green.
" 4....1....	Died.
" 5....1....	Started towards fall and grew a little.
" 6....2....	One died and the other started late and grew about two inches.
" 7....1....	Died.
" 8....1....	Died.
" 9....1....	Died.
" 10....1....	Died.
" 11....1....	Died. (Mr. Chapin bought also one from same nursery, this last spring, which started well and made a fine growth.)
" 12....2....	One died, the other grew moderately well.
" 13....1....	Died.
" 14....1....	Died.
" 15....2....	Both died.
" 16....1....	Died.
" 17....1....	Died.
" 18....2....	Both started late and grew feebly.
" 19....1....	Died.
" 20....1....	Died.
" 21....2....	Both died.
" 22....1....	Started and did pretty well.

Worcester Co., Dec., 1858.

O.

For the New England Farmer.

THE HUBBARD SQUASH.

MR. EDITOR:—I received last spring from Mr. Gregory, of Marblehead, who I believe has the honor of first introducing the Hubbard squash to public notice, one dozen seeds, which I planted in the usual manner of planting squashes, in a rich, loamy soil, just turned from the green sward.

From these twelve seeds, after the usual attention to weeds and bugs, I gathered eighty pounds of squash, which I suppose is quite above the average yield of the Marrowfat or Crookneck, in similar localities.

It is, however, for another purpose that I write this. I wish to know if any of your numerous experimenters in these things have noticed that the Hubbard is less subject to decay than either the Marrowfat or Crookneck?

Several barrels of other kinds in the same cellar have become rotten, while scarce a speck is seen on the rind of the Hubbard.

I suppose fifty per cent. of Marrowfat squashes put into cellars or stalls for winter consumption, decay before they can be used or sold. If what has been true with me in this respect, is a general fact, it constitutes an important consideration in favor of this kind, making really fifty lbs. of the one worth seventy-five or one hundred of the other.

Hoping to hear from those who have cultivated more extensively than myself, and thanking Mr. G. through your paper for his favor, I remain,
Natick, Jan., 1859. OLIVER N. BACON.

MR. MORRILL'S LAND BILL.

Washington, D. C., Feb., 1859.

The Agricultural College bill, introduced by Mr. Morrill, of Vermont, which passed the House by a large majority at the last session, has run the gauntlet successfully in the Senate, and to become a law awaits now only the concurrence of the House in one or two amendments, and the approval of the President.

In its original shape the bill provides for the donation of public lands to the several States for the encouragement of agriculture and the mechanical arts, in the proportion of 20,000 acres to each Senator and Representative to which they are now entitled. All States which contain within their own boundaries the requisite quantity of public lands, of the value of \$1.25 per acre, are to receive them for the purposes of the bill; those States which do not, are to receive land scrip to the amount of their respective shares. The proceeds of the sale of these lands and scrip are to be invested in stocks yielding at least 5 per cent. annually, and constitute a perpetual fund—

“The interest of which shall be inviolably appropriated, by each State which may take and claim the benefit of the endowment, to the support and maintenance of at least one college, where the leading object shall be, without excluding other scientific or classical studies, 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 in life.”

Certain conditions are attached to these grants, to which the assent of the several States, by legislative enactments, is required. They are:—

That “all the expenses of management and superintendence of the lands, previous to their sales, and all expenses incurred in the management and disbursement of the moneys which may be received therefrom, shall be paid by the States to which they may belong, out of the treasury of said States, so that the entire proceeds of the sale of the lands shall be applied without any diminution whatever to the purposes mentioned.”

That “any portion of the fund invested, as provided, or any portion of the interest thereon, shall, by any action or contingency, be diminished or lost, it shall be replaced by the State to which it belongs, so that the capital of the fund shall remain forever undiminished; and the annual interest shall be regularly applied, without diminution, to the purposes mentioned, except that a sum, not exceeding ten per cent. upon the amount received by any State under the provisions of the act, may be expended for the purchase of lands for sites or experimental farms, whenever authorized by the respective legislatures of the States.”

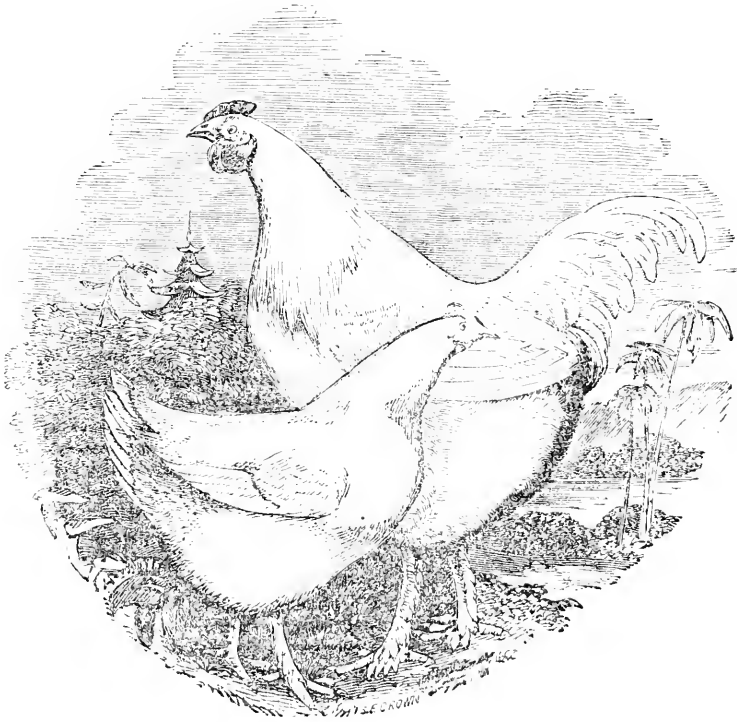
That “no portion of the fund, nor the interest thereon, shall be applied, directly or indirectly, to the purchase, erection, preservation or repair, of any buildings.”

That “every State which may claim the benefit of the provisions of the act shall provide, within five years, at least not less than one college, as described, or the grant to such State shall cease; and said State shall be bound to pay the United States the amount received of any lands previously sold.”

And that “an annual report shall be made regarding the progress of each college, recording any improvements and experiments made, with their cost and results, and such other matters as may be supposed useful.”

Although the bill has been so long before Congress that almost everybody is acquainted with its general purport, I have thought the foregoing minute recital desirable in view of the apparent certainty of its passage. The amendments adopted by the Senate, are entirely consistent with the intention of the bill. They include Minnesota among its beneficiaries, that State not having been admitted into the Union at the time the bill originally passed the House; they make an additional grant of 20,000 acres for each Representative to which any State may become entitled under the census of 1860 in addition to its present number, but they do not, of course, make any corresponding deduction for any diminution in representation which any State may sustain; and they except mineral lands from the provisions of the bill.—*Boston Daily Advertiser.*

LICE ON CALVES.—A number of years ago, I had a yearling that grew poor, and I could not help it. Its breathing became so loud that it could be heard several rods. I thought it would die. One of my neighbors told me he had heard that sour buttermilk was good. I procured some, and washed it from head to foot, and in three days his breathing was very regular, and he was as smart as need be. I had no more trouble with him.—*Rural New-Yorker.*



A PAIR OF WHITE SHANGHAE FOWLS.

The furor which passed over the country a few years ago, and touched nearly every class of our people, in relation to the profits and various breeds of poultry, has now subsided into the "sober, second thought," and all are in a position to judge more considerably of what is prudent and pleasant to be done in this part of our domestic economy.

The farm, certainly, would not be complete without poultry, as there would be considerable loss in some of its products without it; and the farmer's family, away from markets, could not be accommodated with the eggs and flesh of poultry, unless they are produced on the farm. The *convenience* of these things is frequently of more consequence than their actual value.

There will be no doubt about the *profit* of keeping poultry on the mind of those who keep strict accounts; that is, if they manage them judiciously. They do not need a palace, and will not lay any more, or any larger eggs, in such a place than in a pen, provided the latter is light, dry and warm. They require a variety of food, both vegetable and animal, and convenient places for laying, sitting and roosting, and under such circumstances

will yield twice or three times as much profit as the same amount of capital invested in any other stock on the farm.

But it is not on the farm, only, where poultry yields the most pleasure or profit. In the city, they afford the most agreeable "rural sights and sounds," and have a happy influence upon the family, especially its younger portions, beside the convenience and profit derived from their flesh and eggs.

We are not able to say which, of all the varied breeds, are the *most* profitable, and shall therefore introduce to the reader some spirited engravings of several varieties, with such descriptions as we can give of them from personal experiences and the records of them by others.

The cut now introduced illustrates a pair of pure *White Shanghai Fowls*. They are entirely white, legs usually feathered. Their eggs are of a nankeen or dull yellow color, and blunt at both ends. Dr. EBEN WIGHT, of Boston, a gentleman eminently qualified as a judge of poultry, says of this variety:—These fowls are not sluggish or stupid; on the contrary they are intelligent and confiding, and are invaluable for the

purpose of raising chickens. He says they rank among the largest coming from China, and as a proof that they thrive well in this climate, he mentions a cock that at eight months old, weighed eight pounds, and that the pullets are proportionably large. They are broad on the back and heart, with a body well rounded up; the plumage white, with a downy softness; the tail feathers short and full; the head small, surmounted by a small, single, serrated comb; wattles long and wide, overlaying the cheek-piece, which is also large and extending back on the neck; the legs are of a yellow hue, approaching a flesh color, and feathered to the end of the toes.

PREMIUMS ON FOREST TREES AND FARMS.

The *Massachusetts Society for the Promotion of Agriculture* has offered a premium of one thousand dollars for the best plantation of forest trees, and a premium of five hundred dollars for the best conducted farm. These offers are in keeping with the liberal spirit which has ever been manifested by this association to promote the interests of the farmer. Its work is in the right direction. It has given a stimulus to every part of the State within the last five years, by its judicious premiums upon dairy stock, and the Essays upon Manures, Agricultural Education and Market Fairs, and its aid to the State Board of Agriculture.

The offer of these premiums upon *forest trees and farms*, will probably be the means of setting a good many trees growing, and brush up and improve many farms that are now excellent, and improve hundreds more by the examples of neatness, system and thrift which will be established by these inducements to excel. We hope there will be an active competition for the prizes. They are as follows:

1. A premium of \$1,000 for a *plantation of forest trees*.

"The above sum is offered for the best plantation of trees, of any kind commonly used for, and adapted to, ship-building, grown from seed planted for the purpose, or otherwise, on not less than five acres of land, one white oak at least to be planted to every twenty square yards. Notice in writing must be given to the Secretary of the Society, on or before January 1, 1860, of the intention to compete for the premium, stating where the land is situated, the nature of the soil, and what has been done in relation to the plantation up to the time of giving notice. The premium will be awarded in 1870, in case the success of any competitor has been such as, in the opinion of the Trustees, or of those appointed by them to adjudge the same, or give a reasonable probability that the plantation will produce eventually a fair supply of ship timber, in proportion to the number of acres planted. The Society

likewise claims the right, after awarding the premium, to designate from time to time what trees shall be reserved for timber, and the successful competitor shall give security that the trees so designated shall not be cut for any other purpose."

2. A premium of five hundred dollars for the best conducted farm.

"The above sum is offered, in one premium, for the best conducted farm in Massachusetts, of not less than forty acres, taking into consideration the mode of cultivation, farm building, breeding, selection and keeping of stock. Farms, devoted to market gardening, will not be admitted to competition. The Trustees reserve the right of withholding the premium, in case no farm offered shall be considered worthy of it, and also of dividing it, in case no one farm shall be considered decidedly the best conducted. Notice of intention to compete for the premium must be given to the Secretary of the Society, *on or before the first day of April, 1859*, accompanied by the payment of an entrance fee of ten dollars. A written statement, verified by the oath of the competitor, will be required, containing an accurate statement as to the management of the farm, with an account in figures showing the results of the year's operations. The account to commence on the first day of April, 1859, and to terminate on the thirty-first day of March following. All farms entered for the premium shall be subject to the visits and inspection of the Trustees, or by others appointed by them for the purpose. No Trustee or officer of the Society will be allowed to compete."

For the New England Farmer.

WHEN AND HOW IS IT BEST TO TRIM APPLE TREES?

So many and such varying opinions are expressed on this subject, that it is easy to find texts for any theory. But the question still recurs, which is the best way to trim them, and what is the best time to do it? The best way of trimming is to clear out all useless and cumbersome limbs, all decayed branches; all such as impair the form of the tree; always having regard to the peculiarity of its growth. Some kinds of fruit trees are inclined to form their tops by rising in a conical form, as the Pickman Pippin, for instance; while the Roxbury Russet spreads out like an open umbrella—its branches, when loaded with fruit, bending to the ground. Regard, therefore, should be had to the kind of fruit expected to be grown. The most productive orchard I have witnessed is on the farm of Mr. E. Ware, of Marblehead, whose trees have been growing in their present position about thirty years; their limbs now extend twenty feet or more, and completely cover the ground. The earth has been fertilized and pulverized by the running of swine freely in the orchard. The fruit is large and fair, and the trees have suffered very little from insects or vermin of any kind. How these trees have been trimmed I have not been advised; but I think very little trimming has been done upon them. They have always

March 1, 1859.

MASS MEETING AT SUDBURY.

The citizens of Sudbury had a meeting Feb. 3, in the Town Hall, regularly called by warrant, to devise measures to call the attention of the Legislature to their overflowed lands, at which the selectmen were authorized to petition, commence suits, or do whatever seemed desirable to abate the evil. On Saturday, the citizens again assembled, and were joined by persons from most of the neighboring towns. The meeting was called to order by Capt. WM. RICE, and SAMUEL PUFFER elected Chairman, and J. PARKER FAIRBANKS, Secretary. After a brief reference to the Town Meeting on Thursday, the chairman of the Executive Committee of the *River Meadow Association* was called upon to report what progress had been made in certain duties with which it had been charged. He stated that several meetings of the Committee had taken place, that a large sum had been pledged to defray the cost of suits, printing, counsel, or whatever other expenses might accrue. He also stated that word came to him from various portions of the State, encouraging and urging on the movement, because they say it exposes evils common in every part of the Commonwealth.

Dr. J. REYNOLDS, of Concord, spoke of the great depreciation of the lands in question, and illustrated his point by reference to similar damage on Ipswich River, and of the attempted redress by the owners. He said the old Middlesex Canal Company had enjoyed its privileges fifty years, and then sold them out to another party for a song, and sold out *the rights of our citizens* with them.

Col. DAVID HEARD, of Wayland, then gave a detailed and clear statement of the rise of one of the dams at Billerica, and the reservoirs at Hopkinton and Marlboro', and the immense damage occasioned by them in the depreciation of lands and the diseases generated by their miasma.

Capt. WM. RICE, of Sudbury, said he had known the meadows for seventy years—fifty years ago they were very valuable; then a horse could be galloped across them from shore to river bank. People often came from Framingham and paid \$10 a ton for the hay that grew on them. There is a great deal of land that people don't call meadow that is nearly ruined.

Mr. THOMAS BATTLES, of Sudbury, said the best meadows, thirty years ago, were worth \$100 an acre, and that some of them cannot be sold for a single dollar an acre now!

Mr. HORACE HEARD, of Wayland, said, these lands, in 1813, were worth more than the uplands; that at the death of his father, the meadows were appraised at as high a price as the best uplands with the buildings on them! He said the people of Wayland petitioned in favor of the

Boston Water-works, because they were told they would divert the water from the Sudbury river that flows in from the Cochituate lake, and thus, in some degree, relieve their lands.

Mr. E. STONE inquired of Mr. Heard, whether the water from the reservoir operates as injuriously now as it has heretofore? Mr. H., in reply, said it did. There is no diminution of damage.

Mr. J. P. FAIRBANKS said if the people could believe that any remedy was at hand, they would pour out their money to prosecute any lawful means of redress,—but they had suffered so long, and the laws or charters were so unjust and oppressive, that hope had become nearly extinct. Still they were ready to *act*. Within his recollection he had known these meadows rented at the rate of ten acres for ten successive years for \$1000! Now the same lands are a curse to the owner, and to those who live near them! Three years ago, he had great promise of a cranberry crop, but the floods destroyed so many that he got but forty out of two hundred bushels—and this evil is now annual. Floods come upon us when no rain falls, and the drier the time the larger the flood, so that on farms where they have gathered 500 bushels of cranberries a year, they do not get enough now to make sauce for a Thanksgiving dinner! Five thousand dollars' worth of this healthful and valuable fruit is annually destroyed by these floods, and this source of income cut off from our people.

Mr. S. BROWN, of Concord, said, annual losses, similar to those mentioned by the last speaker, were realized by most of the towns in the valley of the Sudbury and Concord rivers. He believed that neither the Legislature nor the people of the county, were aware of their extent. He was told that two or three individuals were permitted to cause these damages through the potency of certain charters—charters that cannot be revoked, though they swallow up your lands with floods, and scatter disease and death over the fair homesteads of our people. He did not believe in such charters—they appeared to him more like certain things that had been done "by the divine right of kings," or the monopolies of Henry VIII. or Elizabeth, in conferring upon some favorite a monopoly of wine sales, or silks, or salt. If some blundering Legislature had conferred privileges upon corporations inconsistent with the rights of others, a wiser one should take instant steps to correct the error, rather than by unfair limitations cut off the people from every source of redress. He did not believe *a single vote* could be obtained in the present Legislature to grant such monstrous powers as were said to be conferred in the charters to which he had alluded. He had not examined the charter of the

old Middlesex Canal Company, but was told by those who had, that it restricted the company to no limits except those of the State itself, and that it could traverse at will over any person's domain, wherever it saw fit to go! Mr. B. spoke at considerable length on other points.

Mr. FAIRBANKS was glad to learn that the Executive Committee was active, and had consulted counsel. The town of Sudbury was ready to act—the selectmen had been authorized to employ counsel and prosecute whenever they thought proper.

Rev. ISAAC JENNISON, of Natick, said a meadow which he could have once sold to a gentleman now present for \$90, he could not now give away to the same person! He wished the movement success, and was ready to expend time and money to get it.

Several other persons addressed the meeting with great enthusiasm, and after the passage of the following votes the meeting adjourned.

Resolved. That the memorial now in preparation by the Committee, be signed by the Selectmen of the several towns on the river, and presented to the Legislature in behalf of these towns.

Resolved. That the Executive Committee be authorized to print any matter that they may deem important to promote the cause.

EXTRACTS AND REPLIES.

LEACHED ASHES ON A CLAY SOIL.

Will leached ashes benefit a clay soil? I make this inquiry because large quantities of ashes are lying in several places in this vicinity, and might be procured at a very low price, probably for drawing.

AQUILA.

Feb., 1859.

REMARKS.—Leached wood-ashes are regarded as the most beneficial to clayey soils. The high temperature at which wood is commonly burned, causes a greater or less portion of the potash and soda to combine with the silica, (sand,) and form insoluble silicates, which remain behind along with lime and other earthy matter when the ash is washed with water. These are just what the clay soil needs.

HUNGARIAN GRASS.

In your paper of the 5th inst., I noticed an article on "Hungarian Grass Seed;" will you please advise me at what season of the year it should be sowed; how much does it require per acre; is once sowing sufficient for more than one crop; what particular advantage will be derived from its cultivation, instead of other grass; in short, tell us all you know about it.

Charlotte, Vt., Feb., 1859. T. D. CHAPMAN.

REMARKS.—We are told by those acquainted with this grass that the same rules observed in sowing herdsgrass seed are applicable to the Hungarian grass, as to soil and season. From 12 to 16 quarts of seed are used, per acre.—Good land for herdsgrass or red top, is suitable for this. If the grass is intended to be used for

green fodder, sow a little thicker than when it is to be made into hay—and if for seed, do not crowd it.

"E. P. M.—t, of Cambridge, Vt.," will please consider this in reply to his inquiries.

We advise our friends not to be over sanguine about this new grass. Test it, by all means, but in a small and careful manner. There are a thousand idlers ever standing ready to get a living out of the earnings of the farmer, and sing such syren songs as are apt to make too many persons think that all is gold that glitters. Sow a quart of seed this year, and note the results carefully. If it does well, continue it; if not reject it.

MANGOLD WURTZEL.

In a former number of the *Farmer*, I noticed a finely written article from Mr. French on the cultivation of the above root in Europe; from his speaking of their roots "running down to the bottom of a drain four feet deep," he, of course, refers to the long, fibrous variety. A friend of mine informed me, that in his tour through the sugar districts of France, a few years since, the Orange Globe variety was in high repute for the feeding of neat cattle; that it was considered vastly better than the tap-rooted, not only in being of a finer grain, but that it was harvested so much easier; from his recommendation, I obtained a few pounds of the seed, which was sown on my farm at Framingham with good success; my neighbor, an experienced farmer, was so much pleased with this root, that he now cultivates it in preference to almost any other root for his cattle.

I.

MILK, PRICE AND MEASURE.

I was greatly rejoiced to see an article on the *price and measurement of milk*, in your last paper. I had concluded we were some of the most duped people in the world, for we are so fascinated with this milk fever that we believe away up in New Hampshire, forty miles from market, if we should patronize our milkmen faithfully, we were on the sure road to fortune. Many of our farmers are enlisted in the enterprise and all are losing money, every day. We do not know what *quantity* we are selling for a gallon, nor the consumer in Boston what he is using that he calls milk!

A SUBSCRIBER.

Derry, N. H., Feb., 1859.

EQUALITY ILLUSTRATED.

\$12,000 a year is annually paid from the Treasury of the State for the support of experiments in culture, whereby the people of the State are sustained; \$60,000 a year is annually paid for sustaining the military of the Commonwealth, whereby their vanity is inflated, their morals depraved, and their lives destroyed.

It is respectfully suggested that these topics be referred to the joint consideration of the House Committees on Agriculture and on the Militia—and that the great gun of the House be instructed to report thereon.

179.

Jan., 1859.

CULTURE OF THE MANGOLD WURTZEL.

Was Mr. Leonard Wray's lecture on the mangold wurtzel, delivered before the Legislative Agricultural Meeting in Boston, last winter, published in full, and if so, where can I obtain it?

On a farm I owned in Rhode Island, I succeeded in getting 1000 bushels and upwards to the acre; once I got 1500 bushels; once 3,337 bushels from three acres, 58 pounds to the bushel.

JOSEPH COE.

Rochester, Mass., 1859.

REMARKS.—Mr. Wray's lecture was partially reported for our columns—we have not seen it in any other form. We have sent you, per mail, a copy of our May number for 1858, containing some things that may be useful to you.

BREAD AND SALT.

I was much interested in an article in your paper some time since, from Dr. Aleott, on the subject of bread-making. I have repeatedly tried unleavened bread or cake, (mixing rather dryly with cool or cold water, sometimes adding a little dry snow for leaven,) and marking it off into narrow strips. I like it much. Think the marking into strips before baking an excellent idea, and am much obliged to the doctor for his article.

Query.—Does the doctor really believe that the great fondness of man, and some other animals, for salt, is no evidence that it is a suitable article for use?

A READER.

OSAGE ORANGE HEDGE.

Will you, or some of your readers, inform me whether the Osage Orange hedge will grow and flourish as far north as the northern part of Sullivan county, N. H.?

L. RICHARDSON.

West Springfield, N. H., Feb., 1859.

REMARKS.—It is quite uncertain whether the Osage Orange would answer for hedges as far north as your locality—we think it would be better to use some other plant, your common hemlock, for instance, if you desire something of the character of the Orange. The hemlock is graceful and beautiful in itself, is hardy, of course bears pruning, and makes a tasteful and attractive hedge. It would hardly answer, however, for fencing.

DEMOLISHING ROCKS.

In levelling a small hill, this winter, I exposed some troublesome looking rocks. I exhausted my small stock of patience in blasting, breaking, burying, etc., and then thought I would try fire and water. I collected a good quantity of brush, weeds, leaves, in fact everything and anything that would burn well. I now made and kept a brisk fire upon and around the rock to be removed, and as soon as it was thoroughly heated (it takes only an hour to heat a rock of about three or four tons) dashed on a few buckets of cold water and to my delight, saw the rock fall to fragments.

OAKLAND GROVE.

Winchester, Mass., 1859.

WOOD ASHES.

Please inform me whether *wood ashes* exhausts the land to which it is applied?

S. E. Y.

Warren, Mass., Jan., 1859.

REMARKS.—Wood ashes undoubtedly acts as a stimulant in the soil—it probably acts upon the sand, even, making it solvent and fit to be taken up by the plants, covering their outer surface, stiffening and strengthening them so that they are able to stand up. In this way it makes the soil *act*, and be useful to the plant. Do not let the fear of its *exhaustive* power prevent you from using it.

LAME HENS THAT DIE.

Will you inform me through your paper of the cause of the lameness of my hens? I have lost since last fall, from fifteen to twenty. In the first place they are taken lame in one leg, and in two or three days the other leg is lame, so that they cannot go, and will lie down; in two or three days after they become lame in both legs they die. My hen-house is built of stone, and the top roosts are about six feet high. The ground is covered with loam; I feed them morning and evening on corn or dough, and they have enough to eat; they do not appear to be in any pain, nor do they grow poor, but are generally fat when they die.

O. H.

Raynham, Jan., 1859.

REMARKS.—Cannot enlighten you—never have witnessed such cases.

A TURKEY CROP.

I have male turkeys that came out in June, that weigh *twenty-two* pounds; a lighter one, when dressed, weighed 17½ pounds, and a young hen-turkey, dressed, between eleven and twelve pounds.

CHARLES H. STODDARD.

East Brookfield, Mass., Feb., 1859.

A BIG PIG.

I slaughtered a pig nine months old, on the 24th inst., which weighed three hundred and thirty pounds.

GEORGE HASKELL, JR.

Essex, Jan., 1859.

For the New England Farmer.

"CORN AND CORN STALKS."

MR. EDITOR:—In the weekly number of the *Farmer* for Jan. 22, an article appeared with the above caption. It seems that the writer of the article referred to, has not succeeded to his mind in the new method of harvesting the corn crop, and for the very reason, as I believe, which he has given, namely, that of cutting up the corn, when it was half-matured, which would naturally give to the corn less weight, and the pale color of which he speaks.

My experience has been very different from that of friend Bacon, as I have practiced cutting my corn to the ground, and shocking, for the last six or seven years, and without any of the serious objections which "W. B." mentions. I believe in the proverb, that there is a time for every thing, and that the time for cutting up corn

to shook, is after the ear becomes well glazed, or in other words, after the stalks are fit for topping. Corn cured in this way, is not only sweeter for bread, but the fodder is worth one-fourth more, at least, than when left to the exposure of the atmosphere. I agree with "W. B.," that, the idea of raising corn is for the grain, but if I can get the extra grain, (as I think if he would take the pains to inquire of those who grind my corn, they would tell him it was second to none,) and the extra fodder, I have secured a greater amount of good, than he who lets his fodder stand and bleach in the field until it is nearly worthless.

If friend "B." will try my way, I think he will meet with better success, and be able to have his "old-fashioned golden puddings again under the new innovation."

A. W. PUTNAM.

Sutton, Jan. 24, 1859.

For the New England Farmer.

EDUCATION AND EMPLOYMENT OF YOUNG MEN IN THE COUNTRY.

MR. EDITOR:—The education and employment of young men in the country is closely connected with our agricultural interests. It is evident that our country towns are losing their population for the reason that our young men leave them for the purpose of gaining a popular education, tending to fit them for any other purpose than the farm. I do not wish to cast reproach on the cause of education. But would it not be better if our institutions of learning were so constituted as to turn the minds of some of their pupils to the pursuits of agriculture? Should not our schools be made manual labor schools; schools which will fit young men for the farm as well as for a profession? I think they should. But considering our means of education as it is, I think our young men may, if they will, furnish themselves with a good practical agricultural education.

Your readers may say that I desire to make all our young men farmers; but not so. We must have teachers, competent teachers, and a liberal supply of them. We must have professional men; but one-half of the number which we now have, and those of the right character, would be far better than the present number. More of our people should be practical farmers. I am a farmer's son myself, and I appeal to those of my class in New England, if it would not be better for more of us to obtain an education preparatory to a farmer's life, than for so many of us to strive for a profession. There is another thing which tends to decrease the interest in agricultural pursuits. Too many of our young men, leaving the farm in pursuit of more fashionable life in cities and large country towns, leave the disgraceful work of farming, as they call it, and repair to a clerkship, and for a year or two work merely for their board, rather than stick to the farm. Let us strive, one and all, to alter this state of things; let us set our hearts and hands to work, and soon our barren fields will be cultivated, our decaying pastures clothed anew with grass, and New England may look forward for a pleasant and prosperous future.

W. M. L.

Sullivan, N. H., 1859.

BOTH SIDES.

A man in his carriage was riding along,

A gaily dressed wife by his side;

In satin and laces she looked like the queen,
And he like a king in his pride.

A wood-sawyer stood on the street as they passed;

The carriage and couple he eyed;

And said, as he worked with his saw on the log,
"I wish I was rich and could ride."

The man in the carriage remarked to his wife,

"One thing I would give if I could—

I'd give my wealth for the strength and the health
Of the man who sawed the wood."

A pretty young maid, with a bundle of work,

Whose face, as the morning, was fair,

Went tripping along with a smile of delight,
While humming a love-breathing air.

She looked on the carriage; the lady she saw,

Arrayed in apparel so fine,

And said in a whisper, "I wish from my heart
Those satins and laces were mine."

The lady looked out on the maid with her work,

So fair in her calico dress,

And said, 'I'd relinquish position and wealth,
Her beauty and health to possess.'

Thus it is in the world, whatever our lot,

Our minds and our time we employ

In longing and sighing for what we have not,
Ungrateful for what we enjoy.

We welcome the pleasure for which we have sighed,

The heart has a void in it still,

Growing deeper and wider the longer we live,
That nothing but Heaven can fill.

For the New England Farmer.

EXPERIMENT IN HARVESTING CORN.

I beg leave to differ from W. Bacon on this subject. I well recollect in my early days that corn, where I then lived, was harvested by first cutting the stalks, and I then knew of no better way, that being some fifty years since, in the town of Winchester, N. H. Since that time I think I have found a better way.

As it regards cutting stalks, I think they will no more than pay for the labor; if the field is large, it is attended with much labor to carry them out of the field to set up to dry. I think I should do quite as well to cut hay at the halves. Should there come a hard frost before the corn gets fairly ripe, it would be much injured. In this vicinity, we usually have a hard frost on or about the 20th of September. If the stalks are cut soon after the corn begins to glaze, as has been the practice with some, it lessens the corn one-eleventh part from that of letting them be on till ripe; it also leaves the corn more exposed to cut off the tops, than it would be with them on, should there be a frost before the corn was ripe. If it stands till it would not shrink in drying, it would be bad policy to first cut the stalks, because it is more work than it is to cut all up together, and you save only about one-fourth of the fodder, and not the best part, for that which comes up at the roots last, called suckers, is much the best, being the greenest and richest. In cutting up the corn and stalks together, there is a great saving both in time and value of both corn and fodder. At the price hay is selling for here now, \$13 per ton, and as the

fodder growing on one acre of land where the corn will yield 50 bushels per acre is worth one ton of good hay, we gain some \$12 or more in harvesting of one acre of good corn, over that of cutting the stalks. I know not why a dollar's worth of hay or corn fodder is not as good as a dollar's worth of corn.

All grains are better to be harvested while the sap is in the straw or stalk, and I know of no one in this section of country that questions this theory, millers not excepted; it is much more delicious and rich, and makes the best bread. I have experimented some few times by letting six rows stand, for the purpose of seeing the difference, in hopes that it would dry off best by standing uncut on the hill, while the rest of the field was cut and bound, and well set up, and in each and every time, that left standing was not as good, was not so yellow, and had much more poor corn, and the fodder the same as lost, hardly worth cutting up at all. In cutting up corn, care should be taken to see that the butts are laid down, so that the bundles will set up well. Bind of the size to have six bundles make one bushel of ears when husked; set six in a stack, two abreast and one at each end, tie the tops together, and they will cure well. In this way, I harvested my corn this last fall, and it is most bountiful, not one-fourth of a bushel but what is fit to grind for family use, and now weighs 64 lbs. to the bushel. My stock eat the fodder as well as they do good hay. I saw one old gentleman last September cutting his stalks. I inquired of him why he cut off the tops instead of cutting up at the roots? He said he was *brought up so*.

Rowbury, Vt., Feb., 1859. A. L. BRIGHAM.

For the New England Farmer.

POTATOES FROM SEED.

MR. EDITOR:—Seeing a piece in the *Farmer* for January 15th, from "S. S.," on raising potatoes from the seed, I thought I would send you my experience in that line, as it has been more satisfactory than his. In the year 1855, I found some very nice looking balls on the tops of a variety known here as the "Late Early Blue." I saved a few of them and planted the seed the season following, and two or three weeks after, the plants made their appearance, and grew very slowly all the season. I obtained enough potatoes from them to plant three hills, last year, (they were about the size of hazel nuts,) from which I got enough to plant thirty hills this year. These were about the size of walnuts.

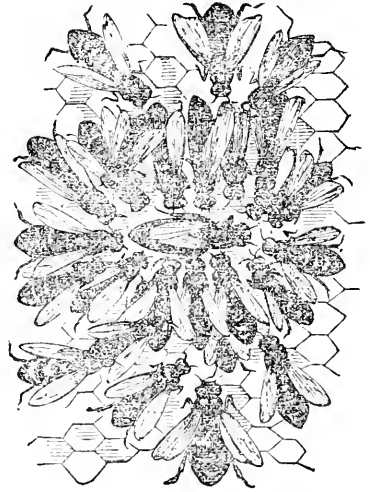
Those produced this season were most of them large enough to cook. I have cooked some of them several times, and they are very nice, fine grained, sweet, but not nealy; which I suppose is owing to their not having come to maturity yet, as it takes about seven years for that, I am told. They seem to be no particular kind, but possibly the qualities of various kinds. Most of them are long, with very deep eyes. Some of them are black, and some like the Early Blue; others look like the Early Blue in color; others are yellow. There were various kinds growing near those from which I took the seed. I have found none of them affected by the rot.

Yours for improvement,

Keene, N. H., 1858. A. H. KINGMAN.

KIDDER'S GUIDE TO APIARIAN SCIENCE.

This is another new work upon the Culture of Bees, by Mr. K. P. KIDDER, of Burlington, Vt., containing 175 pages, and illustrated with several engravings. In the cursory examination that



we have been able to give it, we find nothing remarkably new. But the directions for hive-making, for swarming, tending, &c., seem to be useful and clear. We have no doubt the book will be a useful one to the bee-keeper. Mr. K. is unquestionably devoted to his calling, and determined to understand it. The little cut we have introduced, illustrates a page of his pamphlet circular. His book is for sale at the bookstores in Boston. Price 50 cents.

PERHAPS WITTY, BUT NOT TRUE.

"Agricultural editors and professors, in the enjoyment of salaries, are almost the only men who think farming profitable."

The above is quoted from an essay published in the Transactions of one the County Agricultural Societies of Massachusetts. It is as discreditable to the taste of the writer, as it is without foundation in fact. The profits to be derived from any industrial pursuit, depend in a great degree upon the energy and good management of those engaged in it. That farming is an exception to the universal rule in all other business—that it can be made remunerative without the care, economy and skill requisite elsewhere, no one pretends. We have yet to learn an instance, moreover, when it has been thus properly carried on for a course of years, in which an ample and generous reward has not been returned for all the labor and expense bestowed. And what but farming has transformed the whole face of this broad land from a wilderness to fruitful fields? What, if not farming, has fed, and clothed, and schooled the masses of our people,—constructed our academies, colleges, churches, and public buildings,—yes, and built up the greatness of

our cities, by supplying them with fresh blood, and brains educated by its profits, and unweakened by their cares and dissipations? Agriculture is the immediate sire of commerce, and the wealth of the merchant finds its first sources in the wealth of the farmer. It is quite time such sneering assertions were discarded. Can the writer of the above—can any reader of this paragraph—point to a county or town which does not number more or less of those who have made farming sufficiently profitable for every legitimate human wish? Farmers should respect themselves, and honor their pursuit; and those who are honestly and earnestly endeavoring to aid them in rendering it still more productive, and its followers still more worthy of its high position, should be recognized as beyond the aim of so weak an attempt at ridicule.—*Country Gentlemen.*

For the New England Farmer.

HOW TO TREAT EXHAUSTED LANDS.

MR. BROWN:—I have 30 acres of mowing land, a light sandy loam, nearly run out. I propose, as it used to grow corn well, to put 10 acres of it this season to corn. I have only manure for half of this quantity, and think of trying guano and plaster for the other part, and wish to know the best mode of applying these fertilizers, never having used them. (a.)

After the corn is off, how shall I proceed to get the land back to grass? (b.)

I also want to enrich and re-seed 10 acres more. Can I do it to advantage by sowing buckwheat or clover, and plowing in and seed down in the autumn? (c.)

Will it pay to put in rye, barley or wheat, and purchase fertilizer? (d.)

My object is to get the land back to its former condition as soon as possible. The farm has not been occupied or carried on for three or four years.

MIDDLESEX SUBSCRIBER.

Feb., 1859.

REMARKS—(a.) Some persons spread guano broadcast where the land is naturally moist, and derive considerable benefit from it for one or two years. This is the easiest and cheapest way of applying it. If put in the hill, there is danger of killing the young corn. If the kernel touches the guano it will not sprout—if it sprouts and the tender shoot reaches the guano, it is death to it.

(b.) If you desire to get corn land into grass by the quickest method, you can cultivate the corn field level, sow grass seed after the last hoeing in August, and rake it in or work it in at the hoeing, if there are not many weeds. This is a good way, because the corn shades the tender grass a little, and assists it considerably, if the season is a dry one. Where this is done we think it better to "cut the stalks" and let the sun in after the grass is fairly started. When the corn is removed it should be cut quite close to the ground, so that the stubble shall not be in the way of the scythe.

But if you do not like this mode, add what manure you can spare in the fall and plow it under, cross plow in the spring, and sow with wheat and grass seed.

(c.) Plow, and harrow once, then manure with guano, 500 pounds per acre, if you can spare the money for it, and if you cannot turn up less land—sow with clover or buckwheat, and when just going out of blossom, cut and let it two-thirds dry, and then plow it under. If you turn it under green, rapid fermentation will take place, throwing off the sugar and starch of the plant, its most important elements, and leaving comparatively little behind that is valuable. If dry, or nearly dry, when plowed under, fermentation and decomposition will be slow, the gases will be evolved gradually and absorbed by the surrounding soil, and enriching it for the plants that are to follow.

(d.) Under judicious management we think it will. The land has probably become exhausted of its vegetable matter, by frequent cropping, without much having been returned to it. Fill it with the roots of clover, or with its stems and leaves, or those of some other plant, then plow it deeper than usual, so as to bring up new earth that has not been exhausted of its mineral matter and you have a soil resembling that where a forest has just been cut off.

The object of gain sought must be, the *restoring the land, filling it with vegetable matter, and not getting a crop.* If the crop barely pays for the guano used and for the labor, it ought to be satisfactory. When the land is restored, it will yield profitable crops indefinitely, under proper treatment.

For the New England Farmer.

GRAIN CROPS.

MR. EDITOR:—I send you some extracts from an essay read by Mr. CHARLES A. HUBBARD, before the Concord Farmers' Club, on the evening of the 10th inst. I think they are worthy the attention of farmers in other parts of the State. Mr. H. is doing just what hundreds of other farmers should do.

"Wheat is but little cultivated in this section, but I have raised it to some extent for the last four years, with fair success. Four years ago I purchased a bushel of spring wheat, and sowed three pecks of it, on half an acre of good corn land, and raised twelve and a half bushels of excellent wheat. I sold eleven dollars worth of straw. The next year I sowed three bushels on an acre and a half of light sandy soil, generously manured. The manure was plowed in four inches deep. After the wheat had nearly covered the ground, I sowed on it ten bushels of ashes. The crop was 27½ bushels. The third year I sowed four bushels on two acres of heavy clay soil, but well-prepared. The crop was 47½ bushels of as handsome wheat as I ever saw. The straw I estimated at three tons, worth twelve

dollars a ton. I consider it worth two-thirds the amount of English hay. Last year, I sowed 1½ acres. The product was large in straw, but owing to the wet weather, the kernel was not as fair as usual. I am satisfied that I have been amply repaid for my experiments in raising wheat. I have bought but little flour the past four years. I usually get five bushels ground at a time. This will fill a barrel with flour. Then there will be a bushel of second quality, which makes excellent warm bread, a half a bushel of Graham flour, and the shorts or bran. The seed I prepare as follows: First I soak it 24 hours in strong brine, and then roll it in lime. Wheat I consider the very best grain to sow with grass seed when I wish to seed down to grass."

Yours, &c., JOS. REYNOLDS.

For the New England Farmer.

HON. MARSHALL P. WILDER ON PEARS.

I notice in the proceedings of one of the recent agricultural meetings at the State House, that the Hon. MARSHALL P. WILDER gave a list of those varieties of pears which he deemed best suited to the climate and soil of Massachusetts. No man can have a higher opinion of Mr. Wilder than myself. His efforts for the improvement of agriculture in general, and horticulture in particular, are worthy of all praise. His experience as a pomologist would also seem to give great weight to his opinions. Still, I must beg to differ with his deliberately expressed judgment in regard to the varieties of pears best adapted to our soil and climate. And I think if you were to take the testimony of any number of nurserymen in the State on the same subject, you would find no two of them were agreed in opinion. There are so many circumstances of soil, position, culture, &c., which go to influence the quantity and quality of the pear crop, that he who follows the advice of any one cultivator, will, nine chances in ten, fail in his expectations.

The list of pears referred to, as given by Mr. Wilder, is as follows:

Best Six—Bartlett, Urbaniste, Vicar of Winkfield, Buffum, Buerre d'Anjou, and Lawrence.

For Best Twelve—Add to the above, Rostiezer, Merriam, Doyenne Boussock, Belle Lucrative, Flemish Beauty, and Onondaga.

Best Six on Quince Roots—Louise Bonne de Jersey, Urbaniste, Duchesse d'Angouleme, Vicar of Winkfield, Buerre d'Anjou and Glout Morceau.

Now as to the Bartlett, the value of that pear is admitted. It is indispensable to every good collection. The Urbaniste is also a highly prized fruit, but on some soils it is, as every nurseryman knows, a shy bearer. The Vicar of Winkfield (its synonyms, *Clion*, *Le Cure*, mean the same thing, for Clion was the name of the vicar or curate of Winkfield, who originated the fruit,) is a good bearer, and a handsome pear for the market; but so far from rightfully pertaining to the six best varieties, it ought to be set down as from second-rate to poor. I never tasted one of these pears, that I considered first-rate; I have tasted a great many that were hardly fit to eat. The Winter Nelis is a better fruit, and so is the

Beurre d'Aremberg. On warm soils, the Beurre Diel beats it "all to pieces." Ditto, ditto, the Easter Beurre. As for the Buffum, it is good in some localities, but not reliable in all. The Beurre d'Anjou promises well, but is not as yet fully tested. The Lawrence is a good fruit, but not in all cases a good bearer. In my judgment, the Beurre Clairgeau deserves a place among the "first six" in preference to any named by Mr. Wilder, except, perhaps, the Bartlett and Urbaniste; while the Louise bonne de Jersey ought to take precedence of all except the Bartlett.

When we come to Mr. Wilder's "best twelve," I should strike out the Merriam and the Onondaga (or Swan's Orange,) and retain the others, if not "counted out" by those I have named. The Doyenne Boussock is identical with the Gray Doyenne, and in my opinion, is only a modification of the old White Doyenne or St. Michael. Any one who will carefully examine the wood, the foliage, or the fruit, must come to this conclusion. How this modification has been brought about—whether by budding or grafting on the quince, the thorn, or the mountain ash, and then back again upon the pear—it is impossible to say; but the fact is "patent upon its face." The improvement is certainly an important one; for while the White Doyenne cracks badly both on the pear and quince stock, the Gray cracks only occasionally on the pear, and on the quince is a perfect and most exquisitely flavored fruit, such as was the St. Michael in its palmy days.

As for the Glout Morceau, which Mr. Wilder puts down among the "best six on quince," I shall be better able to give my opinion of it, when I have raised the first specimen of the fruit. As yet, on pear or on quince, I have not been able to raise the first blossom of a Glout Morceau, though I have practiced all the arts of persuasion now known to me. I think this pear is generally voted a very shy bearer, and if Mr. Wilder has succeeded better with it than others, I must believe it an exceptional case. The quality of the fruit is admitted on all hands to be good.

But how is it that Mr. Wilder leaves out of his lists such pears as the L'Angelier, the Andrews, and the Beurre Gris d'Hiver Nouveau? Either of these is a better pear, in my judgment, than one-half of those named in the above lists. So you see, Mr. Editor, that in the quality of pears, as in almost everything else, "doctors differ." My own practice is almost homœopathic, compared with that of Mr. Wilder; but my observation in regard to the pear culture has been pretty extensive, nevertheless.

I think much good would result, if those engaged in the pear culture would state, through the agricultural press, as nearly as possible, the quality of soil on which the different varieties have best succeeded. A "comparison of notes" in this particular, could hardly fail to add to the common stock of knowledge in fruit-growing. I am satisfied that there are several otherwise good varieties of pears which it is useless to attempt to cultivate on a clay soil, or where the argillite is a predominating element.

Somerville.

E. C. P.

COLD WATER TO CURE SCALDS.—I placed a large tub full of cold water, with plenty of ice in

it, by the side of a large kettle full of water, which was boiling very fast. I then rolled up my sleeve above the elbow, and thrust it into the kettle of boiling water up to the elbow, then immediately back into the tub of ice water, letting it remain a few seconds, then into boiling water again, repeating this process ten times a minute, without injury or inconvenience, not even making my arm look red. From this experiment I suggested the propriety of using cold water baths instantly after being scalded. I have practiced the above remedy with entire success during the last ten years. Cold water is always handy where there is hot water. The sooner cold water is applied after scalding, the surer will be the cure.—*Ohio Cultivator.*

SEVENTH LEGISLATIVE AGRICULTURAL MEETING.

[REPORTED BY JOHN C. MOORE, FOR THE N. E. FARMER.]

The subject for consideration was "*Agricultural Markets and Fairs.*"

Ex-Governor GEORGE S. BOUTWELL occupied the chair; and stated in substance, that he had accepted the invitation of the committee to preside, with the view of assisting, rather than leading, the discussion. He would leave the last part of the subject to other gentlemen present. He had been acquainted with agricultural fairs, and would commend their adoption by the farmers of every agricultural town, as great benefit would result from them. They would furnish facilities for observation and comparison, which, from the nature of their occupation, they could not otherwise enjoy, and give them the same chances that manufacturers and others more fully enjoyed, and which were held by them to be so requisite and valuable. Such clubs would not conflict with the interests of county societies; on the contrary, they would assist them. They would operate in their effects like the meetings of which this was one. Education would have to be carried to the farmers, as they could not come to it with convenience to themselves, only as it was familiarly brought to the door, as it were, of their own experience. The State might do well to give some aid to the establishment of such clubs, as they would enable towns to compare their products, and prepare them to compete, by comparison, with other towns at county exhibitions, which too seldom showed what every portion of a county or district could produce, as they could be made to do.

Mr. RICHARD S. FAY, of Lynn, being called on to speak, gave his opinion concerning *Market Fairs*, which he held to be above fairs in importance, as they were, in reality, the true test of agricultural superiority. It surprised him that an English farmer could pay from \$10 to \$20 rent an acre, and yet live so differently from our most prosperous farmers. In the course of two years

residence in England, he had paid attention to the matter; and compared with the state of things here among our farmers who paid nothing per acre for their lands, it appeared a mystery. He had experimented somewhat during his residence in England, and found that prices of living were just about the same as here—so there could be no advantage to the English farmer on that score. He did not labor as the farmers do here; so the benefit from his farm could not proceed from his individual dexterity. The price of labor was, he found, about [the same in England as here; so there would be no advantage to the Englishman in that respect. The expense of keeping cattle in winter was no more there than here; so nothing prejudicial to us could arise from that item. Every farming district had a weekly market once a week, where a ready sale was always had for his stock and produce, at almost the London market prices and everything done in a few hours that the necessities of the farm demanded. There was the combination of the farmer and the merchant which gave the producer two profits, which we had not the advantage of. Besides, the English farmer, when he put his plow into the ground, always had something like a certainty (such was the fine condition of his soil,) that he would have a particular amount of produce. If Massachusetts were divided into districts—(and these announced in the *Farmer's Almanac*), and market fairs established in each, it would be no longer necessary that every farmer should waste his time in cattle jobbing, or his means in hunting up cattle, to be obliged to make a questionable choice, after all his labor—great good would result. According to the nature of the productions of a locality, farmers and others could go and buy and sell with an assurance of a market, or the best the market could afford, and in this respect he would derive material benefit. Dairy cattle, horses, oxen, sheep, whatever was the prevailing produce, could be found in all the perfection in which the district could produce it; and, moreover, according to the quality would be the price and the benefit. Mr. Fay described one of the celebrated Falkirk Tryots in Scotland—where flocks numbering many thousands were brought together from all parts of the country, and, in the aggregate, numbered hundreds of thousands, which were sold to be driven to other parts of the kingdom, and as much as \$500,000 left in payment thereof. Everything was done without higgling or trouble—with less effort than many farmers would have over the sale of a pair of oxen. In September and October, at the same place, 60,000 head of cattle were sold at each of the fair days, with as much quietness and dispatch. It was not to be supposed that this could be im-

itated here all at once; but were farmers willing to get up such fairs, they would find purchasers, and ready ones, too, and would learn to buy and sell, a system of education they stood much in need of.

CHARLES G. DAVIS, of Plymouth, was of the opinion that those who established such fairs as had been recommended would prove themselves the greatest benefactors of the farmers of New England. They would be found superior to all the shows, exhibitions and colleges that could be instituted. This being what he deemed an incontrovertible fact, the question arose prominently—*how could they be brought about?* The best initiatory process, in his opinion, was, to let every farmer lend his earnest personal influence to establish them. It was too true that farmers not only frittered away their time in petty peddling of small articles of stock, but also submitted too freely to the interpolation of middlemen between him and the consumer, to the prejudice of both. It was impossible that a farmer, with produce to sell, could tell what was, or what was not, the market price of any description of it, so long as he depended on the dicta of these peddling middlemen—who hindered the producer and the consumer from coming together and dividing the profits of labor and purchase. Were market fairs established, a different policy would be introduced; and it ought to be for the interest and advantage of both that they should join in the institution of such fairs. They would convince the Massachusetts farmer of what he was now in much doubt, that farming was a profitable occupation; and that where system prevails in working, buying and selling, it could be demonstrated to be so. Mr. Davis wished every one present, when they went home, to bring their agricultural friends together, and see whether they will refuse to sell to peddlers, and carry their produce to market on the market day; if they would so agree, they would soon realize the benefits. He mentioned that Mr. Fay, himself and another party had been chosen by the State Board of Agriculture to present this matter to the community, with the view that it should be brought to speedy perfection, were such the popular wish; and if any objections existed against the proposition, he hoped they would be heard here—provided any objector was in the audience.

Mr. DODGE, of Hamilton, (author of an essay on the subject under discussion.) said, at the first glance into it, he thought there were more reasons opposed than in favor of the proposition; but these were soon obviated by consideration, and the result of it was seen in the pamphlet which he had written, and which had been published. He would not repeat his opinions here; but it was enough to point to the establishment

of the *Shoe Exchange*, in evidence that great results could flow from small beginnings; and if proved in the case of the shoe business, why should farming be an exception? Mr. Dodge, paid his respects to the peddlers and forestallers and exposed the disadvantages under which the farmer suffered at their hands. It was they who demonstrated to the farmer that there was no profit in his occupation; and the demonstration would continue until the forestallers were forestalled by regular markets, and regularly remunerative prices. As a sample of the operations of these parties, last fall—they made a raid into the rural districts and bought up all the apples they could find at \$2 per barrel, and onions at \$1.50. Now the former were worth \$3.50 and the latter \$3—and fast at that; but there the forestallers had previously got advantage of the producers. This should not have been; nor would it long be, were farmers only disposed to do justice to themselves, and establish market fairs.

JOSIAH QUINCY, Jr., made a humorous speech, showing the value of intelligence to the farmer—and especially that which associated itself with a proper market. The sentiments expressed this evening were precisely what every farmer should entertain and carry out into practice, to the discomfiture of the forestaller, who was the great public enemy, whether the producer or consumer was concerned. As one phase of the operations of this class, Mr. Quincy said, when he was Mayor of Boston, he was informed that more than 6000 pounds of poultry were thrown over the wharves into the sea rather than it should be in the market and lower the price! He thoroughly approved the proposition made to-night, and would give it his aid in every shape in which it would avail. He looked on it as being the most important one that had been made in his hearing, for a long time, and the public ought to be obliged to the gentlemen who had spoken for the interest they had taken in this essentially important matter.

JOHN BROOKS, of Princeton, spoke in favor of home markets, and argued that they would be found the most profitable—although he was not willing to be considered as an opponent of market fairs. Perhaps they would do as well as was anticipated. He was afraid that forestalling could be carried as well into a market as into a farm-yard; and had some belief that farmers were not so very ignorant concerning the proper prices of produce as they were represented to be. Mr. Brooks spoke of the system of English farming in accordance with data which we fear has not been gleaned from a very reliable source, (as regards arable farming.) to prove that the farmers there made no more profit on the sum invested

than they did here. He also showed from national statistics that the corn crop of New England was more profitable to the farmer than that of Illinois to the producer there, as was also the raising of pork.

WM. J. BUCKMINSTER, of the *Ploughman*, was the next speaker. He made a defence of the farmers against the charge of ignorance of prices, and was interrupted by Mr. DAVIS, of Plymouth, who explained that the ignorance he had alluded to was that arising from the misrepresentations of forestallers. Mr. Buckminster proceeded to say that, while railroads, telegraphs and newspapers were so common, and so generally distributed, the explanation could not have its full bearing. Farmers were wide awake concerning prices, there could be no doubt; and if they did now and then make a mistake, it was no more than the dealers did. As further proof of farmers knowing what prices were, he found that he could not purchase some things at home—thirty miles hence—so cheap as he could do in Faneuil Hall market. Mr. B. spoke somewhat doubtfully about the proposal before the meeting; although he hoped it would be found otherwise.

Dr. LORING, of Salem, came here with some idea of opposing the scheme of market fairs; but, after hearing the arguments *pro et con*, he was constrained to believe that it was inevitably necessary that farmers should have some system in operation for their better protection and stimulation, and that the best means to adopt was the proposed fairs. Our farmers wanted a stimulus. They generally contented themselves with providing for a twelve months' existence, but give them market fairs and it would soon be otherwise, and there would be no longer depression, increasing waste lands, and general prostration of the agricultural interest. If fairs would not suit, what would? for stimulation was essential. It belonged to the opponents of the proposal to say what would substitute that scheme. Essex county was determined to try it until a better was suggested, although her farmers were aware of obstacles being in the way of their ultimate advantage. Every improvement in agriculture had had its opposition, and this one could hardly escape the same risk. For himself, he had no fear of its ultimate success, any more than he had doubts of its benefits, or of their universality over the Commonwealth.

Remarks were further made, touching on abstract details of the discussion, by Mr. Buckminster, Dodge, Davis, and others. The latter gentleman incidentally showed, practically, in what respects market fairs would prove beneficial—for that purpose taking a familiar view of matters as they now stood, as compared with what they might become were such fairs established.

It was suggested that the subject should be continued, and discussed next week; but arrangements having been made for that meeting, the suggestion was withdrawn. Next Monday, the matter discussed will be "DRAINAGE." Dr. G. B. LORING, of Salem, is expected to preside.

For the New England Farmer.

WORK IN THE LUNENBURG FARMER'S CLUB.

MR. EDITOR:—The following statements and experiments from the Lunenburg Farmer's Club are at your service. As there is much to learn about the measuring of corn, shrinkage, &c., it may be well for every Club to contribute something in regard to the different varieties raised, and the same may be said of the cereals, that a man may see in black and white the best kinds to use, and where they can be found.

It takes a long time to determine what kinds of apples will be the most profitable. After a man has tried many varieties, he will finally settle down on some that will pay the best. The different breeds of cattle, too, are being tried, and it is expected that some discoveries will be made in that branch of husbandry.

We think our Town Club has made some discoveries during the eleven years it has been organized, and we trust that the time has not been spent in vain. County societies may cut a wider swath on exhibition days, but the influence exerted is like the old adage, "Variety tends more to please than to instruct."

We trust the town clubs will receive something from the public crib in the shape of a few hundred a year; that, with what can be raised by the ladies, the county societies will look kind o' lank in a few years. Farmer's clubs are getting to be institutions which cannot be rubbed out any more than the common school, and it is believed they indicate the true mode of disseminating agricultural knowledge.

W. H. JONES, *Secretary*.

CYRUS KILBURN'S CORN CROP.

Mr. Kilburn said, the acre of land on which my corn was planted was in pasture in 1857 and covered to a great extent with rocks and stones, and produced mullen, hardback, buttercup, moss and other weeds; the grass very short and scant, producing not half enough to pasture one cow. Last spring the rocks were blasted and hauled off the land; carted on about nineteen loads of green manure, spread and plowed it under with a side hill plow, harrowed and picked off the stones, furrowed the rows about four feet the same way it was plowed, applied four loads per acre of manure scraped from the barn cellar, including the droppings from the turkey roost, putting in about a pint in each hill. Planted about the 20th of May, with King Phillip corn, using the single corn-planter. Hoed twice, and let four plants grow in the hill; used a plow the first hoeing, and a plow cultivator the second. Cut up and stooked the same on the last of September; husked about the middle of October, and had 125 baskets sound corn, weight 50 lbs. each, exclusive of the basket. 100 lbs. of the ears,

equal to two baskets, was laid in a box to dry, and on the 15th January, 1859, the ears weighed 34½ lbs., and the shelled corn 70½ lbs.; measured 56¾ qts.,—one bushel, 4¾ qts.,—equal to 78.63 bushels by weight to the acre, and by measure, 71.77 bushels. The shelled corn was then spread on a sheet to dry in a warm chamber.

Feb. 4th, winnowed, measured and weighed the same carefully, without losing a kernel; measured one bushel, two qts.; 63 4-10 bushels to the acre by measure; weighed 66 lbs.; 73 37-56 bushels to the acre, by weight; showing a shrinkage of 34 per cent. from the ear at husking time to dry shelled corn. The corn stover when cut up was quite dead; the ears were hard and dry, much dryer than corn usually is when examined by committee.

A WHEAT CROP.

Martin Johnson said, my land was broken up in the spring of 1857, and 400 lbs. guano mixed with plaster, spread and cultivated in. Planted with corn the first of June. The crop did not amount to much, as the corn did not ripen well. In the spring of 1858 the land was plowed twice, and 160 bushels leached ashes and 300 lbs. guano were spread and cultivated in. Two bushels of China wheat were sown to the acre, and cultivator used to put it in. The land measured 304 rods, yielding 73 bushels, thresher's measure. It is a superior variety.

REMARKS.—You ought to have stated the time of sowing.

A CARROT CROP.

J. and J. T. Dunsmoor said, the land cultivated was a loamy subsoil, and contained 138¾ rods. It had been a hop field for seven years previous to 1857; that season it was sowed with wheat, and produced a good crop. In the autumn of the same year, 40 loads compost manure were put on and plowed in. In the following spring, the land was plowed and harrowed again, and the seed for the carrot crop was put in the 13th of April. Beds were made wide enough for four rows of carrots, and had the seed all taken, the yield would have been much larger. The variety sown was the Orange, and 800 bushels carrots and 100 of turnips were taken from the above mentioned land, at a cost of \$75.

A POTATO CROP.

J. and J. T. Dunsmoor said, our field of potatoes contained 1174 rods on a reclaimed meadow, mud from three to four feet in depth. Plowed in the autumn of 1857, and harrowed thoroughly. In the spring, planted in hills three feet by two and hoed once. The droppings of the sheep-fold were used on this field, as it seems, to advantage. Potatoes of the Davis Seedling variety, cut small, with two pieces in the hill, producing 220 bushels.

A CORN CROP.

Joseph Goodrich said, my field contains 248 rods of land, by accurate survey. It was a piece of old pasture land that ferns, whortleberries, brakes and other small brush possessed, and never had been plowed until Dec., 1857.

In May following, the land was harrowed and the loose stones taken off. I then spread about twelve cart-loads of green stable manure to the

acre, and cross plowed; harrowed the second time and furrowed one way, aiming to furrow four feet, but the ground being rough, there was much variation in width; applied about eight cart-loads manure to the acre, in the hills, which were placed from two feet to two and a half apart. This manure was loam saturated with the droppings of cows the summer previous. Planted the 12th of May a variety called the Carter corn, from four to six kernels to the hill. After the corn had come up, and previous to hoeing the first time, a spoonful of plaster was applied to the hill. It was hoed twice, and oxen were used to plow the corn. In August, a shower of hail did much damage to the crop, as, at the time, the kernel was setting, which reduced it considerably. A short time previous to harvesting, a drove of cattle broke into the field and destroyed several baskets of ears. The corn was cut up and stooked in the field September 25th, and stood ten or twelve days, when it was hauled to the barn and set up where the air could pass through it. In three weeks the corn was husked and two bushels of ears shelled, producing 43 qts., then spread under cover where the sun and air operated upon it ten or twelve days, and appeared as dry as corn generally is in January; then weighed the same, and found the weight to be 72 lbs. Quantity raised on the field, 241 bushels ears; weight of one bushel 36 lbs.; allowing 56 lbs. to the bushel, 154 13-14 bushels. By measure, when shelled, 162, nearly.

For the New England Farmer.

NATIVE AND FOREIGN STOCK.

MR. EDITOR:—In reading the remarks and suggestions in the Third Legislative Agricultural Meeting, I noticed a discussion about imported and native cattle. Mr. Asa G. Sheldon, of Wilmington, said there ought to be no distinction made between the breeds, but all should compete on the same level. This is right, as far as my experience extends. I will relate a circumstance which occurred at our Middlesex North Agricultural Society, in Lowell, last September. I entered a yearling heifer, native breed, for the premium. This heifer I raised, and gave a brief account of her keeping till the time she was entered for the premium. When one year old, she weighed 650 pounds. When presented for the premium she was 17 months old, and weighed 884 pounds. She was handsome, and with all the qualities combined for a good cow; she is now 22 months old, and weighs 1052 pounds. But the committee never gave her a passing notice. The premium was awarded for a heifer weighing but 650 pounds, with a small sprinkling of foreign blood. Let the farmers take the same care of our native stock that they do of the imported, and in a short time our native stock will be far in advance of all others. s. R.

Westford, Mass, Feb. 15, 1859.

STRIKING CUTTINGS IN MOSS.—The variety used is called Sphagnum; it is the long moss found in loose and wet meadows, sometimes used by the farmer in lieu of ice to pack outside of butter boxes when brought to market. In pre-

paring this for rooting cuttings of plants in pots, it should be first thoroughly dried and then pulverized. After filling the pot they should receive a good watering before inserting the cuttings.

CONSERVATORY OF ART AND SCIENCE.

A meeting of about forty gentlemen representing the association of *Agriculture, Art and Science*, and various industrial, educational and moral interests of the city, was held February 18, at the Library of the Boston Society of Natural History. The meeting was organized by the choice of Hon. MARSHALL P. WILDER, as Chairman, and Dr. S. KNEELAND, Jr. as Secretary.

The Chairman stated that the object of the meeting was to take steps for memorializing the present Legislature for a grant of land belonging to the Commonwealth, in aid of a plan for a conservatory of art and science, and he invited the representatives of the different interests to state their views. A reading of the portion of the Governor's message, in which he refers to the value of the public land, and advises a certain disposition to be made of a portion of it, brought the subject fairly before the meeting.

Hon. A. H. RICE gave a sketch of the rise and progress of education in this community, and traced the connection between education and science, and the mechanical and fine arts; the highest development of knowledge among us was only an expansion of the common school system. He considered that some such plan as the one presented, for the enlargement and practical application of science in its various branches to the useful and ornamental arts of life, was imperatively demanded as an educational measure.

Prof. AGASSIZ spoke in favor of the plan, which he thought of great importance, as occupying the middle ground between abstract science and its practical application. Science, in the abstract, must go alone, not hampered with any considerations of practical application, assisting, but not interfering with each other; the moment they are combined in the same association, science must languish. Hence the importance of some institution occupying the ground of an interpreter between the two, which he thought the plan proposed would do.

Mr. M. D. ROSS said that the cause of the present movement was the fact that this unoccupied Back Bay land was in the vicinity of the city; in order to make valuable what now is mere water, it must be developed by the citizens, must be used for some purposes of public improvement.

Prof. AGASSIZ, in relation to the Polytechnic School, said that such an institution, intermediate between trade and science, was vitally important; they could not be combined in the same association—this he likened to the high schools, which are the necessary medium between the primary school and the university.

Rev. Dr. BLAGDEN expressed his approval of any plan which promises to develop the relations between science and art; such an institution as the one proposed, he thought, would elevate the intellectual standard of the community, and meet a great public want.

Dr. A. A. GOULD alluded to the frequency of such institutions in Europe, and thought they were imperatively demanded here.

J. D. PHILBRICK, Esq., President of the *American Institute of Instruction*, Gen. B. F. EDMANDS, Mr. GEORGE SNELLING, ZELOTES HOSMER, Esq., Mr. ALFRED ORDWAY, Rev. Dr. MILES, W. E. BAKER, Esq., AMOS BINNEY, Esq., all spoke favorably and earnestly of the plan proposed.

The Chairman remarked that a large space would be required for the exhibitions of the agricultural products. He alluded to the land bill now before Congress, which, if passed, would give the income of 220,000 acres of government land to Massachusetts to be devoted to an agricultural college, if the State would erect the building. Perhaps this income might be devoted to the furtherance of the agricultural department of this plan.

A committee, consisting of Messrs. Edmands, Ross, Baker, Wilder, G. M. Pratt, Samuel A. Gookin and A. Ordway, was appointed to prepare memorials to the Legislature in aid of the Natural History Society.

We regret that the crowded state of our columns prevents us from giving in full the remarks of all the gentlemen who spoke. The movement is an excellent one, and we shall be glad to aid it in any way in our power.

For the New England Farmer.

TURNIPS--ARE THEY WORTH RAISING?

The same land, with equal culture and manure, that will yield 500 bushels of turnips, will yield sixty bushels of Indian corn. What is the comparative value of these two products for the feed of stock? Neither of them will do well without some other feed—but when a proper quantity of hay is fed with them, either will do very well. My impression is that the corn will do the best, especially when the corn fodder is properly used in connection with the grain—and when properly cured and dealt out, it will be found to be worth half as much as so much hay. I am pleased to see the inquiries of Mr. Brigham, of W., on this subject. He writes as though he knew a thing or two. There are many farmers who could answer these inquiries in a satisfactory manner, if they would. Might it not be well to ascertain these things before another season of planting—and not go along entirely on the hap-hazard principle? ESSEX.

Feb. 13, 1859.

FORCING MELONS, &c.—One of the best methods we have found to raise early plants of the melon and cucumber under glass, is to take sods from three to five inches thick, soak them some twelve hours or more in liquid manure, and then plunge them *grass down*, into the bed, then insert three or four seeds in each sod, where they can afterwards be transplanted with the sod, without disturbing the roots.

For the New England Farmer.

TOWN ASSOCIATIONS.

MR. EDITOR:—I feel rather sleepy to-day, but not enough to prevent me from believing that you and others are striking the right key-note by advocating the formation of farmers' clubs and town associations. I trust that your State will move forward in this matter, so that Maine may follow after in the course of twenty years.

There are county societies throughout the State that give premiums, but these are usually received by two or three towns in the vicinity of the fair. The Androscoggin River runs nearly 50 miles through Oxford County, and has very many excellent farms its whole length, but they scarcely receive a dollar in premiums. The reason is obvious. It costs something to drive cattle, or to carry articles twenty or twenty-five miles to the fair, and be on expense for two or three days, and perhaps return without a premium. This is the case to a certain extent all over the State. What we want, is some plan matured in your State that shall equalize the benefits to be bestowed. Moving the fair about effects nothing. It seems to me that town associations must be established for this purpose. Many towns in Maine now have their town fairs. We had one last year, as on previous years. The stock-neighborhood teams, were very fine, and all the farm productions, and the ladies' contributions were in abundance. Committees were raised, and reports made, but without premiums. Everybody went home happy; yet we had, at the same time, State Agricultural and Patent Office Reports sufficient to have given every successful competitor a copy. Had we done it, the charm would have been broken. A few would have been satisfied, the rest would have grumbled. We chose to give away these books, where we thought they would do the most good. I acknowledge myself an earnest advocate of the farmer's interests, but these interests need equalizing all over the county. I admired the grit of a young man, a year ago, when at a club meeting the expense of raising potatoes was discussed, at the close of the meeting, he remarked, "I can show you next year that potatoes can be raised cheaper than *that*," and he did do it, by raising 1500 bushels the last year at one-half the expense estimated by some of his neighbors. He cared nothing about a premium.

You need, and so do we, a man to canvass the State, lecture and form clubs in every agricultural town. I have more faith in that agency, than in all the premiums the State can bestow. I would not overthrow the County or State societies; they would be the stronger, by the movement. Don't send a white-kidded gentleman among farmers, but an intelligent, practical, common sense man, such as will at heart sympathize with the farmer, and the work is done.

Now, Mr. Editor, I am fairly waked up, and will review what I have written. N. T. T.

Bethel, Me., Feb. 18, 1859.

REMARKS.—Glad you *are* awake, sir—wish there were ten thousand more in the same condition. Your hammer strikes right, and hits the nail on the head. The beneficial results of pre-

miums, as now awarded, and of big cattle shows, as now conducted, are nearly at an end. There must be more personal effort, and less show and bluster, and less talk for "Buncombe." You must go to the neighborhood or home of the farmer, and excite him there, among his neighbors—excite them all, once or twice, and then they will excite each other. Cattle shows, properly conducted, are well enough for some things, but they are spasmodic, and do not go deep enough with the masses.

DECREASE OF WATER ON THE GLOBE.

At a late meeting of the British Association, a Mr. Galton read a paper by Mr. J. Spotswood Wilson. "On the General and Gradual Dessiccation of the Earth and Atmosphere." The writer drew attention to the fact that those who had travelled in continental lands, especially in or near the tropics, had been forced to reflect on the changes of climate that appeared to have occurred. There were parched and barren lands, dry river channels and waterless lakes, and not unfrequently traces of ancient human habitations, where large populations had been supported, but where all was now desolate, dry and barren.

After quoting largely from the works of various travellers and writers, (among the latest of whom was Dr. Livingston,) and giving interesting descriptions of dried up rivers and desolate tracts of country in Australia, Africa, Mexico and Peru, which had formerly been inhabited by man, Mr. Wilson concluded that there was a gradual solidifying of the aqueous vapors, and consequently of water, on the face of this terrestrial world, which he inferred was approaching a state in which it will be impossible for man to continue an inhabitant. Yet, he added, we should feel satisfied with the prospect that the term of our occupation is not yet half expired. Races preceded us in the chain of existence, and there was no reason to suppose that others would not follow. Indeed, some of those that are destined to succeed seem to be already in existence, and have their home in the icy sea, where they enjoy a climate that exceeds man's endurance. Various considerations lead to the conclusion that the fitness of the earth for man may extend to a period much longer than that in which it has been occupied by him; nor will that term end till after the Polar bear, the walrus and the narwal have become inhabitants of the tropics.

For the New England Farmer.

SEA KALE.

I beg to say a few words upon the cultivation of sea kale, a vegetable of great excellence, and requiring but little care when a bed is once formed. It is perfectly hardy, grows on any light soil, requires no manure, indeed, it does better without it, and is perennial. It may be grown from seed or from the root, and fifty plants occupying a small space, will supply a small family. In its taste it resembles the cauliflower, and should be cooked in like manner, by boiling. It comes in season a month before asparagus, and may, by protecting the bed with a heavy

coating of straw or hay, a practice always to be recommended, be brought forward even in March. It is much better when it is bleached, and this is done by keeping the plants from the sun under pots, boxes or straw. The seed can be purchased at our seed-stores, or if not at all of them, at that of Curtis & Cobb, in Washington Street. Every farmer should have a bed of this vegetable for his own use, and our market-gardeners would find nothing more profitable to cultivate.

F.

EXTRACTS AND REPLIES.

POTATOES FROM THE BALL.

In the fall of 1854 I saved a dozen potato balls (all from peach blows) and planted them in a seed bed the following spring, from which I dug about two quarts of 'small specimens' of every conceivable shape and color. There are over thirty distinct varieties—some very poor and much affected with the rot—others white, mealy and nice, and not much affected—some yield well, and are good sized, others produce just enough for seed, and little, watery, soggy things at that. I have planted such as I thought to be the most promising, and from my experience in the matter I am of the opinion that there will be a few among them that will prove productive and profitable.

I raised last year from a bushel and a half of these potatoes, thirty-five bushels of sound ones, on ordinary ground, without taking any extra pains with them.

J. J. WATSON.

Orange, Vt., Feb. 7, 1859.

HOW TO CURE KICKING COWS.

In last week's *Farmer* I noticed an inquiry by a subscriber in South Weymouth for a remedy for a kicking cow. I have had many such, and have used various remedies, I have sometimes put a rope or small chain around the cow's body just back of the fore legs, and with a small stick, twist it quite tight. Occasionally it does very well. If the cow is not very bad, put a strap around the hind legs in the form of an S, and draw it pretty tight. I had very good success the last season, in subduing some turbulent heifers, by applying a sort of ring with a spring to it, called a bull-holder, to the nose of the animal, and drawing the head pretty high; after a few lessons they generally give up.

ABEL F. ADAMS.

Fitchburg, 1859.

A COMPLIMENT—BOOK-FARMING—USEFUL MANURES.

It is a paper which ought to be read by every farmer in New England. Many of the single articles it contains of themselves are worth the price of the paper. I am not one of those who declaim against book-farming, but am willing to receive instruction from any source. It seems to me that book-farming and practical experience can be made to harmonize. Who, in reading some agricultural journal, has not had his attention called to some valuable muck deposit, or other material, upon his farm, which may prove a mine of wealth or a bank from which to draw in time of need, rather than from the purse to pay for adulterated manures?

Again, the success of our farmers carefully no-

ted down and laid before the public, has probably done much towards reclaiming *that* swamp, underdraining *this* wet field, sinking *those* boulders, and a hundred other like improvement.

By the way, I beg leave to differ from your correspondent from West Needham, where he says "there is no place more suitable for manure in winter than under the eaves of the south side of the barn." He seems to think that manure made in a barn-cellar is too strong for growing plants—but where is there not a chance for mellowing it with muck, forest scrapings, leaves, or even saw-dust, if too strong, and thus increase the farmer's bank, rather than diminish it by soaking eaves and washing showers?

Pottersville, N. H., Feb., 1859.

GARGET POISON TO HORSES.

Last May, one of my neighbors had a cow to which he wished to feed some garget, and to cut it used a hay-cutter, the one that they cut hay with for two horses; the result was, the horses got some small pieces of the garget, and they both died in a few days from the effects of the poison. I mention this for the good of the public, as I think there are many farmers who do not know that garget is a deadly poison to horses.

A SUBSCRIBER.

Putney, Vt., 1859.

"SPARE THE BIRDS."

I have just met in Vol. X. of the *Farmer*, p. 306, a well-written article on this subject, which I refer to with the greatest pleasure, as it controverts the notions of Mr. N. Page, Jr., put forth with adroitness in the lately published transactions of the Essex Society. I admire to see the beautiful robin hopping and chirping about, and would not have them wantonly killed. I cannot agree with Mr. Page, that they deserve to be killed, because they pick a part, it may be the larger part, of currants, strawberries or cherries.

RULES FOR MEASURING LUMBER.

Can you inform me where I can get a log-book for measuring round timber of any size or length, or scantling? A book that will tell or give the measure of any kind of lumber?

Marshfield, Vt., Feb., 1859. C. H. LEWIS.

REMARKS.—The Text Book of Modern Carpentry, published by Crosby, Nichols & Co., of this city, contains more that you want than any other book we know. We find very little on the measurement of timber in any of the mechanics' text-books.

MAPLE SUGAR.

I send you a sample of maple sugar made on the 18th of February. I tapped eight small second-growth trees on the 17th, from which I obtained eight pails of sap of the sweetest flavor. I do not believe any one in Vermont has got the start of me in making maple sugar this year.

Poultney Vt., Feb. 22, 1859. J. E. COBB.

REMARKS.—Excellent—excellent. Hope you have a good memory!

SALT AS A MANURE.

FRIEND BROWN:—I wish to know how salt is to be applied to the soil,—whether it should be mixed with barn-manure, or sown broad-cast? If mixed with manure, in what proportion? If sown, how much to an acre, at what season, and what kind of soil is most benefited by it? Would it be advantageous to use it when barley is to be grown? How would it affect pasture land? And further, I would solicit the opinion of some of your experienced correspondents on the profit likely to accrue from purchasing salt at 20 cts. per bushel for agricultural purposes.

Would you consider it profitable to buy air-slaked lime, at eight cents per bushel, to put on land?

A. C. BUFFUM.

North Berwick, 3d Mo. 3d, 1859.

REMARKS.—We have often used salt as a fertilizer, but have not pursued the experiments with sufficient accuracy to make them worthy of note. So we refer to others, and find plenty of evidence that salt may be used profitably as a fertilizer where it can be obtained at low rates—where it is dirty or in a damaged state so as to make it unfit for common purposes.

Salt renders dry loams more susceptible of absorbing moisture from the air, and this is of great importance, because those soils which absorb the greatest proportion of water from the atmosphere, are always the most valuable to the cultivator. On heavy undrained lands it would not act beneficially.

When sprinkled slightly over manure heaps it checks the escape of the carbonate of the ammonia, and tends to prevent undue fermentation. It not only acts on vegetation as a stimulant, but serves as a direct constituent, or food, of some kinds of plants.

Applied to grain crops, on light soils, at the rate of 500 pounds to the acre, salt increases the produce of seed, and very much improves its weight and quality per bushel. On grass land and clover, salt has a good effect, rendering the herbage more palatable to stock.

Mangold wurtzel, manured with salt mixed with farm-yard dung, at the rate of ten or twelve bushels, or even more, per acre, grows luxuriantly. It would undoubtedly be useful on a barley crop, because the soil adapted to that plant, is the kind of soil most benefited by salt.

We do not doubt but that salt at 20 cts., and air-slaked lime at 8 cts. per bushel, would be profitable on land where they are actually needed.

UNIVERSAL PLOW—BLOODY MILK—FLEMISH BEAUTY PEAR.

Do you know how the Universal Plow works on rocky and stony ground, whether greensward or old ground, rigged with the intervalle mould? It looks in the cut as if it might work well. The Eagle of Nourse, Mason & Co., are of good workmanship and material, and in clear land,

gauged to a certain depth, they work well—but in stony land they hold hard and don't turn well.

ANSWER.—We hear the *Universal Plow* spoken highly of—have used one to plow several acres of sward land, and find it to work admirably. It is quite probable that a shorter plow might work better on rocky land, than the *Universal*.

Bunches came on the teats of my young cow, and she gave bloody milk; I gave her garget, and the blood ceased to come, but the bunches remain. What shall I do for her?

ANSWER.—Give her six drops of the *tincture of Aconite*, on some meal wet up with water, every other day for ten days.

Do Flemish Beauty pears often crack? I had some that cracked so badly last year as to be worthless; they were on gravelly and stony land. One tree had lime, ashes and soap suds around it.

A SUBSCRIBER.

ANSWER.—Are you quite sure that your pear is the Flemish Beauty? It has not the habit of cracking. This pear must be gathered earlier than most others, even before the fruit parts readily from the tree, and then ripened in the house. If left to ripen on the tree it becomes soft and flavorless, and decays soon.

HUNGARIAN GRASS.

Is it an annual plant, or is it of the nature of other grasses? Will you tell us all about the Honey Blade Hungarian Grass Seed?

Cambridge, N., 1859.

GREEN GRASS.

REMARKS.—We have quite recently given an account of this grass. We have not grown it, but understand that it is an annual plant, requiring to be sowed every spring, like millet. The "Honey Blade" is a homied term to catch gulls with. Test it by the rod rather than by the acre—by purchasing and sowing only a few pounds of the seed at first.

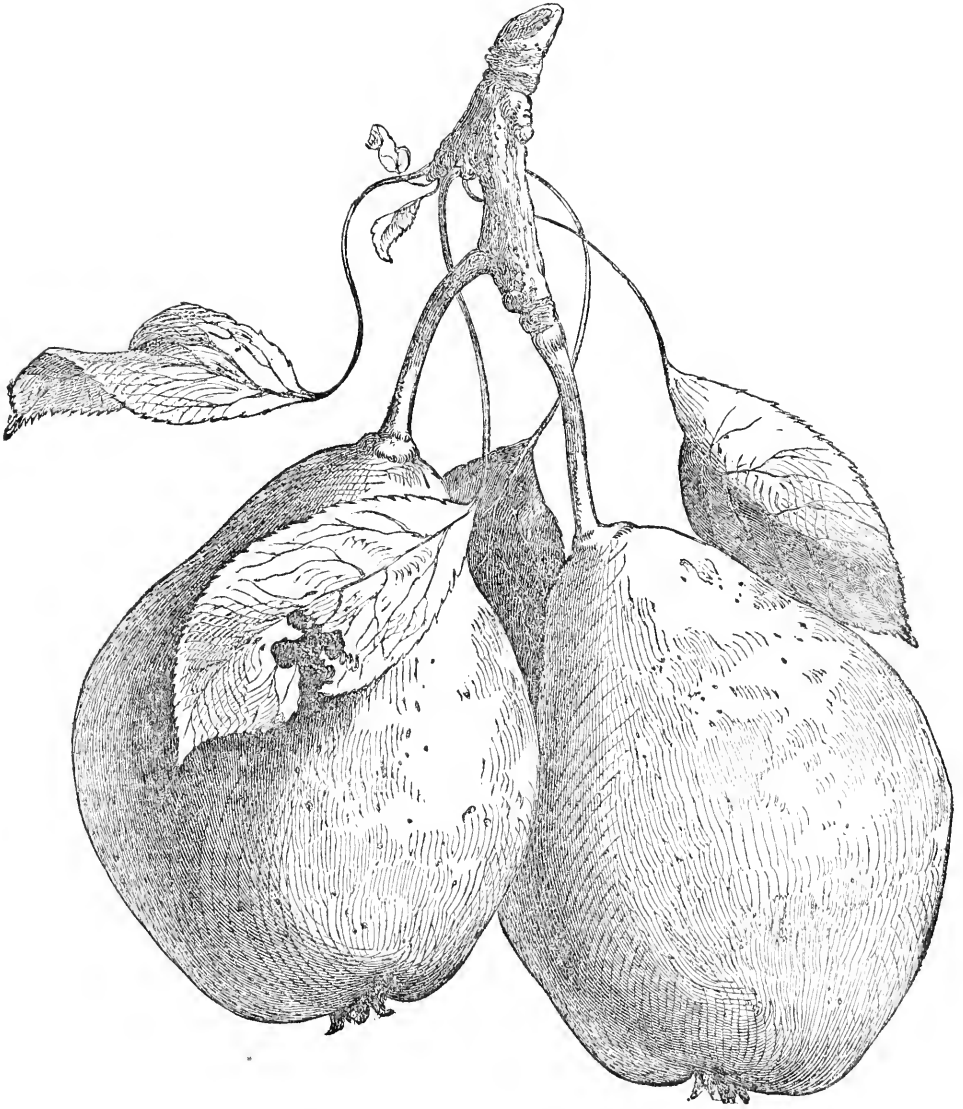
ARE HENS PROFITABLE?

I make the keeping of hens more profitable than any other stock, compared with the capital invested. I feed my young chickens with corn meal four times a day, and plenty of skimmed milk. When old enough to lay, I give them all the corn and oats they will eat, with gravel, lime, and frequently cayenne pepper, mixed with their meal. Twelve hens will lay 142 dozen of eggs in a year, or 142 each, and I call that doing well—though they will sometimes do more.

East New Sharon, Me., 1859. A. R. HALL.

ARTICHOKEs.

A correspondent of the *Cultivator* says that 2000 bushels of this root could be raised on one acre. I have no doubt of this, for from a single rather small tuber I dug in the fall nearly or quite one peck. This root threw up three stocks, yielding as above.



THE MARIE LOUISE PEAR.

FORME DE MARIE LOUISE.
MARIE CHRETIENNE.

PRINCESS DE PARME.
BRADDOCK'S FIELD STANDARD.

In accordance with our promise at the commencement of the year, to illuminate our columns with choice illustrations of valuable subjects, we now have the pleasure of adding to others already given, the above beautiful and truthful portrait of the *Marie Louise Pear*—a pear “everywhere held in the highest estimation.”

According to Downing's account, “this truly delicious pear was originated from seed, by the Abbe Duquesne, of Belgium, in 1809, and its fruit was first sent to England by Van Mons, in

1816. It was introduced into this country, along with many other fine Flemish pears, about 15 years ago, and is everywhere held in the highest estimation, keeping for a long time in the house. The tree is hardy, but has an awkward, rather crooked, and declining habit, and very narrow leaves. In the nursery it is best, therefore, to graft it standard high, when it soon makes a good head. The young shoots are olive gray. It is a pear for every garden, bearing very regularly.

Fruit pretty large, oblong-pyriform, rather ir-

regular or one-sided in figure. Skin at first pale green, but at maturity, rich yellow, a good deal sprinkled and mottled with light russet, on the exposed side. Stalk an inch and a half long, obliquely planted, sometimes under a slightly raised lip, sometimes in a narrow, somewhat plaited basin. Flesh white, exceedingly buttery and melting, with a rich, very saccharine and vinous flavor. Last of September and middle of October."

A HAY SPREADING MACHINE WANTED.

The farmer has found valuable assistance in securing his hay crop in the mowing machine, and horse rake; they enable him to get more hay, to get it better, in a shorter time and at a cheaper rate, than he ever did without their aid.

The mowing machine spreads the hay very evenly on the ground where it grew, leaving it in a condition to dry rapidly, but not to be easily turned, unless it is done by the slow process of using the hand rake.

What is wanted now, is, some light, cheap implement, to put into the fields about ten or eleven o'clock, A. M., with a boy and horse, to pass over the hay rapidly and fling it to the air, so that it will be sufficiently dry to go into the barn on the same day that it is cut. The process of hay making might then be,—cut the grass with a mowing machine just at night, or early in the morning, and by ten or eleven o'clock the top would be nearly dry; then, between eleven and two o'clock, pass over it rapidly with the "tedding machine," or hay spreader, keeping it in motion while the men are at dinner, and by two o'clock, the hay will be ready to go to the barn, provided the day is bright, attended with a drying wind.

Hay made in this way may be secured at a cost of about one dollar per ton less than where it is raked, cocked, partially spread again the next day, and then tumbled up and got in. To any person keeping a dozen head of stock, this saving ought to be sufficient, in one or two years, to pay the cost of the machine.

The *Massachusetts Society for the Promotion of Agriculture*, purchased an *English Tedding Machine* last year, and introduced it into Middlesex county. We saw it on the farm of Gen. LYMAN, at Waltham, who had given it a thorough trial, and who expressed a decidedly favorable opinion of its merits, and of its adaptation to the same fields where the mower has been used. This machine is all iron, too heavy by one-half, and too expensive. Yankee ingenuity can devise one more simple in its construction, lighter, and cheaper, and yet strong enough to be durable, and do all the work required of it. Who will devise and construct it, and make \$10,000 out of it? Here is a fine opening for inventive genius.

Make a machine, and allow us to test its merits by the 25th of June.

For the New England Farmer.

COAL ASHES AS A MANURE.

But few experiments have been made by American farmers to test the fertilizing properties of coal ashes. While we are importing guano and other manures from foreign lands in enormous quantities, and at great expense, it may be well to employ some substances nearer home, which are now neglected and cast aside as useless. Thousands of tons of ashes might be obtained in cities, where coal is extensively employed for fuel, which, when applied to the soil, would doubtless greatly augment its productive powers. It is stated in "Faulkner's Farmers' Manual," an English publication on manures, that coal ashes contain sulphate of lime, with some potash and soda, all of which are known, when separately applied, to produce a good effect on clover crops, and to constitute an important part of the food of all grasses.

The following experiment by an English farmer, may shed some light on the subject; the ground selected contained three perches of clover; the first had no manure, and produced thirty-eight pounds when cut in full head; the second, where four quarts of sifted coal ashes, which had not been exposed to the weather, were applied, the produce was fifty pounds; on the third perch, one quart of plaster was sown, and the crop weighed fifty-four pounds. It will be seen that the ashes increased the clover nearly one-quarter above that on which no manure was applied, which goes to prove that this substance is a valuable fertilizer. Coal is said to be of vegetable origin; therefore, we can see no reason why its ashes should not contain the food of plants. Experiments on various soils and crops might be made by any farmer at a small expense, as coal is employed as fuel in nearly every town.

O. V. HILLS.

Leominster, Mass., Feb., 1859.

UNIVERSAL PLOW FOR STONY LAND.

Since replying to the inquiry of a correspondent recently, in regard to the value of the *Universal Plow on stony land*, we have taken pains to call on one of the best plowmen in New England who was among the first to use it, and with the various mould-boards before us, had a long "plow-talk" over them, and could not fail to come to the conclusion that the *upland* mould-boards of the Universal Plow adapt the instrument peculiarly well to the plowing of rough and stony *grass lands*.

They have a short and powerful curvature or *twist*, which enables them to turn the sod well among stones.

They are quite broad on the bottom and at the heel, so that they spread the furrow-slice well, and prevent stones from rolling back into the channel and bringing the furrow-slice back with them, grass-side up. Whatever the share enters un-

der and lifts, the mould-board is quite sure to spread off and turn over effectually.

The share has a good strong *dip*, or earthward tendency, which enables the plow to enter readily under the furrow-slice, and among the stones, to hug the ground well.

The proportions of length of beam to weight of plow are such as to balance the instrument well, and make it run true, without jumping when the share strikes a stone or other obstacle.

The stubble mould-boards of the Universal Plow work excellently in old ground that is stony. They are short, with a strong turn and peculiar form, by which they lift the furrow-slice high and throw it off powerfully, burying the stubble and vegetable matter completely, and leaving a clean channel for the next slice, and breaking and pulverizing the soil.

The No. 141 upland is the right mould-board to buy for plowing stony grass land, where the team is two to three cattle; and the No. 152 stubble mould, for a pair of horses or oxen in plowing old ground. That makes two changes. A third and excellent change is had by procuring the skim plow and using it on forward of the No. 152 stubble mould, for sod and subsoil plowing, working the land 8 to 10 or 12 inches deep, as desired. The best form of mould-board for stubble or old ground plowing, is also the best for the rear mould-board in sod and subsoil plowing, lifting the earth high and throwing it off well. The No. 152 mould-board does this to perfection. The No. 140 upland mould-board is a larger size than the 141, for two yokes of oxen. The No. 141 mould-board has been considerably used for plowing stony sod land, and the best reports are heard from it.

GLOBE MANGEL WURTZEL.

MR. BROWN:—A few weeks since I forwarded to you a few words on the Yellow Globe variety of Wurtzel, as cultivated in France, and having met with some remarks of an English farmer, commending this sort, I herewith send you the following extract:—

“With regard to this variety not producing near the weight of the long rooted, I would say that the result of my first trial in the same field and under precisely similar treatment as the long, was so much in favor of the Globe, that its merit with me and several who witnessed it was so far established, as to induce me to sow only sufficiently long, to produce an additional proof of its inferiority. In my case, the result is a decidedly increased quantity and quality. Added to this, its superiority as a keeper is unquestionable; the reason with me is obvious, for the virtue and quality of the root being concentrated in its globular form, whereas in the long, the want of that density and close texture renders it more exposed to the action of the air, which

absorbs that portion of succulent matter indispensable to its proper keeping for the purposes of late feeding, in which its permanent value consists.” The Orange Globe, (says another,) “is more nutritious.” For the cultivation of the Mangel Wurtzel, see the *N. E. Farmer* for last May. I.

NATIVE SHRUBS.

In the culture of ornamental shrubs, but little attention has been given to our beautiful native varieties, such as the large flowering mountain laurel, (*Kalmia latifolia*), *Rhodora Canadensis*, and *Clethra anifolia*. These three sorts rival in beauty many of our foreign or introduced shrubs. The *Kalmia* is not only found growing in a swampy or wet soil, but also on comparatively dry upland; its general height is from four to eight feet, the flowers are disposed in large corymbs at the extremity of the branches, and are of a white color, tinted with red. It blossoms in June and July. The plants, when taken up with a ball of earth attached and placed in a half-shady situation, not being exposed to the meridian sun, the soil rather moist, will generally succeed. They should be transplanted as early in April as possible. The *Rhodora*, or as it is sometimes called, “The False Honeysuckle,” is a smaller shrub, with beautiful purple flowers which precede the leaves early in the spring; the bush, when in bloom, resembles a dwarf peach; its height is about two feet, and it is found growing frequently in clumps in low ground, but will flourish in almost all good soils that are not too dry. This shrub should be taken up as early in spring as possible, or late in the fall. The *Clethra*, called White Pepper Bush, is a tall and clean-looking white flowering shrub, having leaves of a rich and shining green, rarely injured by insects; the flowers have a strong fragrance resembling the *Syringa* or Mock Orange. We have often commended our cultivators to try this plant for hedges, particularly on moist or springy land, as it is invariably found in such soils.

RADISH---ONION.

A good method to pursue to obtain radishes free from worms, is to mix seeds of the Early Olive radish with that of the onion, sowing them together: that is, in a bed requiring two ounces of onion seed, mix one-half an ounce of the radish. We find that in pulling these roots, it does not seemingly interfere with or injure the onion. The onion we should sow, and would commend for table use, is the Early Weathersfield Red; it is milder flavored, and a more delicate variety than the Danvers Thick, or the Common Yellow, and altogether the best variety for eating; the root is of the form and size of the other varieties.

CHESHIRE COUNTY, N. H.

The people in Convention, comparing their experiences.

Another of the series of agricultural meetings instituted in Cheshire County, was held at Keene, Feb. 17, in the Town Hall. Gen. CONVERSE, President of the County Society, in the chair. The afternoon was devoted to a general discussion of the subject of *Manures*, and to that of *Wheat*,—the question upon the latter being, whether the farmer cannot raise the grain and supply himself with flour, at less cost than he can raise other articles, subject himself to the cost of finding a market, selling, and then, after paying three or four profits to those whose hands it has passed through, purchase what he needs for his family supply? No vote was taken upon the question, but judging from the remarks of the speakers, we came to the conclusion that the impression was a general one that the farmers of Cheshire County were working at considerable disadvantage in neglecting to raise wheat, and in purchasing so largely of flour. As an illustration of the amount of flour purchased in the towns, it was stated that in a single town in that State, where there was not a manufacturing establishment in the town, but where nearly all the people were engaged in farming, and the population only about fifteen hundred souls, *five thousand dollars worth of flour* was annually sold! And it was thought that about this state of things exists all over New England. It appeared by the statements made that there is no difficulty in obtaining remunerating crops of wheat in that region. Mr. GEORGE H. WRIGHT, of Keene, said he had always raised wheat, and got an average of fifteen bushels per acre, and found the crop as sure as any other. Mr. JAMES ELLIOT, of Keene, said he had raised *forty* bushels of wheat on a little less than one acre and a quarter! Col. ADAMS, of Fitzwilliam, rarely failed in getting a good crop of wheat; thought it as sure and profitable as any of our farm crops. Mr. BOYCE, of Troy, said he went into debt for a farm, raised wheat profitably, and soon brought the farm into condition to make it a sure and good investment of his labor.

The discussion of the subject of manures took a wide range—but the evidence was, that the farmer must mainly depend upon what can be accumulated on the farm through his own industry and skill in collecting, composting and preserving it; that this, more than all others, is the manure best adapted to the soil and the crops, and will secure to him the most successful and profitable results. Mr. MILAN HARRIS, of Harrisville, gave detailed statements of his experiences with guano, showing that on moist lands, with proper skill in its application, he had used considerable quantities with satisfactory results.

But notwithstanding this, he candidly stated that he agreed in the opinion expressed by others, that the farmer must depend upon the resources of his own farm, and if he used the specific fertilizers, must use them as helps, rather than as principals. In this connection, Mr. S. W. BUF-FUM, of Winchester, spoke of the importance of a better knowledge of our farm operations, and especially in *preparing the manures* upon which we are to depend for successful crops. He warmly urged upon the farmers more reading and careful investigation, and said no efforts they might make would pay better in the end. In these statements he was confirmed by the venerable JOHN PRENTISS, of Keene, who said that farmers, as a class, undervalued books, and that in the fifty years he had been a bookseller in that place, he had rarely sold a work treating upon agricultural matters to a farmer! The mechanic, the machinist, merchant and manufacturer, were eager to gather information from books, or any other source, but the farmer seems to have prejudices that are invulnerable. Mr. P. also detailed his plan of making up a manure heap by collecting leaves and all sorts of vegetable refuse, and composting them with matter from the cow and horse stall, depositing the mass under cover until it became quite fine, and then using it upon his garden crops. Mr. WOODWARD, *Editor of the Keene Sentinel*, spoke favorably of top-dressing mowing lands before the roots of the grass are exhausted, and thus make them continue to yield a ton and a half per acre for a dozen years in succession, instead of incurring the expense of re-seeding each five or six years.

In the evening, the meeting was much more fully attended. A lecture was read by the Editor of the *N. E. Farmer*, upon *some of the hindrances of good farming*, and upon its *social relations*, and then an animated discussion followed, which continued until past nine o'clock.

The next meeting of the series was held at Marlow, 17 miles from Keene, the next day, Friday, the 18th. Hon. ALLEN GRIFFIN was elected President, and Mr. LEWIS, Secretary. The *grass crop, manures, grain crops* and top-dressing were the subjects discussed. The President opened the meeting in an interesting speech upon practical topics, which operated as a key-note throughout. Messrs. ELLIOT, of Keene, DOWNER, Dr. PERKINS, Col. FARLEY and MESSER, of Marlow, related experiments or experiences in regard to one or another of these subjects. Mr. POWERS, of Marlow, said he brought land that was so poor that sorrel would not grow on it, into a high state of product by the use of *meadow muck*. The President confirmed this statement by saying that he often had occasion to pass the land referred to, and believed it to be one of the most

productive fields in the town. Mr. PARKER, of Marlow, made valuable statements in relation to the use of muck, and urged the people to give it more attention, and cited several things that had been said as showing the importance of such gatherings as these. He thought them just what is needed to improve the condition of New Hampshire farms. Mr. SIMONDS had used tan, he said, with excellent results—plowed under deep, it keeps the land light and porous, and he believed had some fertilizing properties.

The evening exercises were similar to those at Keene, and the Town Hall was crowded with attentive listeners until 9 P. M.

For the New England Farmer.

FEED OF MILCH COWS.

MR. EDITOR:—In looking over the "Transactions of the Worcester North Agricultural Society," for 1858, I have been a good deal interested in the record of some experiments, made by JOHN BROOKS, Jr., of Princeton, for the purpose of testing the relative value of different kinds of feed for milch cows. So far as one can judge through the manifold blunders of the printer—(you gentlemen of the press do sometimes make strange work—[It is strange there are not more.—Eds.] with types)—the experiments appear to have been tried with care; but they would have shown better the comparative milk and butter-producing qualities of the varieties of feed, if each variety had been given to the animals some days before the result was recorded, so that the trial should begin under the full influence of the feed experimented with; for in the daily record there is sometimes a large difference between the first and the last days of the trial, the effect of one kind of feed running into the next experiment. For instance, as to the amount of milk; one cow, during the trial of cotton seed meal, gave at the commencement, 10.94 pounds, and on the last day 14.19 pounds, showing a daily increase for the whole time. And with 15 pounds of English turnips daily, all the cows gave an increased amount of milk at the close; while, with the same quantity of rutabagas, directly following the English turnips, three of the four cows gave less milk at the end than at the beginning of the term—in one case a pound a day less. On the last day of trial with English turnips, the aggregate of milk given by the four cows was 37.37 pounds; with rutabagas it was but 34.50 pounds. This result conflicts with the common opinion in regard to the relative value of the English turnip and rutabaga; and perhaps it should not be received as settling any point in dispute; but, looking at the various aspects of the result, it certainly should not be set aside as worthless testimony in favor of the turnip. It is to be regretted that Mr. Brooks did not state which of the very numerous varieties of the English turnip was used in his experiments, as there is probably some difference in their value for feed.

I have made an abstract of some of the more important matters in Mr. Brooks' tables, which, perhaps, you will think of sufficient value to present to your readers. I take at random the cow

Dora. The quantities of milk given, are the daily average for the whole term of five days for each experiment. She gave, when fed on

	Milk.	Cream.	Butter from 4 qts. milk.
	lbs.	pr. ct.	oz.
Hay only, 27.60 lbs.....	8.33	1.66	10
Hay 22 lbs., cotton seed meal, 2.75 lbs.....	11 51	1.87	12
Hay 24.40 lbs., Eng. turnips, 15 lbs.....	10.50	1 71	11
Hay 23 lbs., ruta bagas, 15 lbs.....	10 06	1.61	10
Hay 23 50 lbs., carrots, 15 lbs.....	10.89	1.65	10
Hay 25 lbs., English carrots, 15 lbs.....	10.38	1 68	10
Clover hay, 2nd crop, 28.40 lbs.....	11.31	1.73	11
Hay 23.80 lbs., corn meal, 2.75 lbs.....	10.46	1.67	10

In the following table may be seen the daily average for the four cows used for the experiments, with the average increase or decrease of milk during the time occupied by each trial. Does Mr. Brooks, by *English* carrot, mean the common *white* carrot?

	Milk.	Cream.	Increase of milk.
	lbs.	pr. ct.	lbs.
Hay only.....	7.34	1.64	.97
Hay and cotton seed meal.....	9.34	1.84	1.97
Hay and English turnips.....	8.95	1.70	.75
Hay and carrots.....	8.81	1.57	.53
Hay and English carrots.....	8.31	1.63	.29
Clover hay, 2nd crop.....	8.09	1.81	2.04
Hay and corn meal.....	7.82	1.65	.62
Hay and ruta bagas.....	9.07	1.61	.40 dec'e.

Mr. Brooks probably has convenient arrangements for experiments of this sort—will he not increase the obligation under which the farming community lies to him, by enlarging on his experiments, and bringing new articles of feed to the test? He can then do a great service to his brethren, while he is benefiting himself more especially.

MINOT PRATT.

Concord, Feb. 17, 1859.

FRUIT CULTURE.

The greatest desideratum, at this time, in the culture of the apple and pear, particularly the latter, is to ascertain for ourselves, on our respective soils, what varieties will succeed well with us, and cultivate these, as being the most remunerative.

Our fruit books generally do not enlighten us much on this important matter. One of the most practical cultivators of fruit and vegetables in England for almost a century, (having recently deceased at a very advanced age,) was John Rogers; he may be said to be the only writer who has given us scarcely anything upon the importance of the right soil for the various kinds; thus in his description of the St. Germain pear, he writes, "No tree thrives better on a light, shallow loam, on a dry bottom; and no pear is of less value, if grown in deep, rich, heavy soil." He speaks of apples "having local propensities, rendering them more prolific in one place than another," and continues, "deep, rich soils in sheltered situations, are not the most proper for the apple, though recommended by writers who ought to have known better."

When asked the cause of canker, he would reply, "that it is occasioned by too deep planting on unfavorable soils." Of the Quince apple, it should not be planted on a strong, moist soil; of another variety, should be planted in a light, sandy loam; of another, should be in the same, for though it arrives at a greater size, both of tree and fruit, in deep and rich loam, the fruit greatly deteriorates. The Nonpareil requires a light, rich loam, on a dry subsoil, for in heavy soils it soon becomes cankered and falls to decay. Of the Summer Golden Pippin, a light, loamy soil, on a dry bottom suits it best. Of Harvey's Pippin, this sort is not nice as to soil generally. Of the famous Ribston Pippin, which he calls the "Glory of York," he says, tree hardy, healthy and vigorous, if planted in a loamy soil, having a dry, hard subsoil; stiff, moist soil causes canker, while on inferior soils, even in bleak situations, the tree bears bountifully.

As regards the above extracts, it may be said that these effects may not necessarily follow in our country; but if they may not occur to such an extent on our soils, we cannot but think, from what we have observed here, that it will be found to be true in a measure, at least, on our New England soil.

For the New England Farmer.

HOW TO TREAT A YOUNG ORCHARD.

MR. EDITOR:—How would you advise to treat a young orchard of six acres, set at different times, since 1848? The land a rather poor, gravelly, sandy soil; a part abounding in stumps, having been cleared four years since. Previous to setting, holes seven feet in diameter, 18 to 24 inches deep, were dug and filled with top soil, loam, and in some cases, mud. The part first set has been kept in constant cultivation, moderately manured and cropped with corn, potatoes, beans, roots, &c. Distance from barn one half mile. The manure from the barn-yard can be used to good advantage, (is in fact needed,) on orcharding, mowing-fields and gardens nearer home.

Queries.—Would it be good policy to keep the ground plowed and harrowed, without manuring or cropping?

Would it be a good plan to sow buckwheat or some crop to turn in green?

Or would a slight manuring and cropping, (planting nothing within several feet of the trees) be on the whole better, economically considered, than either of the above methods?

In general, the growth of the trees thus far has been very good. Unquestionably, liberal manuring would be a capital idea; but where this is not readily obtained, it is natural to seek other means to gain the desired object.

Lexington, Feb., 1859. SUBSCRIBER.

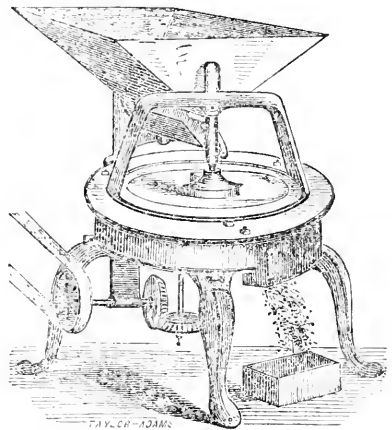
REMARKS.—As you have begun an orchard, and already expended considerable money upon it, it will be exceedingly bad economy to suffer

it to depreciate. Our opinion is, that the trees should be kept in vigorous condition in preference to the mowing-fields near home. Let a portion of these go to pasture, or rest, if you cannot supply the whole with manure, and dress the orcharding so that the trees will continue to grow thriftily. They will not stand still—if they are not growing, they will soon become sickly, borers and other vermin will attack them, and they will soon acquire a habit of decay which you cannot arrest.

Plow the ground, manure it as well as you can, sow clover seed and cut the crop for two years; then cut the rowen, let it lay and wilt a day or two and plow that under, and you will fill the soil with vegetable matter from the roots of the clover. With a lighter manuring, the land may then be moderately cropped for a year or two, and then you may change to clover again. In this way the crops will pay for labor and manure, and you will get the growth of the trees free.

PORTABLE IRON GRIST MILL.

We know nothing, personally, of the merits of this mill, but give the illustration and description of a party interested, because we believe a good, low-priced mill is an article much needed by farmers. It is stated that "the grinding surfaces are flat like a burr millstone."



"The mills have been severely tested, and have been driven 600 revolutions a minute, grinding 12 to 15 bushels of fine meal an hour, without clogging, and thus demonstrating the fact that the principle of the mill is correct. The grain feeding directly upon the revolving under plate—the upper plate being stationary—is ground or cut as fine as is wished by regulating a screw at the bottom of the spindle, while the centrifugal force drives the meal to the outer edge and throws it off. These mills are constructed wholly of cast and wrought iron, are of great strength

and efficiency, with no springs or wood-work to get out of order. It requires little power or skill to run it. It will grind saleratus, cream tartar, white sugar, bones, grain, coffee, and as a chicory and spice mill has no equal. Any part of it can be duplicated at small expense. The grinding surfaces are very durable, and can be duplicated when worn out at the expense of a single pecking of a burr stone, with no delay of the mill.

"There are two sizes; the small hand mill, suited to the wants of the farmer, is of sufficient power and capacity to do all his milling at home at his leisure, and saving in tolls enough in a short time, to pay for the mill.

"The large mill is of great strength and power, and can be driven by horse or other power to do great execution."

For the New England Farmer.

THE ONION MAGGOT.

MR. EDITOR:—Reflecting upon the inquiry you made of me yesterday morning, I thought it might be useful to answer with more distinctness, in a form that you can make known to those seeking the information. Your inquiry was, as I understood it, Has any mode of destroying the maggot or worm that depredates upon the onion yet been discovered? My answer was, None, or none that has come to my knowledge.

The last season, I made particular inquiry on this subject of Mr. D. Buxton, Jr., I. Bushby and I. Stone, three of the most intelligent cultivators in this county, and their answer, uniformly, was like that given by Gov. Lincoln, in 1845, at the close of a discussion of the potato rot; the only thing certain about it is, "it is death to the potato." Be this as it may, I have never had better potatoes than this past season; and although many hundred bushels of onions have been destroyed by the maggot, there are still enough left fair and bright for all reasonable purposes. A still more blasting and mysterious influence pervades some fields, known as the black vomit or the rust; to which, two years ago, I called the attention of the savans of the Essex Institute at Salem, and induced them to view the premises; but their Report thereon has not yet appeared.

J. W. PROCTOR.

South Danvers, Jan., 1859.

SQUASHES VS. PUMPKINS.

Cultivators often lose sight of the distinction between *species* and *varieties*, hence they recommend the "importance" of planting all the melon, squash and cucumber tribe of plants away from each other, with the idea that they will mix. The Marrow, Valpariaso, Hubbard and Acorn, called squashes, will mix with each other, and also with the Connecticut Field and hard-shelled pumpkins, but *not*, as we have ever found, with the crook neck, the last of which we consider the true type of squashes. This variety may have more

affinity to the family of gourds; we have heard that it will degenerate if grown in connection with the bottle gourd; of this we know nothing personally. As for any of the above hybridizing with the melon or cucumber, if this should have possibly taken place, we think it doubtful whether the seeds from these abortions, (if they should have any,) would vegetate.

If the analogy in the animal and vegetable world hold good, they would not, any more than the eggs of the mongrel Canada goose crossed with our native bird, or a colt could be obtained from the mule.

BOYS' DEPARTMENT.

A STORY FOR BOYS.

"When I was six years old," says a well-known merchant, "my father died, leaving nothing to my mother but the charge of myself and two young sisters. After selling the greater part of the household furniture she had owned, she took two small upper rooms in W— Street, and there, by her needle, contrived in some way—how I cannot conceive, when I recollect the bare pittance for which she worked—to support us in comfort. Frequently, however, I remember that our supper consisted simply of a slice of bread, seasoned by hunger, and rendered inviting by the neat manner in which our repast was served, our table always being spread with a cloth, which, like my good mother's heart, seemed ever to preserve a snow-white purity."

Wiping his eyes, the merchant continued:

"Speaking of those days reminds me of the time when we sat down to the table one evening, and my mother had asked the blessing of our Heavenly Father on her little defenceless ones, in tones of tender pathos which I remember yet, and which, if possible, must have made the angels weep, she divided the little remnant of her only loaf into three pieces, placing one on each of our plates, but reserving none for herself. I stole around to her, and was about to tell her that I was not hungry, when a flood of tears burst from her eyes, and she clasped me to her bosom. Our meal was left untouched; we sat up late that night, but what we said I cannot tell. I know that my mother talked to me more as a companion than a child, and that when we knelt down to pray, I consecrated myself to be the Lord's, and to serve my mother.

"But this is not telling you how neatness made my fortune. It was sometime after this that my mother found an advertisement in the newspaper for an errand boy in a commission store in B— Street. Without being necessitated to wait to have my clothes mended, for my mother always kept them in perfect order, and although, on minute inspection, they bore traces of more than one patch, yet on the whole they had a very respectable air; without being obliged to wait even to polish my shoes, for my mother always kept a box of blacking with which my cowhides must be set off before I took my breakfast; without waiting to arrange my hair, for I had been

obliged to observe from my earliest youth the most perfect neatness in every respect, my mother sent me to see if I could obtain the situation. With a light step I started, for I had a long time wished my mother to allow me to do something to assist her.

"My heart beat fast, I assure you, as I turned out of W— Street into B— Street, and made my way along to the number my mother had given me. I summoned all the courage I could muster, and stepped briskly into the store, and made known the reason of my calling. The merchant smiled, and told me that there was another boy who had come in a little while before me he thought he should hire. However, he asked me some questions, and then went out and conversed with the other boy, who stood in the back part of the office. The result was, that the lad who first applied was dismissed, and I entered the merchant's employment, first as an errand boy, then as a clerk, afterwards his partner, until his death, when he left me the whole business, stock, &c. After I had been in his service some years, he told me the reason he chose me in preference to the other boy, was because of the general neatness of my person, while in reference to the other lad, he noticed that he neglected properly to tuck down his vest. To this circumstance has probably been owing the greater part of my success in business."

LADIES' DEPARTMENT.

THE HOOP FASHION.

Now, lest it should seem unkind to our good mothers, wives, sisters and daughters, (being of the masculine gender, and withal a physician, who of all men should be tender of female weakness,) we frankly confess that there are circumstances connected with female life, and seasons of the year, when moderately sized hoops may be worn with an augmentation of comfort and increase of health. But duty compels the statement that such cases are very rare in our climate. In very hot, dry weather, (of which we yearly have but little,) light hoops tend to raise the weight of skirts from the loins and lower portion of the back, and, consequently, take off, by admitting freer ventilation, a part of the warmth which at such a time must be uncomfortable, and lighten the dragging sensation resulting from the weight of the skirts. So much is readily conceded.

But, even then, the evil far overbalances this moiety of good. Constant care is necessary at every change of temperature, from hot to cold, and from dry to moist, lest this cooling process be carried too far, and the health of the wearers of these frames become endangered, or essentially impaired. No feeble person, or invalid, however, should risk this augmented ventilation at any considerable distance from home, even on a summer's day, unless she have a guarantee that the weather will not change during her absence.

So little has this gear to recommend itself even in summer. But what shall be said of it for winter? Then it is positively unsafe for health. It is true, some advantage can be devised against this wanton exposure of health and life in winter, by a much increased amount of under-dress. But

these, again, aid in increasing the circumferential extension and clumsiness of the body, the former of which is by no means accommodating to the gentlemen, either on the narrow sidewalks in Boston, or in carriages, or cars generally; and the latter surely cannot be viewed favorably as a feminine recommendation by one of the other sex in pursuit of a partner for life.

But, seriously, there are most weighty objections against this now prevalent custom. Of late an eminent physician abroad has raised his warning voice against this pernicious custom. He says, "he has no doubt but in the parturient chamber he has lost several patients who might have survived this critical period, had they not have been debilitated by colds, and irritations and inflammations induced by such a reckless exposure of female health as does, and must necessarily result, from such gear in winter, as hooped petticoats, fashionably called 'skirts.'"

If these are facts, and, from the nature of the case, we see no reason to doubt their truthfulness, there are weighty and ample reasons why such a system of dressing should be immediately changed for one safer and healthier.—*Dr. Wm. Cornell, in Happy Home.*

DOMESTIC RECEIPTS.

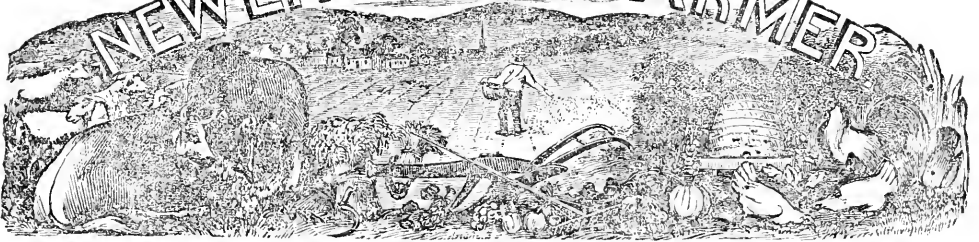
A SIMPLE PUDDING.—Boil a quart of milk, cut up some bread in small pieces and soak them in the milk for about half an hour; then add a table-spoonful of Indian meal, and a piece of butter the size of a walnut; sweeten well, and put in nutmeg and other spices. Bake about twenty minutes.

POMATUM.—Melt about half a pint of beef marrow, and add to it six cents' worth of castor oil, and three table-spoonful of alcohol; scent to your fancy. First rend the marrow, then melt it and put in all but the perfume, and beat it until it becomes like cream; then add the perfume.

TO MAKE CREAM CHEESE.—The following are two recipes:—Take a quart of cream, or, if not desired very rich, add thereto one pint of new milk; warm it in hot water till it is about the heat of milk from the cow; add a small quantity of rennet (a table spoonful is sufficient;) let it stand till thick, then break it slightly with a spoon, and place it in a frame in which you have previously put a fine canvass cloth; press it slightly with a weight, let it stand a few hours, and then put a finer cloth in the frame; a little powdered salt may be put over the cloth. It will be fit for use in a day or two.

ANOTHER METHOD.—If cream is scarce, so that a sufficient quantity cannot be had at once, take a fine canvass bag, and pour as much cream as you may happen to have into it, adding additional small quantities twice a day, and, from its becoming naturally sour, the thin part of it will drain through the canvass, and the remainder will prove an excellent cheese. If one quart of cream can be had at once, and poured into a fine canvass bag, it will make a nice-sized cheese, and of course equally as good as those made by several small quantities added at convenient intervals. The cheeses made in this way are not fit for use so soon as those made with rennet.

NEW ENGLAND FARMER



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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NO. 5.

JOEL NOURSE, PROPRIETOR.
OFFICE...34 MERCHANTS ROW.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

CALENDAR FOR MAY.

"When rosy May comes in wi' flowers,
To deck her gay, green spreading bowers,
Then busy, busy are her hours—
The gardener wi' his pailde.
The crystal waters gently fa',
The merry birds are lovers a',
The scented breezes round him blow—
The gardener wi' his pailde."—*Burns.*



MAY is more celebrated in song than any other month in the year—but it must have been a May different from ours, that inspired the poet in some of his attractive strains.

The *Spectator* says—"A celebrated French novelist in opposition to those who begin their romances with the flowery season of the year, enters on his story thus:—

"In the gloomy month of November, when the

people of England hang and drown themselves, a disconsolate lover walked out in the fields," &c. &c.

The reason why the writer commenced in this way is quite obvious. He had a *disconsolate* lover to dispose of—a lover who, for aught we know, was at that very moment walking out in search of a place wherein to drown himself, *a l'Anglaise*.

Had he begun it thus—"In the beautiful month of May, when all nature was rejoicing—when birds were singing in every tree, and flowers were blooming in every nook," &c., &c., poetic truth would have required, not the intro-

duction of one solitary lover on suicidal thought intent, but a *pair* of lovers "sitting on a mossy bank," looking unutterable things at each other.

Philosophize as we may, the weather does have a great influence over the spirits of the wisest of us, and we cannot help sympathizing with her varying moods. In the case of the "lover" aforesaid, we would hazard a guess that the lady dismissed him in an equinoctial storm, and that if he contrived to live through the winter, they made it all up, and were married the following May, with all the orange flowers and "honiton" suitable to the occasion!

Heaven's sunshine dissipates "vapors" of more than one kind, and "Melancholy often conveys herself to us in an easterly wind."

Geologists tell us that when the earth emerged from chaos, there was a period in which nothing but enormous lizards perambulated its surface, and that it took some time to fit it up for the residence of human beings. We have often been reminded of this in looking out upon a world just waking from its winter nap—and as day after day, a man plods amphibiously along through mud, water and snow—a pair of long rubber boots beneath his feet, and an umbrella over his head, he may be supposed to have pretty vivid conceptions of those primitive settlers of the lizard tribe. But then came the dry land, the green grass, the birds, the flowers—verily, it is the old story of the garden of Eden over again!

"And the Lord God took the man and put him into the garden of Eden to dress and keep it."

We would not indulge in idle speculations, but may we not fairly infer from this passage, that husbandry, in some form, was his natural and original occupation? Is it not true, also, that the necessity for the three learned professions, as they are called, arises entirely from the sins and infirmities of mankind? The minister calls not the righteous, but sinners to repentance. It is the lawyer's business to heal dissensions occa-

sioned by the bad passions of men, and the physician treats diseases brought on by some violation of the laws of nature,—either in the parent or his ancestors. So of many trades and mechanical arts, it were easy to show that they are founded upon artificial wants; but we can hardly imagine a condition in which farming is not man's legitimate pursuit.

If Adam attended to the cultivation of the earth, what, meanwhile, was Eve's employment? We may infer what Milton thought about it, for he makes her thus lament the expulsion from Paradise—

"O flowers,
That will not in other climate grow,
My early visitation and my last
At even, which I bred up with tender hand,
From the first opening bud, and gave ye names,
Who now shall rear ye to the sun, or rank
Your tribes, and water from the ambrosial fount?"

Most ladies, like their mother Eve, love flowers by nature, though all do not like the care of them. It is, however, a taste capable of cultivation. We believe any woman who can have the time, and land enough and help enough to give her genius full scope, will soon enter into the matter with all the enthusiasm characteristic of the sex.

We find some excellent hints in "Rural Affairs," a little annual published at Albany, N. Y., by LUTHER TUCKER & SON, Editors of the *Country Gentleman*. "Two very distinct styles of arranging and planting ornamental grounds have been adopted. In the old-fashioned or *geometric* style, everything was arranged in straight lines, or occasional circles. Every care was taken in this style to avoid irregularity." This anecdote is subjoined. "The old gardener of Selkirk, who was very strongly imbued with this mania, when he shut up the thief in the summer-house for stealing the fruit, was compelled, for the sake of symmetry, to confine his own son in the summer-house opposite!"

Nature delights in curves, rather than angles. She puts a bank of violets here, a clump of pine trees there—a wild rose on one side the brook, and a clematis on the other.

There are few who have been blessed with homes, who cannot recall their early days with pleasure, and associate with them some spots especially dear. The influence of all such memories is pure and refining beyond estimation; how much more so when the memories come linked with beautiful scenes. The elm tree at the door, with a robin's nest on a swaying branch—the vine over the porch, the morning-glory trained about the window, and the flower-garden—yes, the flower-garden!—your little boy, or your young brothers, may go to the grave with heads as white as snow, but he will keep in his heart a daguer-

reotype of this beautiful home of long ago, and you in the midst as its presiding genius.

Years ago we knew of a flower-garden—we fear it was rather in the *geometric* style—but we have never seen one so graceful in our eyes since. The centre was a square—the four outside beds were triangles; the whole bordered with pinks, while year after year grew in the same places, peonies, marigolds, tulips, jonquils, lady's-delights, and a few other common flowers. Farther down the enclosure was a pear tree, and ranged about it an oblong square of fleur-de-lis.

A faint idea of the fine appearance of this last arrangement seems to have dawned upon somebody, for it received the name of "Old Maid's Row."

Ah, it is easy enough now to look back from the heights of modern improvements, and smile at the want of artistic skill exhibited in the garden we have described; but we are content it should remain an unaltered picture in our memory, which shall bring back to us a vision of the fair florists who tended it.

And you, madam, and you, sir,—have you not a similar picture in your memory? and for what price would you part with it? Perhaps it is all grown over with weeds now, and only a few stray flowers mark the spot, but you will see it as it was in other days, and you will see those whose names

"Have been carved for many a year
On the stone!"

For the New England Farmer

THE HYDRAULIC RAM.

MR. EDITOR:—I have been looking over the pages of your interesting and valuable journal, hoping I might find something from W. D. B., of Concord, in reference to the Hydraulic Ram he likes so well, and to which allusion was made by him in the November number of the *Farmer*. In the article referred to, he says, "I think so well of the ram, that I should be glad to give you a full article on the subject." It is this "full article" that I have been looking after. I desire to learn more about this machine, which overcomes the force of gravity, and makes water run up hill.

I should be glad to hear how his ram has wintered. So far as my knowledge extends, the opinion seems to prevail that the greatest trouble with these machines lies in their liability to freeze.

I have no doubt there are many readers of the *Farmer* who suffer much inconvenience, especially in winter, for want of a convenient supply of water for their stock. It is evident that where streams are handy, the hydraulic ram, if it will work, is just what is needed. I presume there are many, even among those that have good wells, and keep large stocks of cattle, who would be glad to avail themselves of this seemingly easy method of obtaining running water, when they become convinced that it is reliable, and that the cost of

the machine and expense of keeping in repair will not be so great but that it will pay.

If "W. D. B.," or others, who are posted on this subject, will let their light shine, they will oblige many readers of the *Farmer*. s. d. c.
Sunderland, Mass., 1859.

JARVIS' AND BAKER'S ISLAND GUANO.

In our advertising columns, the reader may find this guano offered for sale,—and we call attention to it in order to refer those persons who desire to use some specific fertilizer, to an article which we think may be used moderately with safety. There are thousands of farmers who would be glad to employ some manurial agents beside what they derive from the natural resources of the farm, if they could resort to them with confidence. In various particulars such agents may be *profitably* used.

From the results of an experiment on our own farm, and from analyses by different chemists, we are inclined to think that this guano may be used advantageously. It does not yield ammonia, but its principal ingredients are the *phosphates* and *sulphates* of lime, the articles which confer a lasting benefit on the soil, instead of stimulating and exhausting its properties.

We have been careful, as our readers well know, about recommending specific fertilizers for general use,—but we have no doubt that this guano is safe and valuable, used as an auxiliary to our common manures. Let each use it in small quantities, but dress liberally whatever ground is attempted to be gone over.

We shall take occasion to speak of it again.

For the New England Farmer.

BARLEY FOR HORSES.

In Portugal, and, I suppose, in the Peninsula generally, barley is the principal food for horses and asses. Nowhere do these animals appear fatter and sleeker than in and about Lisbon. Gentlemen's horses, whether native to the country, or brought from England and Germany, as many of their carriage horses are, are the pride of their owners and grooms, and certainly seem extremely well cared for. Yet their food is nearly or quite all barley straw, and the grain served to them as oats are with us. The barley is threshed by being trodden out under the feet of oxen and horses, and is made as fine as the old straw from an under bed.

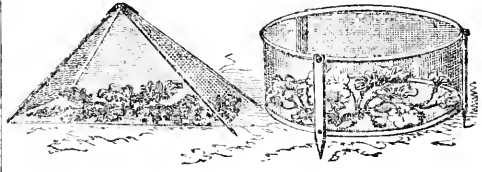
When upon the road the usual baiting is bread, coarse wheat bread—occasionally dipped in the cheap wine of the country.

The barley crop appears stout and heavy as it stands in the field; and yet the land is ill-manured and far from rich. I do not see anything to prevent as large crops on ordinary lands; and I do not know why animals here should not find it as nutritious and as palatable food as it is there.

II.

West Lebanon, N. H.

FOLDING VINE PROTECTOR.



We give above the illustration of a new device to protect cucumber, melon, squash and other vines from the depredations usually made upon them by swarms of hungry bugs. It is simple, cheap, and we think must prove effectual. The inside hoops in the round one are rattan, and the outside ones are made of tough white ash. These are covered with gauze, with the meshes sufficiently small to prevent the entrance of the striped bug. The three upright pins are simple pieces of pine that may be whittled out in one minute; the upper end has a notch cut in it, while near the lower end a hole is bored, which is slipped upon the bottom screw, and the protector is set up.

The one at the left hand has four sticks, each sawed out lengthwise, so as to admit the gauze, and fastened at the top with bits of leather. The points of the sticks in this and the round one are thrust into the ground until the gauze touches the surface, when there is no room for the access of bugs.

While it appears to us that these protectors will be more effectual than anything we have before seen, intended for the purpose, they have some advantages not possessed by others. The first, is their *compactness when not in use*, as they may be "collapsed" instantly, and some one or two hundred packed into a flour barrel, headed up and put away for another year. There being gauze on the sides as well as the top, the air will have a free circulation among the plants, so that they may grow about as vigorously as they would were nothing about them. They are also light, yet strong, cheap, and convenient to handle, either in placing, or taking them from plants, and in packing them away.

These protectors were invented, and are manufactured by Mr. Caleb Bates, of Kingston, Mass., who has taken measure to secure a patent.

SEWING MACHINES IN ENGLAND.—Great excitement prevails at Stafford and Northampton, in England, in consequence of the introduction of sewing machines in the manufacture of boots and shoes. At a meeting in Stafford, attended by 2000 makers and binders, it was stated that 5000 persons had been thrown out of employment in Northampton, and 1000 in Stafford, by the introduction of machine-sewn tops, and a union was formed for resisting the innovation.

For the *New England Farmer*.

VARIETIES OF NEW APPLES.

In running my eye over the last edition of *Downing on the Fruits and Fruit Trees of America*, I was struck with the number of new varieties of the apple he had added to his list in ten years. Within a circle of twenty-five or thirty miles in diameter, near the centre of which I reside, I find twelve new kinds, which I will give, together with the place of their origin.

Garden Royal.....	Sudbury.	Mother.....	Bolton.
American Beauty.....	Sterling.	Carter.....	Leominster.
Full Orange.....	Hold-n.	Foundling.....	Groton.
Hill's Favorite.....	Leominster.	Hunt's Russet.....	Concord.
Magnolia.....	Bolton.	Priest's Sweet.....	Leominster.
Washington Royal.....	Sterling.	Willis' Russet.....	Sudbury.

Now I can speak of most of these apples from actual experience. I regard the *Garden Royal* as the most delicious early autumn apple that I know. The *Foundling*, in this neighborhood, is perhaps entitled to the second place. The *Carter* is an acquaintance, and a most agreeable one too, of fifty years standing, and, regarding it as both a cooking and a dessert apple, has few equals and no superiors, from October to January, while the *Mother*, with those who know it well, ranks equally high during the same period. The two russets, *Hunt's* and *Willis'*, are both deservedly favorites, which will be in season from January to May, and the *Washington Royal*, which *Downing* endorses on the authority of the *N. E. Farmer*, will carry us through till we can gather our apples fresh from the trees. The other kinds will probably afford us a variety, and perhaps an equally agreeable flavor, while the *American Beauty* and *Priest's Sweet* will furnish the baking pan from September to May.

This, I think, is very well for a little circle of thirty miles diameter, and yet I have eaten apples nearly or quite as good as these, in the same region, which had no name known to the producer.

If this district was carefully canvassed, I do not doubt that at least twelve more varieties of nearly, or quite equal excellence, would be brought to light. Who will be the explorer? Who will found an establishment for systematically testing our native fruits and disseminating those of real merit? Will not some of our horticultural associations make it an especial subject of their attention? Is it not a matter of much more interest to fruit-growers than the introduction of foreign varieties, or even those from the Middle and Western States?

HENRY LINCOLN.

Lancaster, Mass., March, 1859.

REMARKS.—An excellent article—please let us hear from you again on similar subjects. We think a more particular account from you, of these and other *home* varieties of apples, would be of essential service. Such particulars, for instance, as the habits of the tree, with regard to quickness of growth, form, soil adapted to it, time of fruiting, flavor, and keeping qualities of the fruit, &c. &c.

Notwithstanding the *Garden Royal* originated in about the centre of Middlesex County, and

well deserves the reputation you give it, it cannot, probably, be found in one in ten of the gardens or orchards of the people.

The *Hunt Russet* is one of the surest bearers, and the fruit remarkable for its long-keeping qualities, as well as for its delicious flavor, yet it cannot be found in one-fourth of the orchards of the county. And these deficiencies exist, while the people are cultivating third and fourth-rate fruit that requires its own weight in sugar and spices to soften and make palatable its harshness.

It may be said that accounts of these good apples may be found in the books—so they are, thanks to those who have given them attention—but books are not scattered broadcast among the farmers, as are newspapers. So we hope our correspondent will amuse himself, and benefit others by giving us brief sketches of the apples that have originated on our own soil.

EIGHTH LEGISLATIVE AGRICULTURAL MEETING.

[REPORTED BY JOHN C. MOORE, FOR THE N. E. FARMER.]

The meeting of the *Legislative Agricultural Society*, last Monday evening, was well attended. The subject discussed was "*Drainage*."

Dr. G. B. LORING, of Salem, occupied the Chair. In opening the discussion, he said that the process by which land might be relieved of its superfluous moisture was one of the most important to the agriculturist. It lay at the very foundation of the successful cultivation of the soil. He did not refer to large operations; but large tracts of land saturated by springs, or holding in their basins the drainage of the hills or the falling rains and snows, which did demand the attention of the farmer. These were to be found everywhere. Hardly a farm could be found in New England which did not contain many valuable acres where cultivation was a matter of great uncertainty, on account of the water with which they are chilled and drowned. Every farmer knew that a ditch properly cut through a swamp would drain it. Every farmer knew that surface water would escape by means of dead furrows and an open drain. But most farmers had seen their strongest soils fail in the production of cultivated crops, and their best grass lands invaded by rank and sour herbage, in spite of all their efforts to keep them warm and productive by means of fertilizers. They had, indeed, removed the water from the surface, but the poison lay deeper down, at the roots, dwarfing their crops and neutralizing their manures. The great object of thorough draining was to deliver farmers of this evil. There were lands where nature did this for them, and where the character of the subsoil and the location of the lands were such

that deep tillage was alone necessary to produce a profitable result for agricultural labors. But where these did not exist—where the soil rested on a bed of clay, or was deluged by springs—art was required to enable nature to perform her proper work. Almost any cold soil could be brought to a kindly condition by drainage. If farmers would furnish their crops with a fair chance to remunerate them for their labor, let them rid the soil of water. If they would avoid the effects of drought, by allowing the roots of their plants to penetrate the soil to a depth which drought could never reach, let them drain the water from the subsoil. If they would prevent their fields from freezing to death in winter, and cracking and parching beneath the summer's sun, they should give them proper consistency by rendering the subsoil light and porous. In order to be warm and fertile, and equal in its temperature, receptive of manure, and responsive to its influence, soils must be free from that superabundance of water which made it cold in winter—surface-dry in summer—hard, clammy and forbidding.

Dr. Loring believed one of the most valuable inventions for accomplishing this object to be *tile-draining*. He looked on Mr. SMITH, of Deanston, Stirlingshire, Scotland, who more than a quarter of a century ago demonstrated the benefits of this form of drainage, as the benefactor of the farmer. His system had reclaimed thousands of acres in his own country, and had been adopted by the most enterprising farmers in our own. Dr. L. also alluded to the efforts made by Mr. JOHNSON, of Seneca county, New York, who had laid more than forty miles of tiles on his farm, and had increased his crops one hundred fold, by proper under-draining. It was hardly worth while to discuss the comparative merits of the different modes of draining at the present day. Stone drains had had their day. Except under extraordinary circumstances, they were not so economical as tile drains, and in no case were they so effectual. Every man, it was reasonable to assume, who undertook thorough-drainage, had advanced far enough in agricultural science to avail himself of tiles, if they could be had within reasonable reach. Dr. Loring said he did not propose to explain their construction, or their mode of application, but simply give his own experience of the use of tiles. He had on his farm a finely located field of four and one-half acres, level, warm, convenient to his barn-yard, and in every way a tempting piece of soil to cultivate. For half a century, however, it had been a reproach to the science of farming. It rested on an impervious bed of clay, into which all the water from the surrounding hills, and from four and one-half acres of overhanging

clouds, was sure to be caught. It had been drained for generations by a deep, unsightly, open ditch, and was laid out in beds, with dead furrows. Many a crop had been lost there; and farmers always said it was plowed either a day too early or a day too late. When Dr. L. took it, it had, he said, long been laid down to grass, and everywhere the nutritious grasses were being expelled by rushes and weeds. He cut about half a ton of hay per acre from it in the season of 1857. On the first day of December of that year, the season being propitious, he had the open ditch filled in above two rows of four-inch sole tiles, from three to five or six feet deep—a thousand feet in length—with a fall of about four inches per 100 feet. Into these main tiles, on each side, he inserted two-inch sole tiles at distances varying from 20 to 32 feet, with the same fall for the water. The drains were filled at once, and their operation commenced. All winter they continued to discharge water from the field; and at the opening of spring its cultivation was begun. Here and there between the lines of drain were hollows which the plow could not obliterate, and the water would stand for a short time in them. But the soil improved month by month, and yielded 60 bushels of corn from the acre. During last autumn it was thought best to add a few more drains, and while making them, the workmen exclaimed—"How brittle this clay is!" The water was gradually passing out of it. The field already showed the benefit of the expense put upon it. The snow melted rapidly upon it, and it was fast becoming suitable for root culture, for which it was designed the coming season. The cost of draining it had been about \$45 per acre; and, Dr. L. said, were he disposed to drain another piece of land, he should adopt the very same method of doing it—with the exception of laying the two-inch lateral tiles 16 or 18 feet apart instead of 30 feet—as a stiff, tenacious clay demanded the lesser width. He could not too highly recommend the draining system to farmers at large, and would urge the encouragement of the system of thorough drainage, by all proper means, at the hands of our agricultural societies, and of the Commonwealth. As there were several gentlemen present who had studied drainage, and experimented as well as he, the Chairman would proceed to call upon them for their opinions as to its value.

Mr. B. V. FRENCH, of Braintree, was the first speaker called upon, and he stated his experience in draining in his usually familiar style—having first given a succinct history of the improvement, and commended the principle of encouragement offered to draining improvers by the English government and by private corporations. The general argument he used was in fa-

vor of thorough drainage on nearly all descriptions of soils, as furnishing the best and safest condition for every description of cultivation. Deepening the soil was of the highest advantage to crops—to show which fact. Mr. French mentioned that he was informed that the roots of corn had been traced 15 feet in the soil, clover roots 23 feet, and strawberries 4 feet. Were such conditions furnished trees as would enable them to throw out their roots without obstruction, there would be no more complaint of their being heaved out by frost in the spring. He commended drains 4 feet deep, and 30 feet apart, and such could be formed, tiled and filled for about \$50 an acre, or less, according to circumstances. The remainder of Mr. French's remarks showed an extensive acquaintance with the subject, and an earnest desire to have draining more liberally followed up.

Mr. SANFORD HOWARD, of the *Cultivator*, gave a very interesting history of draining improvements made by Mr. Johnson, Seneca county, New York State, showing that they had been commenced under discouragement, and especially discouraging advice, but their consequence had been singularly profitable. These improvements had begun on a small scale at first, but subsequently had been somewhat extensive, and 31 instead of 15 bushels of wheat, per acre, had been the produce of drained lands, while the crops were less subject to parasitical diseases, and earlier brought to maturity. Besides, a good crop was always certain from drained land, when undrained soils would not furnish one worthy the cutting. The cost to Mr. Johnson of digging, laying the tiles, and filling, (including the price of tiles) was 28½ cts. per rod. The land was not what was called wet land. It had a clay subsoil, and was very apt to bake in summer, chill in winter, and heave in spring, which evils had been obviated by its drainage. While Mr. Howard believed in the general benefits of draining, there were lands, he thought, that would not remunerate the farmer for the labor and expense. He briefly alluded to the science of draining as followed in Scotland, stating that the improvement in Ayrshire had been equivalent to a doubling of the produce of the land. On the eastern coast of Scotland the land was somewhat different in character, and the profit had not been so great. From 2½ to 3 feet was the approved depth of drains, where experience had proved the question of what was the proper depth. The soil Mr. Howard would except from draining advantages, were those porous soils which rested on a loose subsoil, without any intervening impervious stratum, or hard pan.

Mr. FLINT, *Secretary to the Board of Agricul-*

ture, was called on to speak of certain improvements on the farm at the State Reform School in the way of draining. He could not speak of expense, as the labor was done by boys. The land was wet, and subject to remain in a semi-flowed state. As to the results, little definite information could be given, as the improvement was only a year old; but, last spring, the land could be worked as early as any other part of the farm. It took several years before the full amount of draining benefit could be realized—hence the present impossibility of speaking of results in the case in question.

Mr. NOURSE, of Bangor, Me., drained a field in 1856, and last year he had 45 bushels of barley, per acre. One acre yielded 51 bushels. It was drained 4 rods apart, and the drains from 3 to 4½ feet deep. It was designed originally to cut drains between, but those already constructed had worked so well as to make this design probably unnecessary to be carried out. Mr. Nourse was of opinion that depth of drain compensated, in some degree, for width. He thought that, if a farmer had 200 acres of land, he would do better to sell one-half and spend the money on the other, and borrow beside, if necessary, and profit would yet accrue in a greater degree than if he cultivated 200 acres of undrained land. Mr. N. thought \$35 as much per acre as draining would cost, and \$20 per acre more than it might amount to in some places. He concluded by giving a very interesting and instructive view of the philosophy of draining, which he had learned from experience. He approved of the use of tiles, as in every respect preferable to stones; but the latter ought rather to be used, than improvement should be neglected.

Mr. J. W. BUCKMINSTER, of the *Ploughman*, was doubtful concerning this fancy style of tile-draining, and wished to know why it should supersede open drains? He also felt anxious to know where the profit of this underdraining lay; in particular, where drains should be made in order to be profitable, and where they would be useless?

Mr. SANFORD HOWARD answered the first question by stating that open drains, during showers, would carry away fertilizing matter laying on the surface, whereas, by the water being forced down to the drains, through the soil, the sediment was retained in it, and extra fertility would be the consequence. When in Scotland, he saw a man jamming clay into his drains in order that the water should get into them from underneath, and not flow over their tops to the outlet, or along the surface, carrying the manure with it.

Mr. BUCKMINSTER would content himself with a homœopathic dose of such fancy, costly drains,

as he deemed it, everything considered, the most likely to be safe to take. His question as to what soils should be excepted from drainage had not been answered.

Mr. LEANDER WETHERELL spoke in favor of draining; and recommended a "little farm well tilled" in preference to the rage for too much land, which was so common. His own experience showed him that drainage was the most profitable of all improvements—was in truth the parent of all that was successful in agriculture. He felt satisfied with the answer given to the question relative to open drains, but thought open ones better than none; and, in the case of cultivated forests, it was absolutely essential. He believed all lands would benefit by drainage—no matter what their character or position—provided drainage was possible; and Mr. Buckminster acknowledged this to be an answer to his second query.

Several other gentlemen spoke; principally in evidence of the profitableness of draining, and that it was no fanciful improvement, after which the meeting adjourned.

The question for next Monday evening will be, "*The best Breed of Horses, and the best modes of breeding with reference to the wants and the interests of New England Farming.*"

For the New England Farmer.

RIVER MEADOWS.

MR. BROWN:—I learn by a few of the last numbers of the *Farmer*, that an effort is being made to redeem some of the river meadows in this vicinity. This is a good move, and is what should have been done long ago. That these lands are the most valuable in the State, for farming purposes, there is no doubt. When we take into consideration their close proximity to some of the largest cities in New England, with large and populous towns all about them, and the soil being of such a nature, deep and mellow, without stones, and being composed largely of vegetable matter, thereby rendering them almost inexhaustible, and when we take into account the natural washings they receive from adjacent lands, &c., it seems too bad that they should be rendered almost worthless, merely to accommodate a few old mills that are but little profit to their owners or any body else.

In this town there is a small river which has its source in Hart Pond, and runs in a circuitous route through Carlisle, then back into Chelmsford, and empties into Concord river in Lowell, about one mile from its mouth. This stream is called River Meadow Brook, and may easily be found on the county maps. On this river there are two mills where lumber is sawed in the winter and spring, and grain ground at all times when it is wanted.

On the banks of this river are some of the best lands to look upon that the eye ever beheld; and they are as good as they look. The vegetable deposit of which this land is composed is of various depths. I have dug down seven feet,

and found it there almost entirely vegetable matter. One of my neighbors told me he had dug down ten feet, and found it rich and mellow. Of the number of acres of this kind of land on this river, I do not know, but should judge from the mouth to the source of the river, as it runs, to be some ten miles, and the meadow on its banks to be about thirty rods wide.

Now, these mill-owners claim the right to flow this land at pleasure. I have before me the history of Chelmsford, and in this we get an idea of their right and privilege. The author of this book, without doubt, copied from the old records, and as some may have never seen the record by which the present owners claim their right, perhaps it may not be amiss to quote what the records say, as doubtless hundreds of others are similarly situated.

"FIRST SAW MILL—July 3, 1656.—This year was granted to Samuel Adams, in consideration of his setting up a saw mill, 450 acres of land upon the south side of his meadow, called Brook Meadow, provided he supply the town with boards at three shillings per hundred, or saw one log for the providing and bringing of another to be ready to work the next March.

"FIRST CORN MILL.—To this were added a hundred acres in consideration of his erecting a corn mill, and to give him still further encouragement, they passed an order, that no other corn mill shall be erected for this town, provided the said Adams keep a sufficient mill and miller. In 1661 he obtained liberty to set flood-gates at Hart Pond to himself and his heirs forever."

Evidently, this was a wise arrangement at the time, but to say that it is so now, is the height of folly. Then, again, I have been told that it was not the custom to flow these meadows in the summer till after the crops were off.

The present owners of these privileges obtained their right by purchase, consequently no law or force should be brought to bear upon them without full and just compensation. Therefore, I have thought that if an arrangement could be made with the mill-owners on this and Concord River, and perhaps others, by which the gates should be raised on the first day of April and shut down on the first day of October in each year, it would be all that was necessary for the grass and cranberry crops. Then we could gather these crops without having them several times inundated, thereby rendering them almost worthless.

T. J. PINKHAM.

Chelmsford, Feb. 18, 1859.

NIGHT AIR.

During the months of September and October, throughout the United States, wherever there are chills, and fever and ague, intermittents, or the more deadly forms of fever, it is a pernicious, and even dangerous practice, to sleep with the outer doors and windows open; because miasm, marsh emanations, the product of decaying vegetation—all of which are different terms, expressing the same thing—is made so light by heat, that it ascends at once towards the upper portion of atmospheric space, and is not breathed during the heat of the day, but the cool nights of the fall of the year condense it, make it heavy, and

it settles on the ground, is breathed into the lungs, incorporated into the blood, and if in its concentrated form, as in certain localities near Rome, it causes sickness and death within a few hours. The plagues which devastated Eastern countries in earlier ages, were caused by the concentrated emanation from marshy localities, or districts of decaying vegetation; and the common observation of the higher class of people was, that those who occupied the upper stories, not even coming down stairs for market supplies, but drew them up by ropes attached to baskets, had entire immunity from disease, for two reasons, the higher they abode, the less compact is the deadly atmosphere; besides, the higher rooms in a house, in summer, are the warmer ones, and the miasm less concentrated. The lower rooms are colder, making the air more dense. So, by keeping all outer doors and windows closed, especially the lower ones, the building is less cool and comfortable, but it excludes the infectious air, while its warmth sends what enters through the crevices immediately to the ceilings of the rooms where it congregates, and is not breathed; hence is it that men who entered the bar-room and dining-saloons of the National Hotel, remaining but a few brief hours, were attacked with the National Hotel disease, while ladies who occupied upper rooms, where constant fires were burning, escaped attack, although remaining in the house for weeks at a time. It was for the same reason that Dr. Rush was accustomed to advise families in the summer time, not being able to leave the city, to cause their younger children, especially, to spend their time above stairs. We have spent a life-time ourselves in the West and extreme South, and know in our own person, and as to those who had firmness to follow our recommendation, that whole families will escape all the forms of fall fevers who will have bright fires kindled at sunrise and sunset in the family-room. But it is too plain a prescription to secure observance in more than one family in one thousand. After the third frost, and until the fall of the next year, it is an important means of health for persons to sleep with an outer door or window partly open, having the bed in such a position as to be protected from a draught of air. We advise that no person should go to work or take exercise in the morning on an empty stomach; but if it is stimulated to action by a cup of coffee, or a crust of bread, or apple, or orange, exercise can be taken, not only with impunity, but to high advantage in all chill and fever localities.—*Hall's Journal of Health.*

FLOWERS FOR ROCK WORK.

One of the most interesting sights in a garden, is what is called artificial rock work, where the plants, which we are accustomed to see growing wild in our pasture, are transferred from these localities to the garden, where they are planted around, and into the interstices of rocks. These appendages to the garden are not so common here as in the old country. In England may sometimes be seen a hundred or more varieties of ferns, of different forms and shades, in one rock-work.

In erecting rock work, it should not be built up to resemble a pile of loose stones, nor regular in its outline; the rocks must be large and rugged, of rude forms, the spaces between them may be filled in with small stones, and the paths around may be irregular. This ornament to the garden should be placed in a half-shady situation, as most of the plants used require moisture and partial shade. A few of those varieties best suited for this purpose are, the Blood Root, Early Anemone, Saxifraga Vernalis, Rock Geranium, Partridge Berry, Mitchellia or Checkerberry, Linnea Borealis, Blue Houstonia, Epigea, or Ground Laurel, White and Yellow Dalibarda, Wood Anemone, Columbine, and the smaller species of ferns.

For the New England Farmer.

EXPERIMENTS IN RAISING OATS AND POTATOES.

MR. EDITOR:—Several of your readers have requested me to inform them of my method of raising the oats and potatoes, recently reported in your paper, through the columns of the *Farmer*.

The potato ground is dry loam, on which I raised corn the previous year. The ground for the corn was prepared as follows: I applied thirty loads of stable manure to the acre, plowed in, and ten loads of hog manure per acre, in the fall. In the fall I planted and harrowed the ground. Last spring I applied twenty loads of stable manure per acre, plowed in, then plowed and harrowed it again. Planted it with Danvers red potatoes; rows three feet apart, and the hills eighteen inches apart. Seed small, cut once, and two pieces in a hill. I planted twelve bushels on an acre. The first time hoeing, I plowed between the rows twice, also the cultivator twice. The second time hoeing, I plowed twice between the rows. Raised 505 bushels on one and one-half acres, good size and sound.

The oats were raised on ten acres green sward and three acres old ground. Soil, dry loam. Plowed in the fall eight inches deep, harrowed thoroughly in the spring before and after sowing, and rolled. When the oats were three inches high, applied 150 pounds of plaster to the acre—no manure. Seed $3\frac{1}{2}$ bushels per acre. Raised 725 bushels.

WILLIAM HANSON.

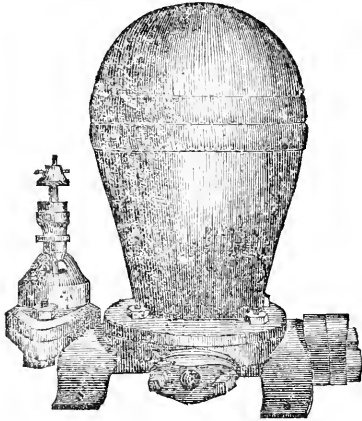
Barre, Vt., Feb. 22, 1859.

REMARKS.—A good example for us, gentlemen; 505 bushels of potatoes on $1\frac{1}{2}$ acres of land, and nearly 56 bushels of oats per acre.

☞ The article from Mary E. C.—y, *George Hill, N. H.*, upon the attractions of the "Mascoma Valley," is written with feeling and poetic imagination, and gives evidence of a highly cultivated taste. But as the scenic descriptions have been given before, it is not necessary to publish her article. She ought, however, to cultivate her talent for writing.

For the New England Farmer.

W. & B. DOUGLAS'S HYDRAULIC RAM.



For the purposes of Irrigating Lands, and Supplying Dwellings, Barn-yards, Gardens, Factories, Villages, Engines, Railroad Stations, &c., with Running Water.

One of the first considerations in locating a house or barn is to select a site that water—pure, soft water, may be supplied in abundance at little cost. A commanding site—some dry hill, from which one may look over the tops of his neighbor's chimneys, proves an expensive place, always, for water. In how many homes that are elevated "the women folks" complain bitterly for the want of plenty of water. How poor it does make a man feel to be obliged to tackle up his team and take the scow and draw home a couple of barrels against washing-day.

I saw a selection made of some building-lots the past season that was most unfortunate. The land was gravelly, and so elevated that the wells must prove a heavy item in the cost of the home. Then, too, after a deep well has been dug and paid for, the pumping of the liberal quantity of water which an establishment requires, is the hardest work done on the farm.

It will do for wealthy people to build on hills. It is not economy for those who expect to earn their living, to build on elevated situations. Other considerations, besides the facility of getting water, should prevent.

But a great many people live in houses that others have builded, and must continue by pump or bucket, or some other way, to get their daily supply. It is my wish to suggest to some of your readers how they may have running water in their houses and lands, at an expense, perhaps, within the reach of all.

It is very true that a large portion of the farms of New England are destitute of springs and small brooks. But many have them. I know of hundreds where it is perfectly convenient to obtain a supply of water to drive an hydraulic ram. A well may be dug deep in a moist place, near the foot of a hill. This will drive a small ram and deliver a portion of water wherever you please. Then there are brooks very common. The water is not so desirable as that of springs, but still it will do for washing and for stock. Wherever you can raise a dam on a brook of two feet, there you may make a ram work to great advantage.

DESCRIPTION OF THE RAM.

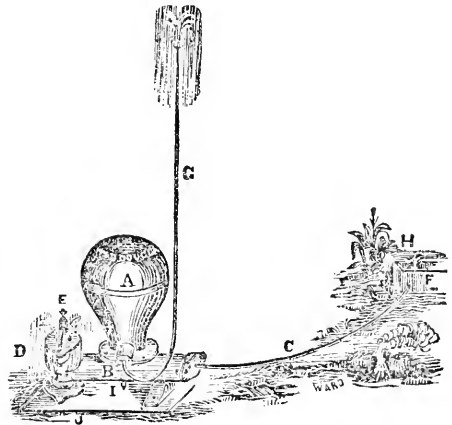
The cut at the head of this article gives a very good representation of the hydraulic ram. The air chamber in the centre is most prominent. This can be readily detached by turning off four screws. A valve is placed at the bottom of the air chamber, not seen in the engraving.

The valve enters the machine on the right. A convenient arrangement for attaching the drive pipe, and, also, the service pipe, is seen near the bottom of the ram.

The "puppet valve" is on the left. It is attached to the spindle, which rises and falls with the working of the machine.

HOW IT OPERATES.

The ram has two valves. One is called the puppet valve. This is so nicely balanced that it opens when the stream in the driving pipe is at rest. As soon as the stream has acquired its full velocity, the pressure on the valve, through which the water passes, is just sufficient to close it again. Now it is plain that the stream suddenly stopped in the driving pipe must press with great force against the second valve placed at the bottom of the air chamber. The valve opens, and a portion of the compressed water in the driving pipe is forced into the air chamber. The service pipe connects at the bottom of the air chamber and the elasticity of the air presses out a continuous stream. Here is the ram, with the pipes attached and in operation.



H, Spring or Brook; C, Drive or Supply Pipe from Brook to Ram; G, Discharge Pipe conveying Water to House or other point required for use; B, D, A, E, I, the Ram; J, the Plank or other foundation to which the Machine is secured for use.

THE POWER OF THE RAM.

To enable any person to make the calculation as to what fall would be sufficient to apply to the ram to raise a sufficient supply of water to his premises, for any ordinary distance of say 50 or 60 rods, it may be safely calculated that about one-seventh part of the water can be raised and discharged at an elevation above the ram, five times as high as the fall which is applied to the ram, or one-fourteenth part can be raised and discharged, say ten times as high as the fall applied, and so in that proportion as the fall or rise is varied. Thus if the ram be placed under a head or fall of five feet, of every seven gallons

drawn from the spring, one may be raised 25 feet, or half a gallon 50 feet. Or with 10 feet fall applied to the machine of every 14 gallons drawn from the spring, one gallon may be raised to the height of 100 feet above the machine, and so in like proportion, as the fall or rise is increased or diminished.

A year's experience with a hydraulic ram has enabled me to give further suggestions for which you may find room another week.

I have written the above without the slightest interest in the sale of the ram, and wholly to recommend a truly deserving invention.

Concord, Mass.

W. D. B.

TO CORRESPONDENTS.

"A Subscriber," of Salem, will probably obtain the eggs he wants of *George Cruickshank*, of Whitinsville, Mass.

We have many favors from correspondents on hand, most of which will have a place. Some of them are more appropriate for another season of the year, and will be preserved—such, for instance, as two or three upon the subject of *topping and harvesting corn*, and one upon *making maple sugar*, which came when the season had nearly closed. We would inform "G. F. N." that we do not preserve manuscripts, whether we use them or not. The one to which he refers contained a pleasant anecdote, but matter more to our purpose crowded it out.

We have several articles on the turnip discussion which we shall mingle in with others as we have room—one from Mr. JOSLIN, of Waitsfield, Vt., in our next paper; and also one on the cultivation and use of the beet.

We have another article on pruning from Mr. PUTNAM, of Danvers, but as no new points are introduced, and as so much has already been said on the subject, we will postpone its publication for the present. We would say to Mr. P., however, that the gentleman whom he quotes in support of his theory has probably sometime since considerably modified his opinions.

"E. L.," New Bedford, will find it difficult to seed the land to grass he speaks of without the use of manure. Better manure a portion of it and seed it down. The orchard having been cultivated and manured for several years, may be laid to grass for two or three years—especially if sowed to clover—and not injure the trees. It should then be plowed and cultivated again.

Information by Letter.—A correspondent from L—e, Mass., wishes to put three acres into grapes, currants and gooseberries, and desires us to write him what it will cost per acre, and give such other information as will promote his enterprise. All this would afford us pleasure if it were in our power to comply with his request, especially as his letter is accompanied with a stamp for the return letter, and an expression of

willingness to pay for all trouble. Let us call his particular attention, and that of other correspondents, to our position for a moment. We have from three hundred to six hundred letters a week, and many of them of a character similar to the one before us. Now, how many clerks would it require to answer their queries of this nature, and answer them considerably, so that they would not mislead, rather than be beneficial? Our correspondent must see that we can not reply to him, although we have every disposition to do so if it were in our power.

We will state to him that we do not keep the articles for sale which he wants, nor any others, excepting a few agricultural books, but he may find them among the persons who advertise in our columns.

Ring Bone.—We cannot inform "N. P. S., North Prospect, Me.," how to apply the medicine he speaks of. He must write to G. H. DADD, Vet. Surgeon, Boston.

CRANBERRY ON UPLAND.

We have thought that our Agricultural Societies have heretofore been rather premature in their recommendation of the upland culture of this fine fruit. As "one swallow does not make a summer," neither will one experiment justify us in commending this method. All know that the cranberry is natural to the meadow, and although the covering with water may be injurious at the time of flowering and setting of its fruit, still the flooding of the vines in winter, and the covering with litter or evergreens to protect the roots from a severe freezing, as is practised in the *upland* culture, will prevent this culture to any extent. In order to be remunerative, these beds or patches must be made on the meadow, or upon a springy soil. The owner of a considerable patch in Essex county recently stated that it would require *five* times the labor to keep the same amount of land well weeded out, devoted to cranberries, that it would to keep clear of weeds an equal extent in strawberries. This, with the whole process, from the first preparation of the land—the placing of meadow or swamp mud between the rows in mid-summer and the covering with evergreens in winter—must bring all to the conclusion that the upland culture of cranberries, so called, ought not to be recommended to our farmers.

We gave the matter a pretty thorough trial for several years, and became satisfied that the best way is to select a piece of land, either on the meadow, or its margin, where it is naturally moist, cover the grass entirely with sand or gravel, say to the depth of three or four inches, and set the vines in it, within six or eight inches of each other, and keep them entirely free from weeds.

For the New England Farmer.

TURNIPS ARE A PROFITABLE CROP.

MR. EDITOR:—Several conflicting accounts regarding the cultivation of rutabagas have lately appeared in your journal, and some farmers of experience, even, seem yet to be undecided, whether they are a profitable crop, or even will pay for raising. In your last No., February 12, your correspondent, Otis Brigham, asks the question, "When compared with other crops, are they worth raising?" My answer to that gentleman is, that like himself, I have raised them for the last 45 years, in quantities varying from one to twenty acres, each season, and find them, when compared with corn and other farm crops, decidedly the most profitable of any crop that I have cultivated in this country or in Europe, during that period. Mr. B. admits, that he raised 500 bushels, on half an acre of ground, last year, when and where nothing else could be raised.

That quantity exceeds, considerably, what I have ever been able to produce, even under the most favorable circumstances; still I do not doubt the statement, as I know that such quantities have been raised, and will be again.

Now, taking into consideration, as Mr. B. expresses himself, that they will grow where and when nothing else can be raised; I would simply ask the reason why they should not be worth raising; or in other words, why will they not pay? He admits that they are good food for cattle, &c., and yet appears to be in doubt with regard to them as a remunerating crop. Is Mr. B. aware, that his 500 bushels are now worth in Boston or New York market \$165 wholesale? or at the rate of \$330 per acre, which I should think is a pretty good return, and ought to satisfy any ordinary man on the subject in question. To go into detail, however, would occupy too much room in your valuable paper. Allow me, therefore, to state a few simple practical facts, regarding the cultivation and use of that valuable.

In the first place, a tolerable crop of bagas can be raised on ground too poor to produce almost anything else, and that with comparatively little manure, say 3 cwt. of guano, or the price of it in bone meal, per acre, which quantity would scarcely make any impression on an acre of corn, or potatoes, &c. &c., and fair crops are often raised after hay and early potatoes have been removed, the same season, as bagas can be planted successfully any time during the month of July, and even later some seasons; and by leaving the tops on the ground, to be plowed down, immediately after the roots are removed, will overbalance any bad effects that their exhausting properties may have on the land for producing the subsequent crops.

A luxuriant crop of bagas will clean the ground better than any other hoed crop; and if properly treated, will effectually eradicate every vestige of *witch* or *witch grass*, that common curse to cultivators of the soil over the world, and the expense for labor will not exceed that of an acre of corn or potatoes. It is a well established fact, that an acre of good bagas, fed out to cattle, will produce more manure, and of better quality, than three acres of corn. It is also an old and well-established fact, that young growing cattle and swine will thrive, and grow faster, on turnips,

than any other description of food; and every farmer who has cellar room to preserve them in winter, ought to produce a liberal quantity of them, every season, for that purpose. They are also good for producing beef and milk, although I certainly prefer beets for the latter purpose, notwithstanding it costs more than double the expense to raise them.

On the farm that I now cultivate, there are two acres of neglected, hard, gravelly land, that prior to last June had not seen a spadefull of manure, and had been cropped with rye for the last four years in succession preceding that date, by a former tenant, by which means it had become a real consolidated sward of *witch* or *witch grass*, and thought by many to be past redemption, for any kind of crop. In June last I made an attempt to break it up with a double team, but only succeeded in scratching the surface with plow and harrows, so as to change its color a little. After tormenting it with the harrow for awhile, I marked it off into rows three feet apart, manured in the hill the same as for cabbage, and planted the piece with rutabagas, finishing on the 3d July. All the manure I had for the two acres, was the scrapings of the dung-yard, which was deposited in the hills, in the usual way, at the rate of not more than two and a half cords per acre. The seed was dropped on the top of the manure and covered with the foot; the ground being too rough to admit of any speedier method of planting. The seed germinated quickly, and in less than three weeks, the piece was fit for thinning, and much in need of hoeing, and the final result was an excellent crop of the handsomest turnips that could be produced under any circumstances, notwithstanding the insurmountable and complicated difficulties with which their cultivation was beset; and the tops were so luxuriant, that they rotted, and choked out every vestige of *witch grass*, and the piece is now as clear of that obnoxious weed as any part of the farm. The produce per acre was 580 bushels, but if it be taken into account, that in consequence of the unparalleled wildness of the ground—the hills were far apart in many places—it may be safely computed, that at least a third more weight might have been produced, had the ground been under a better state of cultivation. This experiment corroborates, however, in a certain degree, what Mr. B. says about turnips growing when and where nothing else can be raised. On another piece, half an acre in extent, from which a tolerable crop of hay had just been removed, I planted rutabagas on the 19th of July, and had a fair crop, 320 bushels of good sized turnips. The piece received about two cords of sea-weed and dung-yard scrapings, which was harrowed in on the plow furrow, and the seed deposited by the machine in rows, 18 inches apart. The next and last piece appropriated to that crop last season, was half an acre of rather clayey sort of land, where a crop of onions had been cut off by the maggot. These were deposited by the sowing machine in rows 18 inches apart on the 3d of August, and as the ground had been heavily manured for the onions, it produced 402 bushels of handsome turnips after that late date; or at the rate of 804 bushels per acre.

In conclusion, I may here state, that in consequence of the barn that contained all my hay,

cattle and horses, &c. &c., being consumed by fire, with all its contents, last fall, I have been under the necessity, for the first time in my life, of keeping my cows and oxen exclusively on corn butts and turnips; and I do not see, but what they will compare favorably, and look as well in the meantime, as any around that have been feeding on English hay and grain, which confirms me still more in the faith, that rutabagas are worth raising, notwithstanding all that has been written and said against them lately.

THOMAS CRUICKSHANK.

Beverly Farms, Feb. 14, 1859.

For the New England Farmer.

FARMERS' CLUBS OR TOWN AGRICULTURAL SOCIETIES.

MR. EDITOR:—I learn from your interesting paper, that you are still wide-awake, and active, too, on the subject of Farmers' Clubs or Town Agricultural Societies. You have visited, it seems, several towns in Cheshire County, N. H., and endeavored to create a deeper interest in the subject of farming. Had you given previous notice, in your paper, of your intended visit, and of the object you had in view, we should, several of us, have been there to see and hear for ourselves, and you would probably have received an invitation to address our own town society, which has now been in existence and in successful operation a little more than a year. I say *in successful operation*; because, though we have done little more than hold discussions on subjects of the highest importance to us as farmers, yet our discussions have been listened to, and participated in, by a class of persons who never would have been benefited by the discussions of a county or State society. In fact, we have made up our minds that, if the people will not go to hear the discussions, then the discussions must be brought home to them. Our field of missionary labor is at home, and every farmer is expected to take a part in it, at least to give his opinion upon every subject under discussion. In this way, we compare notes with each other, and make a profitable exchange of our experience. Though there is a good degree of harmony existing among us, and a very general interest manifested in the attendance upon our meetings, yet we do not always agree upon every subject, because we are not all equally well-informed upon every subject, have not all enjoyed equal advantages for information, and our individual experiences have been different. Still, I would mention as the result of our last year's discussion on one topic, "the cutting and securing of the hay crop," that it was better done, and in better season, than in any previous year; and the crop of hay is worth more money. Now, if we can only make an equal improvement in some other branch of husbandry every year, we shall be doing very well; and some of us have faith to believe, that we shall even do better. Be this as it may, we are determined to do our best.

I have made the above few hasty remarks, not as an act of laudation upon our own humble efforts in forming a town society for the discussion of agricultural subjects, but to encourage similar efforts elsewhere. I regard these town

associations as a kind of *normal* school for the education of the great mass of the people, in which the old and the young enjoy equal privileges, and may be each other's instructors, and helpers of each other's joy and labors; and where old fossil prejudices may be compelled to give way to clearer views and better practices on the subject of farming. These social gatherings will be the means of creating a more general and deeper interest in the subject, and of diffusing throughout the length and breadth of our land a greater taste for agricultural pursuits. These little town societies, though humble in their origin, are the fountains, from whence are to proceed all the streams of scientific, experimental and practical knowledge, which are to elevate the character and extend the influence of farmers. These are the fountains, I say, whose streams running through every vein and artery of the body-politic, are to give energy and respectability to our calling; and, without whose vivifying influence, the science of agriculture will continue to be greatly neglected, if not despised.

It is true, that farming is a humble, toilsome and laborious occupation. With many, the tiller of the soil is regarded somewhat in the character of a slave, as low-born and low-bred. This is the opinion of the frivolous and the ignorant, who still continue to depreciate and despise rural pursuits and pleasures. But it should be borne in mind that they equally depreciate and despise all labor, all industry, all enterprise and all effort. There is nothing in farming inconsistent with great intellectual and moral cultivation; and there is no pursuit that rewards so liberally with health, and wealth, and honor, as farming.

JOHN GOLDSBURY.

Warwick, Feb. 9, 1859.

SEA KALE.

Why is it there is such an aversion to adopt any new article for culture? How slow were most cultivators for years in raising the tomato, spinach or rhubarb. Some of these were cultivated in the gardens of the amateur some twenty years before they came into favor by our market raisers; the salsify is still hardly known as a marketable vegetable, while the sea kale can rarely be found even in the markets of our large cities. Farmers and gardeners are not, however, the only ones that are thus slow to receive valuable novelties. The medical faculty of Paris, it is said, proscribed as poisonous, the potato, one hundred years after that plant had raised millions of vigorous troops, who, under Marlboro', had again and again beaten the finest armies of France.

The sea kale is said, by Dr. CURTIS, to "centre within itself all the good qualities of the cabbage tribe, and as a purifier of the blood in the spring, it cannot be too highly recommended." This plant, when first introduced into cultivation in England, was said to be one of the most valuable acquisitions made to their culinary vegetables for fifty years previous.

The sea kale is of easy culture, either by seeds, slips, or pieces of the root; that from seed, however, is the most preferable. Any land in good heart will answer. The seed should be sown about two inches deep, the ground pressed down with the spade or hoe, and in about three weeks the plants will make their appearance; these should be thinned out to about one inch apart, and they want little attention other than to keep the weeds down.

At the commencement of winter, clear the plants of decayed leaves, bend over the tops carefully, and cover them with litter. The following spring the seedlings having made strong, healthy plants, should be transplanted into ridges two feet distant; they will then produce what is called the *crown*, or edible part at the top of each. It is a very lasting plant, producing as strong shoots or sprouts at eight or even ten years old as they did at four. The sea kale being a maratine plant, a slight dressing of salt to the soil previous to setting them out, will greatly benefit their growth. This vegetable is cooked in the manner of spinach and other greens.

For the New England Farmer.

ORNITHOLOGY.

BY S. P. FOWLER.

There is probably no branch of Natural Science that has enlisted so many ardent admirers as Ornithology. The readers of the *Farmer* are no doubt aware of the enthusiasm displayed by Wilson, Audubon and Nuttall. William Bartram, one of our earliest naturalists, was a great lover of our feathered tribes. He remarks, "birds are, in general, social and benevolent creatures, intelligent, ingenious, volatile, active beings." J. P. Girard, the author of the *Birds of Long Island*, says, "it is his opinion that those who pass through life without stopping to admire the beauty, organization, melody or habits of birds, rob themselves of a very great share of the pleasures of existence. In spring when nature has recovered from the chilling blasts of winter, and again puts forth her rich foliage, what can be more delightful, than to listen to the rich melody of our songsters, robed in their nuptial plumage, perched on the branch of the rich magnolia, arranging their splendid attire with studied care, as if jealous the swelling buds would put forth blossoms that would rival them in beauty?" John Ray, the father of British Natural History, in his work entitled "The Wisdom of God manifested in the Works of Creation," published in London in 1727, remarks, when speaking of birds, "by their melodious accents they gratify our ears; by their beautiful shapes and colors they delight our eyes; being very ornamental to the world, and rendering the country where the hedges and woods are full of them, very pleasant and cheerly, which without them would be no less lonely and melancholy; not to mention the exercise, diversion and recreation which some of them give us." We are informed

by Montaga, that the venerable Dr. Latham, a distinguished English ornithologist, when in his ninety-first year, was as delighted in seeing a specimen of a new bird, as a boy on finding his first bird's nest!

The eccentric English ornithologist, Charles Waterton, has given us an amusing account of the means employed by his instructors to counteract in his boyhood the growing passion for the study of birds. How poorly they succeeded in their endeavors to destroy his enthusiasm, may be learned from his autobiography, and the reading of his admirable "Third Series on Natural History," published in 1857 when in his seventy-sixth year. In his account of his life and adventures, he says, "when I was not quite eight years old, I had managed to climb upon the roof of an outhouse, and had got to a starling's nest under one of the slates. Had my foot slipped, I should have been in as bad a plight as was poor Ophelia in the willow tree, when the 'envious sliver broke.' The ancient housekeeper, mentioned in the account of the barn owl, had cast her rambling eye upon me; seeing the danger I was in, she went and fetched a piece of gingerbread, with which she lured me down, and she seized me as though I had been a malefactor. At nine years old, I was sent to school in the north of England, where literature had scarcely any effect upon me, although it was duly administered in large doses, by a very scientific hand; but I made vast proficiency in the art of finding birds' nests. It was judged necessary by the master of the school to repress this inordinate relish for ornithological architecture, which, in his estimation, could be productive of no good. Accordingly, the birch rod was brought to bear upon me when occasion offered; but the warm application of it, in lieu of effacing my ruling passion, did but tend to render it more distinct and clear. Thus are bright colors in crockery ware made permanent by the action of fire; thus is dough turned into crust by submitting it to the oven's heat."

To my mind, language used by modern naturalists, expressive of their great love for birds, appears tame when compared with the enthusiasm discovered by some of the old authors. The most enthusiastic language we remember to have read upon the importance, or rather pleasure, to be derived from the knowledge of birds, was recorded in a work originally written in High German, in a rollicking style, by Peter Kolben, in 1731, in his preface to the "Natural History of the Cape of Good Hope;" wherein he says, "the beauty, the variety and music of the feathered nations are enchanting delights; and their instincts and habits often nobly instructive and amusing. I cannot help adding a reflection or two more here with regard to the feathered world, those beautiful, merry nations, which seem designed by Heaven as a kind of soothers and softeners of the chagrin and melancholy of human life, and a sort of counterbalance for the dull, the sour and the gloomy parts of the animal creation. What eye is not struck with those lovely nations of singers! What ear is not ravished with the charms of their melody! We say, after the French, that he who has no taste for music, has no soul. I must confess, I think he has a very strange one, or that it is hampered under

a strange sort of organization, who is not sensible to the melody of the feathered nations; and can people have a relish for the music of those beautiful warblers, and not a curiosity to look into their history; not a desire to know their make, their instincts and their economy; the knowledge of which is both profitable and entertaining? The variety of their abodes, habits and instincts, their various make, music and embellishments, are matters of the most delightful amusement. Nor are the preying, the mute or the unmusical part of them unprovided with matter of very noble and very useful contemplation." What writer in modern times, has so earnestly and enthusiastically set forth the claims of birds upon our attention, as did this old author, more than a century and a quarter ago?

Danversport, Feb. 3, 1859.

NINTH LEGISLATIVE AGRICULTURAL MEETING.

[REPORTED BY JOHN C. MOORE, FOR THE N. E. FARMER.]

The attendance at the Legislative Agricultural Society's weekly meeting, on Monday evening last, was not so large as is usual. The subject for discussion was—"*Horses: the best method of breeding, with a view to the special interest of New England farmers.*"

MR. SANFORD HOWARD, of the *Cultivator*, presided. In opening the discussion, he stated that it had been arranged that the question as to breed should be confined to the purposes of the immediate locality. But no single kind of horses could be recommended to breeders in this locality, as three kinds were prominently required among us—the heavy cart horse, the coach horse and the roadster. The heavy draft horse, owing somewhat to the disqualification of soil in this Commonwealth, could be more profitably bred in a more southern and western situation. The draft horses, in this country, he might remark, were not so strong or perfect as the Clydesdale breed in Scotland, and the Suffolk Punches of England. The latter were much hardier and stouter, and less liable to leg ailments. The coach horse, also, could not be profitably bred in this section. With the roadster, however, it was different. Our Morgans, especially those with a dash of the Black Hawk blood, were superior to any that could be found in Europe.

With regard to breeding, a standard of merit should first be fixed; and if material was not to be found which would come up to that ideal standard, here or elsewhere, the improvement would have to go on with what material we had on hand. The roadster should never be bred from the race horse, as the properties of the common roadster and the racer were very different. The hunter, which was a cross with the racer, in mechanical conformation, was not adapted to the uses to which the common roadster was put.

The special point of value in the hunter was a great power in the hind legs, which enabled him to take extraordinary leaps; whereas the qualities of the trotter, to be perfect, demanded a proper and equal distribution of muscular power over the whole body of the animal. Mr. H. read several authorities to prove his position, and to show that a racing animal, or crosses from such, in equal properties of blood, would never make trotters. The mode of breeding adopted—according to Lawrence, and the author of "British Rural Sports"—with the greater success, was the coupling of the hackney mare and stallion, both of which have been bred as roadsters. These authorities, however, gave all the praise to American trotting horses—as being so greatly superior to all similar descriptions to be found in Europe as to be considered nonpareil. Further, they upheld that the less racing found in a roadster the better. Englishmen advocated bringing their breeding stock from America; and absolutely laughed in their sleeves at the idea of Americans going to England for animals to improve their roadster stock. This was to be looked on as a very high compliment, and showed decidedly that we had all the materials of improvement among ourselves. There had been no cross of the English Norfolk roadsters with the racer, during the past twenty years, and none was certainly demanded here among us, where perfection had so eminently excelled that arrived at in England. Mr. Howard combatted the idea that the importation of thorough-bred blood into our breed of roadsters would give greater uniformity in symmetry and color. The racer was made up of a medley of bloods, many of them very different in the representation of physical characteristics; and such assurance as had been argued in favor of racer blood could not be relied on. The properties of the racer were peculiar to the animal, and were of no value whatever if imparted to animals designed for different purposes; therefore let us cultivate our own breed of roadsters, as we have them among us.

Dr. WOOD, of Boston, was called on to speak, and stated that he was not of the belief that racer blood was an improper element to impart to the roadster. Experience had said so. In 1791 old *Messenger* was imported into N. Y., and his blood is generally diffused there among the best trotting stock. From that horse came *Lady Suffolk*, *Trustee*, *Hector*, *Ajax*, *Celeste*, and a great number of others; and many other noble animals came directly from racing blood—among them the late *Black Hawk*, which came from a thorough-bred mare brought into this State from Canada. It was, therefore, plain that the racing blood was an important element in our best roadster stock. The very best the coun-

try can boast of came from a three-fourth thorough-bred Hambletonian mare.

The PRESIDENT had not denied the fact that a trifle of thorough-bred blood was a good element in a roadster; and the previous speaker would recollect that the Messenger horse had the repute of having vulgar blood in him.

Mr. FAY, of Boston, from his own experience, had evidence that corroborated what had been said by Dr. Wood; and that gentleman quoted the unsurpassed feats of Trustee in proof that there was no stock more hardy and capable of endurance than the thorough-bred.

Dr. LORING, of Salem, thought the discussion had taken a course foreign to the original intention. Farmers did not wish to breed cart horses, or trotting horses, but good, substantial, useful animals, that could be used for general purposes. Such breed we had here in New England, weighing from 900 to 1050 lbs., hardy, well made, capable of great endurance, fair drivers, and patient under fatigue and hardship. They were very valuable to the farmer, although they might not be exactly alike in all parts where they were found. Out of the farms, the plows and furrows, this stock had been taken, and had performed greater feats than had been done by any other description of horses. There was, then, no use in going back to the old Messengers, Trustees, Abdallahs and Justin Morgans. They were the parents of our present famed stock, but they were not fast themselves. They produced progenies of great endurance, not speed. for the speed had been engrafted on the stock since, and that speed had been frequently remarkable, as records were quoted to show. The Morgans were indeed remarkable—more so than any other kind, and they were not thorough-breds. The author of a late work on the horse did not recommend the use of Morgan stallions, because they were not thorough-bred! The history of horses produced

by thorough-breds, did not show such trotting feats as those got by the Morgans. Why then should racer blood be infused into our stock? We did not want our horses to run; they did not want to run, as it was, but took to trotting naturally, as they had been bred for that object. Moreover, the Morgans were adapted for all general purposes, and that was more than the racers were. Take one of your thorough-breds from the plow, and ride him to market, and what would he be like at the end of the journey? What experiments had been made with racer blood, had been failures here, for the produce had neither symmetry or substantiality about them. We certainly had among us the best material out of which to breed good farm horses. We had done so, not by management, but by chance, as we had nothing but native material to work upon. Our

horses were superior, too, to those of the districts where thorough-bred stallions were used. If a good roadster was to be found in Virginia and Maryland, he was sure to have northern blood in him. Instead of improving the breeds there, the racing blood made them a nuisance as roadsters. This was not encouraging to the friends of importing horses from England, to improve our own; on the contrary, it proved the policy of Englishmen coming here to purchase our stock for improvement. Her best breeders had acknowledged the superiority of our horses. One of the most eminent, declared that he had never seen such a horse in England, and that they could not raise such horses there. He further added that no where in the world could such horses be produced, as he had seen here in New England, in our own State—and they were not directly, but very remotely allied in blood to the racer.

Mr. WETHERELL, notwithstanding all that had been said, was of the belief that our stock of horses was very much indebted to thorough-bred blood, in similar measure as our cattle had been. He also thought that too much stress had been placed on speed among us, and that we had cultivated it at the expense of endurance. The same evil had appeared among the racing stock of New England. A special point of management—feeding—had also been much neglected, as well as the careful watering, training and general treatment. These things should be better attended to than they had been.

Mr. BUCKMINSTER, of the *Ploughman*, spoke next. He confined his remarks principally to the exposition of what he called the fallacious doctrine of breeding a horse to suit general purposes. No horse could be so adapted, unless he was treated cruelly, by being made to accomplish labor which he was not perfectly adapted to perform.

Dr. LORING denied that there was any special necessity for breeding for special purposes, as it was well known that horses could be found in the country doing the common farm work, which could be put to any labor on the road, the field or the street without cruelty, but would go into any description of labor to which a horse was physically adapted. Dr. L. commended the use of small horses to large mares; the horse not more than 16 hands high, symmetrical, compact, and above all things, well tempered. If the contrary was the rule, heavy bone and light muscle would be the result.

The PRESIDENT was of opinion that what nearest conformed to the Morgan type was the best model of a horse for general purposes. If he had not said so previously, he had meant to do so. He then announced that the question for next

Monday evening's meeting would be, "*The cultivation and management of Hay.*" Hon. JOHN W. PROCTOR, of Danvers, is expected to preside. The meeting then adjourned at a quarter past 9 o'clock.

For the New England Farmer.

REVIEW OF THE SEASON.

In No. 1 of the current volume of the *Farmer* is a "Review of the Season," by D. Buckland, in which he suggests the utility of similar statistics from other parts of the country. Believing such information may be serviceable to some, and interesting to many, I now respond to the call by extracting from my daily register.

We are situated in latitude 44° N., and nearly on the meridian of Washington. I keep my thermometer in the shade at the north side of the house, both summer and winter.

The 4th month was dry and warm. Plows were started as early as the 7th. The 12th, grass and grain looked quite green. I found several varieties of wild flowers in the woods the 18th. A heavy thunder shower on the morning of the 30th. Mean temperature 43.53°, which is 8.18° above the mean of that month of 1857, and 2.47° above the mean of Toronto for eighteen years.

The first half of the 5th month was dry, but a plenty of rain fell the last half. The wind blew from some easterly point, 17 days. Mean temperature, 52.16°, which is .63° above that of 1857, and 4.88° below that of 1855. Maximum height of mercury, 74°, minimum, 32°. Cherry and pear trees in bloom the 28th. Early apple trees began to bloom the last of the month.

6th month. The first half was cool and very wet; but little rain after the 13th, and we had some extremely hot weather. Mean temperature 69°.—8° above the mean of the same month of 1857, and 7° above that of 1855. It was also 8.16° above the mean at Toronto for 18 years. Apple trees in full bloom the 3d, but some trees near the Lake were white as late as the 16th. A fair quantity of blossoms, enough to produce a good crop, if a good proportion had matured. Max. height of mercury, 90° the 28th. Min. 45° the 1st. Mean of first 12 days, 67°; mean of last 12 days, 83 $\frac{3}{4}$ °.

7th month. First ten days, hot and dry. Rain fell in ten days of the month, but the season for harvesting hay and grain was pretty good. Hay crop about an average. Wheat much damaged by weevils and rust. Many fields were not harvested. Mean temperature 70°.—2.13° below that of 1857. Max. height of mercury, 87°.—Min., 48°. Warmest day the 10th,—coldest the 12th. Difference in the mean of the two days, 23 $\frac{1}{2}$ °.

The first half of the 8th month was very hot and dry. In the evening of the 18th, a sudden change in temperature occurred. Between 6 and 9 o'clock the mercury fell 17°; a further depression of 7° in the night made 24° in *eleven hours*. Overcoats and fires were comfortable several days, but fortunately no frost was seen in this region,—the earth having absorbed an extra amount of heat in the previous hot weather, had a surplus to impart to the cold air which came in

contact with it. Mean temperature of the month, 68.77° or 1.64° above that of same month of the previous year. Max. height of mercury, 88° the 11th; min., 44° the 23d. An abundance of rain fell in the last five days of the month, doing considerable damage to crops on flat land.

The temperature of the 9th month was about the same as in the last two or three years. The mean for the month being 61.14°. Max. height of mercury, 85°; min., 32°. Rain fell in only 9 days, yet in large quantities, and the ground was very wet. First general frost the 23d.

Potato crop pretty good, though on clayey soil they rot badly; not much diseased on sandy land. Corn about an average,—some pieces very good. Fruit almost an entire failure. Buckwheat somewhat damaged by frost.

L. VARNEY.

Bloomfield, Prince Edward Co., C. W.

For the New England Farmer.

WHAT IS THE BEST SEASON FOR PRUNING OUR FRUIT TREES?

This question is constantly asked; our agricultural papers have articles weekly on this subject. The conflicting opinions which are there given, we apprehend are in consequence of a want of knowledge of the nature of the circulation of sap, as well as in the office of leaves. Nature teaches us in this matter in the grape vine; we all know, that if the lateral shoots of the vine are cut or injured in early spring *before* the expansion of the leaves, it will bleed; but few seem to be aware that, on the contrary, if we will but wait until these leaves are fully developed, this will not to any extent occur, for the leaves which are analogous to the lungs in animals, by a *beautiful economy* take up the sap; hence pruning should not be done before this period; the trees then are in their most vigorous growth, and the wounds will heal over better at this season. It is amusing to hear the different testimony of farmers on this matter of pruning—thus, a writer from North Danvers says: "I have never known an apple tree that was pruned in March or April to bleed." While another, writing from Marshfield, thus speaks—"In pruning in April or May, I have found it impossible, in some instances, to prevent the wounds then made from flowing sap—it would burst off paint, shellac, and everything I could apply. I have known it to continue to flow for *two, or even more years*." The latter is the most astonishing to us, *if true*.

J. M. I.

For the New England Farmer.

CORN CULTURE.

How more than one hundred bushels of Indian corn was raised to the acre, in the State of Maine—the *north-ernmost* of all the States of the Union.

Mr. Willard, of Wilton, Franklin county, Me., says that in 1853, he grew fifty-five bushels, eight quarts, on half an acre, of merchantable shelled corn, fit for use. It was done after this manner; a piece of gravelly loam was selected, and finely plowed ten inches deep, and manured with six cords of stable manure, in best condition for use, one-half of which was spread and covered by the plow; the other half was placed in the hill.

An abundant supply of well-seasoned seed was dropped, and the surplus plants were thinned out so as to leave about one plant to each square foot of land. It was carefully cultivated, and kept entirely clear of grass and weeds. Potatoes, pumpkins or beans were among the corn, and none were wasted there.

I have never seen a more rational and satisfactory account of corn culture than this, and although I have heretofore been slow to believe that one hundred bushels of useable corn could be grown upon an acre, still, by the application of the same industry and fidelity that Mr. Willard applied, I believe that most of our farmers could double their crops. Let them begin by plowing as deeply and fertilizing and pulverizing as well, and with the blessing of Heaven, their crops will be as good. P.

South Danvers, March 4, 1859.

EXTRACTS AND REPLIES.

PLUM ON THE PEACH.

A writer in a recent *Cultivator*, signed "E. W.," says "that in visiting a Mr. Allen's nursery he learned a fact relative to plum trees worthy of the notice of our horticultural brethren. Near the house are several plum trees of some twenty years' growth, which were entirely free from warts or excrescences. Mr. A. imputed this *entirely* to the fact, that all his plum trees are on peach bottoms."

This is altogether new to me. Having a few years since cultivated this fruit to some extent, I had a good opportunity, with upwards of fifty distinct varieties, to have seen this; on the contrary, those varieties grafted on the peach root, viz., Bolmar's Washington and Prince's Imperial Gage, all being on this root, were greatly affected, so much so that those trees were the *first* we were obliged to cut down. I was troubled with these unsightly excrescences to such an extent as to render the growing of the plum out of the question, and at once discarded its further cultivation in my soil. J. M. I.

Salem, Mass., 1859.

WATER THROUGH LEAD PIPES.

I have repeatedly noticed in the papers accounts of fatal effects to persons, resulting from the use of water conveyed through lead pipes. Does lead water hurt farm stock? A neighbor whose cattle for many years had been watered at the barn through logs from a spring thirty rods distant; the logs getting leaky, he pushed a lead pipe through them, thereby saving much digging. Since that time, his cattle, with as good food and care, appear more lean and less thrifty, and do not shed their coats and look sleek so soon by more than a month after being turned to pasture. Cattle have died soon after swallowing paint, lead and oil, and is it not possible that lead and water may be hurtful to animals? What material is best to convey water through, to quench the thirst of man and beast? AN INQUIRER.

REMARKS.—We have no doubt that water impregnated with lead is hurtful to man and beast. Water is not injured by passing through logs, and where there is a constant stream, so as to

keep the logs continually wet, they will last for many years. Conductors, bored, and ready to lay, are sold in this city; they will undoubtedly last many years, if kept all the time wet. Cement pipes are excellent, but must be kept from the frost.

BEEES—CRITICISMS.

I see by the *Farmer* of Feb. 26th, that Mr. Kidder has given in his book a plate like Mr. Langstroth's—"The honored queen of a happy family." The subject is a beautiful one. It is a pity that in copying from Mr. L. he did not correct some errors. Both of them, (Messrs. L. & K.) have over-drawn the matter, it is not exactly true to nature. It is true a few bees will usually give the attention represented. But I never saw such eagerness—such devoted attention by so much of a crowd. It would hardly seem possible for her to move; and among the rest, a drone is making his way into the crowd (an occurrence not often seen,) anxious no doubt for a salute. Another error should have been avoided relative to the shape of the bee; the head is too small, and the body too large, &c.

St. Johnsville, N. Y.

M. QUINBY.

FEEDING STOCK.

I have one hundred sheep, three horses and eight head of cattle, and am, like a good many of my neighbors, short of hay. Hay is now worth here \$15 per ton, corn \$1 and oats 50 cts. per bushel. Now I wish to know which is best, all things considered, to purchase hay, corn or oats at the foregoing prices.

If grain, how shall I feed it, and what quantity would be equal to a foddering of hay, say for one hundred sheep?

Will corn meal or oats, fed to ewes with lamb, be injurious? A SUBSCRIBER.

Woodstock, Vt., 1859.

REMARKS.—Situating as you are, we should purchase all three of the articles, hay, corn and oats, and feed them judiciously to all the stock. A moderate quantity of corn or oats fed to the ewes with lamb, will be beneficial to them.

GAS LIME.

Please give an article on gas lime, the soil it is adapted to, with its value as a fertilizer. *Hartford, 1859.* SAMUEL MATHER.

REMARKS.—The refuse lime of gas works consists principally of a mixture of carbonate of lime, plaster, and other salts of lime containing sulphur. It may be used upon old mossy pastures, or sprinkled on the furrows in the spring with advantage; or, when greatly diluted, sprinkled on grass lands. As it does not contain much caustic lime, it may be mingled with barnyard manure in small quantities.

COMMITTEE OF PRODUCE.

It has seemed to me that in each of our agricultural societies, favored with the bounty of

the State, generally about \$600 a year, there should be a committee of this character, whose duty it should be, by personal inspection, correspondence, or otherwise, to ascertain and digest a complete statement, in tabular form, in their respective precincts, and make returns of the same to the Secretary of the Board of Agriculture. Let such statements be made with such authority, from year to year, and brought together in the secretary's report, and they will, in a great measure, remunerate for the money expended in support of such societies. I forbear to enlarge, always bearing in mind the maxim, "A word to the wise is sufficient."

March, 1859.

THE MANGOLD WURTZEL.

Please state the process of preparing the soil for a crop of mangolds, and where I can obtain the seed.

T. W. SAWYER.

West Millbury, Ms., 1859.

REMARKS.—Plow and cultivate so as to make the soil quite fine. Manure well, broadcast, furrow out good wide and deep furrows, fill them with manure, and sprinkle salt over it, then turn two furrows upon this, one on each side, rake down, roll it, and sow the seed. Under such treatment you ought to get a thousand bushels per acre, if you tend them well. The seed can be had of Nourse & Co., 34 Merchants Row, Boston.

ELECTRICITY.

I noticed in the *Farmer* remarks by "Electricity," in answer to questions made by "Non-Electricity," in reference to ventilation and electricity. Will "Electricity" answer the question,— "Why the electricity strikes a tree, or even the lightning rod standing in the open air, when the atmosphere and all the gases are reduced to an equilibrium? When this question is satisfactorily answered, I shall then be prepared to remove the cause and save the expense of protectors.

Derry, N. H.

INQUIRER.

ACID SUGAR MAPLE SAP.

Will acid sugar maple sap affect paint or strike through it so as to taint the wood of the tub? What will cleanse vessels painted on the inside, so that they will not affect sap or water?

Ashfield, Feb., 1859.

HENRY TAYLOR.

REMARKS.—Will some sugar-making friend reply?

A GOOD PIG.

MR. JOHN R. WALKER, of this city, dressed a pig on the third of March, nine months old that day, which weighed alive 375 lbs.; dressed 320 lbs. It was quarter breed Suffolk. It was handsome, and had not been hurried any, but had lived on the usual pig food, corn meal principally, until within two months past, when some ground wheat has been added. I give this item, so that you will know that New Hampshire farmers are not much behind the times—in the *porcus* line, at any rate.

ROCKINGHAM.

Portsmouth, N. H., March, 1859.

A FINE COLT.

I noticed a statement in the *Farmer* a few weeks since, with regard to a large colt that I own, that needs some correction.

The writer called him a *Morrrell* colt, which in Vermont is equivalent to saying he was sired by the old *Morrrell*, of Danville, Vt.

Justice to all concerned requires me to state that the colt was sired by the *Morrrell* Champion now owned by William T. George and Henry Whicher, of Topsham and Newbury, Orange county, Vt.

The colt is now eighteen months old; color dark chestnut, height 16½ hands, and his weight in *ordinary* flesh is over one thousand pounds.

PERLEY ROBERTS.

Washington, Vt., Feb. 23, 1859.

WHITE PINE SEED.

Will you be so kind as to inform me through the columns of your paper the best season for planting the pine seed, and likewise for gathering the cone? As I have some fifty acres plain land that I wish to plant with the same, this season.

A SUBSCRIBER.

REMARKS.—Friend CUTTER, of Pelham, will please answer this.

PUMPKIN AND SQUASH.

Can you, or any of your scientific correspondents, inform me of the chemical composition—organic and inorganic—of the pumpkin and squash?

C. BLAISDELL.

West Newham, March, 1859.

HOW MANY POUNDS OF MILK FOR A POUND OF CHEESE?

Can you, or any of your correspondents, tell how many pounds of new milk it takes to make a pound of merchantable cheese?

ENQUIRER.

Lyndeboro', N. H., Feb., 1859.

For the *New England Farmer*.

PREMIUMS FOR SPEED OF HORSES.

MR. EDITOR:—I have just received the Report of the doings at the Annual Meeting of the State Board of Agriculture of Ohio. Among other votes passed at the meeting, were the following:—

"1. *Resolved*. That paying premiums by agricultural societies for speed of horses, simply as such, without due reference to qualifications for purposes of general utility, is a perversion of the original design."

"2. *Resolved*. That trials of such speed have a great tendency to divert attention from every thing else, and with what seems to be their inseparable accompaniments, are degenerating and demoralizing, and therefore we will not offer such premiums, and will discourage their being offered by county and district societies."

This opinion, thus forcibly expressed, is entitled to much respect. It comes from a great agricultural State, and where at the same time the breeding of horses enters into the occupation of farmers very largely.

Very truly yours,

A FARMER.

For the New England Farmer.

PORTUGAL AGRICULTURE.

MR. EDITOR:—I observed in Portugal, what struck me as a peculiarity of the climate, that the ground seemed never exhausted. It has been cultivated in the same way near a thousand years, and still produces, for aught I know, as much now. The mode of culture is rude, and the quantity of manure applied very small. Little manure is made; cattle are not housed in winter; barns are hardly known except in connection with inns and in the towns. Ferns, brakes and leaves are collected in wet places, and flocks of goats folded upon them at night, sometimes, or the materials are drawn into the middle of the road for the travel to pass on them, and after about a year carted to the field. Such a thing as a heap of barn-yard manure I never saw there out of the cities. The merest sprinkling is put upon the land, and the surface barely smoothed over with a plow, not much better than a sharp stick. And yet pretty good wheat, really stout barley and tolerable Indian corn are grown every where. Indian corn is sown broadcast, and thinned to about one plant a foot square, with the hoe. The corn is perfectly ripened, though the ear is small. Potatoes yield plentifully, and are of excellent quality.

And so the land is tilled year after year, and century after century. The principal difference of the climate from our own is, that the seasons are reversed there. Summer is the winter of vegetation. All nature sleeps in summer; the earth dries up; every green thing withers.—With the autumn rains vegetation revives, and the earth looks green again. The barley and the wheat harvest is over before the drought comes on in June, and sometimes earlier. Indian corn and potatoes, by means of artificial irrigation, come forward at any time, in the south of Portugal. Green peas are in market every day in the year. The wonder to me is, how the fertility of the land is preserved under such a system of cultivation.

II.

West Lebanon, N. H.

GRAFTING AND TRIMMING FRUIT TREES.

An experienced cultivator in Dutchess county, N. Y., writes as follows on these subjects:—

“Scions for grafting should be cut in February, which is the right season to insure their living and doing well; they should then be housed in a cellar until the time for inserting them arrives, which, with you, might be by the last week of April or the first of May, and during the latter month. They should be put only into healthy, vigorous branches, such as you would not care to remove from the tree, and thus you will have an artificial tree that will be ready for bearing in about three years.

By removing too many branches from a tree injury may be done. Careful attention should be given to this point in lopping the branches preparatory to grafting, in order that the sap may pass into the remaining branches and keep the tree healthy and growing. I give you these ideas, knowing that fruit trees are often injured

by those who go about the country making it their business to set grafts in April and May, setting as many scions as they can, and getting pay for those that live, thus doing great damage to the trees.

Many farmers in our county have, I think, a wrong idea as to the time of pruning their apple trees, saying it is of little consequence when the tree is pruned, if it only needs pruning. This, I am ready to say, is a sad mistake, for at all seasons when the sap is down it is entirely wrong. The first or second week in June is the only fit season for pruning the apple tree. Then the sap is in full flow, and the wound made by cutting off a bough begins to heal and grow over immediately.”

For the New England Farmer

LEGISLATION---LAND DRAINAGE COMPANIES.

BY HENRY F. FRENCH.

In the valuable treatise of Dr. Warder, of Cincinnati, recently published in New York, upon Hedges and Evergreens, an abstract is given of the statutes of most of our States upon the subject of fences, and we know of no other book in which so good an idea of the legislation on this subject can be so readily obtained.

By the statutes of Massachusetts, any person may erect and maintain a water-mill and dam to raise water for working it, upon and across any stream that is not navigable, provided he does not interfere with existing mills. Any person whose land is overflowed, may, on complaint, have a trial and a verdict of a jury, which may fix the height of the dam, decide whether it shall be left open any part of the year, and fix compensation, either annual or in gross, for the injury. All other remedies for such flowage are taken away, and thus the land of the owner may be converted into a mill-pond against his consent.

We find nothing in the Massachusetts statute which gives to land-owners desirous of improving their wet lands, any power to interfere in any way with the rights of mill-owners, for the drainage of lands. The statutes of the commonwealth, however, make liberal and stringent provisions for compelling unwilling owners to contribute to the drainage of wet lands.

For the convenience of those who may be desirous of procuring legislation on this subject, we will give a brief abstract of the leading statute of Massachusetts regarding this matter. It may be found in chapter 115 of the Revised Statutes of 1836. The first section explains the general object.

“When any meadow, swamp, marsh, beach or other low land shall be held by several proprietors, and it shall be necessary or useful to drain or flow the same, or to remove obstructions in rivers or streams leading therefrom, such improvements may be effected, under the direction

of commissioners, in the manner provided in this chapter."

The statute provides that the proprietors, or a greater part of them in interest, may apply by petition to the Court of Common Pleas, setting forth the proposed improvements, and for notice to the proprietors who do not join in the petition, and for a hearing. The Court may then appoint three, five or seven commissioners, to cause the improvements to be effected. The commissioners are authorized to "cause dams or dikes to be erected on the premises, at such places and in such manner as they shall direct, and may order the land to be flowed thereby, for such periods of each year as they shall think most beneficial, and also cause ditches to be opened on the premises, and obstructions in any rivers or streams leading therefrom to be removed."

Provision is made for assessment of the expenses of the improvements, upon all the proprietors, according to the benefit each will derive from it, and for the collection of the amount assessed.

"When the commissioners shall find it necessary or expedient to reduce or raise the waters, for the purpose of obtaining a view of the premises, or for the more convenient or expeditious removal of obstructions therein, they may open the flood-gates of any mill, or make other needful passages through or round the dam thereof, or erect a temporary dam on the land of any person, who is not a party to the proceedings, and may maintain such dam, or such passages for the water, as long as shall be necessary for the purposes aforesaid."

Provision is made for previous notice to such persons who are not parties, and for compensation to them for injuries occasioned by the interference, and for appeal to the Courts.

This statute gives by no means the powers necessary to compel contribution to all necessary drainage, because, first, it is limited in its application to "meadow, swamp, marsh, beach or other low land;" the word meadow in New England, is used in its original sense of flat and wet land; secondly, the statute seems to give no authority to open permanent ditches on the land of others than the owners of such low land, although it provides for temporary passages for the purposes of "obtaining a view of the premises, or for the more convenient or expeditious removal of obstructions therein." The word "therein" referring to the "premises" under improvement, so that there is no provision for outfalls, except through natural streams.

On the other hand, it is manifest that the State assumes power sufficient to authorize any interference with private property that may be necessary for the most extended and thorough drainage operations. The power which may com-

pel a man to improve his portion of a swamp, may apply as well to his wet hillsides, and the power which may open temporary passages through land or dams without consent of the owner, may keep them open permanently, if expedient.

By an act of the Legislature of Massachusetts, passed March 28th, 1855, ample provision is made for compulsory outfalls. The act provides that any person having the ownership of low lands, swamps, &c., that, by means of adjacent lands of other persons, or of a highway, cannot be worked, drained or used in the ordinary manner, without crossing said lands or highway may be authorized to establish roads, drains, &c., to said places. The process is by a petition to the County Commissioners, notice to all parties interested and a hearing. The Commissioners, if satisfied that the request is reasonable, shall proceed to lay out and establish the improvements, and assess damages equitably among parties benefited, to be paid to the party whose land is thus burdened.

An appeal lies to the county by either party dissatisfied with the award, as in cases of the laying out of highways. By an act of May 30th, 1857, it is provided that where the lands are all in one town, the selectmen may act instead of the County Commissioners.

By the provisions of these acts, we understand that any owner of "low lands, lakes, swamps," &c., may, in proper cases compel his obstinate neighbor to allow him to open such drains through adjacent lands as may be necessary to perfect his work.

The provision is broad enough for all low lands or swamps, and should be extended to all other lands, dams and other obstructions whatever, and thus place in the hands of the proper authorities complete power to do what is just and equitable, and for the public good.

It would seem, then, that the commonwealth, which is perhaps as conservative in her legislation as any other, assumes and exercises all the power necessary to authorize the most complete system of drainage. Whatever the powers of the States, upon the points suggested, there is no doubt of their power to protect the farmer, to some extent, against the encroachments of mill-owners and water-power companies. Our courts are teeming with suits between land-owners and these companies about flowage, and in these suits the corporations have usually the advantage of wealth and influence and concert of action, as well as of knowledge of the true state of facts, while the land-owner has the benefit usually of strong sympathy on the part of jurors.

The appointment of commissioners to examine, define and record, from time to time, the height

of all dams and embankments, the capacity of gates and sluice-ways, the agreed or ascertained rights of flouage, connected with all mills and reservoirs within their jurisdiction, and such other matters as might be necessary to make definite the respective rights of the parties, would tend to lessen litigation, and quiet much disagreeable and expensive controversy.

In those States, too, where it is deemed constitutional, provision might be made by proceeding before the same commissioners, for compulsory outfalls, upon proper compensation to owners, and even for partial or full contribution by unwilling owners, where lands are so situated that it is necessary, for the good of the whole, to interfere with property of owners who refuse to join in the enterprise.

WONDERFUL POWER OF FUEL.

It is well known to modern engineers, (remarks an English journal,) that there is virtue in a bushel of coal properly consumed, to raise seventy millions of pound weight a foot high. This is actually the average effect of an engine working in Huel Towan, Cornwall, England. Let us pause a moment and consider what this is equivalent to in matters of practice. The ascent of Mount Blanc from the valley of Chamouni is considered, and with justice, as the most toilsome feat that a strong man can execute in two days. The combustion of two pounds of coal would place him on the summit. The Menai bridge, one of the most stupendous works of art that has been raised by man in the modern ages, consists of a mass of iron not less than four millions of pounds in weight, suspended at a medium height of about 120 feet above the level of the sea. The consumption of seven bushels of coal would suffice to raise it to the place where it hangs. The great pyramid of Egypt is composed of granite. It is seven hundred feet, in the side of its base, and five hundred in perpendicular height, and stands on eleven acres of land. Its weight is therefore 12,700 millions of pounds, at a medium height of 125 feet; consequently, it would be raised by the effort of about 630 chaldrons of coal, a quantity consumed in some foundries in a week. The annual consumption of coal in London is estimated at 1,500,000 chaldrons. The effort of this quantity would suffice to raise a cubical block of marble, 2,200 feet in the side, through a space equal to its own height, or to pile one mountain on another. The Monte Nuovo, near Pozzuoli, which was erupted in a single night by volcanic fire, might have been raised by such an effort from a depth of 40,000 feet, or about eight miles. It will be seen that in the above statement, the inherent power of fuel is, of necessity, greatly underrated. It is not pretended by engineers that the economy of fuel is yet pushed to its utmost limit, or that the whole effective power is obtained in any application of fire yet devised; so that were we to say 100 millions, instead of 70, we should probably be nearer the truth.—*Maine Farmer.*

THE CONCORD FARMERS' CLUB.

The meetings of this association have been attended through the winter, and the discussions sustained with unusual spirit and ability. The annual meeting was held Nov. 11, when the following gentlemen were chosen officers for the ensuing year;—N. H. WARREN, President; S. H. RHODES, Vice President; JOSEPH REYNOLDS, Secretary; ELIJAH WOOD, Jr., Treasurer.

The President and Secretary were appointed to assign places of meeting, and subjects for discussion, on each week during the season. At the next meeting, Nov. 18, this Committee reported the following list of subjects to be discussed, in the order in which they are presented. The gentleman at whose house the Club meets, is expected to read an essay upon the subject to be discussed on that evening. These essays are read before the discussion. Farm Buildings, Rotation of Crops, Farm Implements, Market Gardening, Reclaiming Swamp Lands, Horses, Agricultural Books, Diseases of Farm Stock, New Plants for Cultivation, Manures, Swine, Grain Crops, Draining, Root Crops, Garden Fruits, Pasture Lands, Soiling Cows, Poultry, Flower Gardening, and Corn Culture.

At the second and third meetings, the subject of Farm Buildings, especially the structure and internal arrangement of Barns, was fully discussed. On the fourth evening, an interesting discussion was had, on Farm Implements. At the fifth meeting which was held, the subject of Market Gardening was discussed. In this subject was included the expediency and profit of farmers raising vegetables for the market, the best methods of cultivating certain vegetables, and the best and most profitable ways of conveying them to market, and disposing of them. The present mode of marketing produce is very laborious, and takes much of the time of the producer, and there seemed to be a general conviction that some other method must be adopted. If the produce of a town or neighborhood could be conveyed to market, by railroad, and delivered to an agent or agents, who should dispose of it for the producer, for a commission of a certain per cent. on the price obtained, it was thought it would be a better way than that pursued at present. This subject is now fairly before farmers, and if the managers of railroads will afford the needful accommodation, some plan will be devised, that will relieve them of the necessity and hardship of spending so large a part of their time in dragging loads of produce to market. Could some feasible plan be devised to accomplish this object, in which the expense should not absorb all the profits, it would open a new source of employment to farmers, and enable

them to compete successfully, with the market gardeners, in the immediate vicinity of Boston. There need be no fear of over-stocking the market, especially with those articles that are matured in the early part of the season, as radishes, asparagus, rhubarb, early peas, cucumbers, &c., as these are now sent to Portland, Bangor, Halifax, and other places, north and east, and the demand is annually increasing.

For the New England Farmer.

ST. HELENA POTATOES.

MR. EDITOR:—In 1856, I purchased six or seven potatoes of this variety, at Worcester, Mass. At the close of the Horticultural Fair, the productions were sold at auction, and seeing a plate of very nice looking potatoes, I secured them, at a high price apparently, at least it would be so considered in Vermont.

We have used them freely in our family this year, having raised over one hundred bushels, and find them a good potato for use. They grow large, and are not liable to rot, very smooth, as the eyes are directly upon the surface; very compact in the hills.

Messrs. Drew & French, in the *New York Tribune* of March 5th, describe the potato exactly, under the name of "Prince Albert." Upon the card attached to the plate of those I brought from Worcester, was the name of the producer, and also of the variety, and by that name we have called them. Are they the same, or not?

E. P. MUDGETT.

Cambridge, Vt., March 9, 1859.

REMARKS.—It is quite likely they are identical, for the same potato is often known by different names. The finest potato that we are acquainted with, or, at the least, one equally as good as any, is that called the "Riley," or "Dover," from the fact that a cargo of them was brought into the city of Dover, N. H., by one Capt. Riley. They are the true "*Irish Cup Potato*," and will at once be recognized as such by many of your friends from the Emerald Isle. There are two objections to them; they do not yield largely, and their eye cups are so deeply set that it requires much care to prepare them for the oven or the pot. But upon the plate, with a little sweet butter, the *Irish Cup* is a potato that will commend itself any where.

RUTLAND COUNTY AGRICULTURAL SOCIETY.—President, Daniel Kimball, of Rutland; Vice Presidents, Chauncey S. Rumsey, of Hubbardton, Alpha H. Post, of Rutland; Recording Secretary, Henry Clark, of Poultney; Corresponding Secretary, Orel Cook, Jr., of Rutland; Treasurer, Hon. Zimri Howe, of Castleton; Auditor, Ward M. Lincoln, of Brandon, and a Board of Managers consisting of twenty-five persons.

For the New England Farmer.

LETTER FROM CONCORD, MASS.

A California Picture—River Meadow—Horse Powers.

A gentleman in this town who returned from California an invalid, last summer, lately received from his partners there a very interesting ambrotype picture of their store at the mines, around which were quite a company of his old friends, and the train of mules which he had often journeyed with from their head-quarters at Marysville to this depot, among the mountains.

The picture was large, and exceedingly well taken. The express charges on it were *nine dollars*.

RIVER MEADOWS.

I am looking on, with a good deal of interest, to see what progress is made in getting down that ruinous dam on the Concord River. There has been no movement of a like importance agitated for years. It will take money to make it successful. Mr. Talbot bought and built in good faith. At that time the purchase, if necessary, of the privilege of flowing such an extent of country could have been most advantageously made. Now, it seems, Mr. Talbot has expended in buildings and peculiar machinery some *eighty thousand dollars*.

Now, what can you do unless you have about one hundred thousand dollars with which to commence negotiations? No amount of words or complaining will ever start a stone from that dam. The lever must be made of gold.

When one thinks for a moment of the rich alluvial lands that could so soon be made to yield the hay and corn to crowd a thousand barns, it seems a burning shame that the unfortunate barrier which stupid legislators allowed to be erected, should not be allowed to come down by their wiser successors.

HORSE POWERS.

While the horses stand idle in their stalls, their owners sweat at the wood pile! Every farm of considerable size should have some sort of a horse-power. It should be located in the ample barn, where, on rainy days, the horse could drive a saw which would cut a cord every hour, easily. Then, how a horse can make a grindstone go around! I like to have a grindstone perfectly true, exactly round, and then go so that fire will occasionally start out. Where grindstones are turned by hand, they are very seldom burst by going too fast! The fact is, it is tedious work—the most so of all summer. Where a water power is not convenient it is a great relief to have the grindstone go by horse-power. The tools will always be kept sharper, and can be ground in less time. It is the height of folly to smash away with dull tools. It will pay to provide convenient means to keep them in order.

Hay cutters are made to attach to a power so that the hay, for a large stock, can be most expeditiously prepared. If one has a taste for the thing, the horse can saw the wood, wash the clothes, churn, turn the grindstone, cut the hay, shell the corn, drive the small circular bench saw, and pump the water.

Are not farmers less interested than other classes, in ingenious contrivances which expedite their business and save their strength?

March 1, 1859.

W. D. B.

For the New England Farmer.

BLIGHT IN THE PEAR.

MR. BROWN:—Having been in the habit for years of examining the various accounts that have come to us, particularly from the South and West, where blight in the pear is more common than with us, we have been struck with the resemblance their seems to be between what they call frozen sap and scald, or sun blight; thus one writing from Mobile, describing its first appearance and effect upon his trees, corresponds entirely with a similar article from Illinois, from one who denominates his as frozen sap blight. We can hardly suppose that frozen sap blight could occur in the climate of Mobile.

We believe that there are two forms of blight, one form being caused by a severe scald, often produced by the practice of denuding the trees, when young, of their side, or lateral shoots, thereby exposing their naked trunks to the sun, for there are few trees in a young state that can endure the scorching rays of our August sun when thus denuded; there is a constant effort in young trees to throw out these side branches near the ground. The enlargement of the trunk of a young tree with its laterals uninjured, will be much larger in a given time, than upon one with these shoots removed. This we believe to be one of the causes, at least, of one form of blight. The other form, or what is called frozen sap blight takes place ordinarily upon trees that are forced in strong and highly manured soil when young, and by cutting off the tap root, thereby causing the tree to make long succulent shoots, the growth extending to so late a period as to be overtaken by the winter, before the sap is sufficiently elaborated, and the wood matured to stand a severe freezing. Rich soil with manure or excess of moisture undoubtedly increases the evil. The tap root, although not forming a part of every plant, when it does so, is an *essential* part of that plant, and the injury to any one part of a plant, occasions a change in the natural developments of the other parts. In allusion to this cutting and high manuring, it has been said that "nature, to be perfect in any of her works, should not be forced; we may be impatient, *not her*. In her elaborate and harmonious labors, time must be given for all things; and all we have to do, is to understand what she intends."

I would like to ask, if any one ever knew of our natural button pear trees to be affected by either of the above forms of blight. J. M. I.

Salem, March, 1859.

GROTON FARMERS' CLUB.

No town in our community gets up a better "Town Show," introduces more good articles to public inspection, or does its work in a more spirited manner, than the town of Groton; and there are few towns where a farmers' club exists, where the people seem to take so little interest in its affairs and "let it alone so severely." How these two things are to be reconciled, we do not know. The meeting on the evening of March 14th, at which we were present, was thinly attended, although the hall where it was held was in the cen-

tre of a populous village. The travelling was exceedingly bad, it is true, but in such a locality, the hall should have been crowded.

It is encouraging, however, to find farmers' clubs holding stated meetings, and their great work progressing, though it be sometimes with only little zeal. Groton, with her excellent land and intelligent population, ought to lead the way, and we found some among them convinced of this fact. There are many examples of good husbandry in the town. Gov. BOUTWELL has given one in the construction of his barn, and the accuracy with which he keeps his farm accounts,—being able at all times to show profit and loss in his operations. His well-arranged barn was filled with a fine stock of cattle. There are others excelling in different departments of husbandry, but whose places we had no opportunity to see.

For the New England Farmer.

THE CATERPILLAR.

The tent caterpillar, (*Clisiocampa Americana*), has become famous for its ravages; so great are they that it is necessary to adopt every means in our power to check its progress, and to do this we must know the insect under all its forms.

In the winter there may be seen on apple trees, (as well as on many others,) at the ends of the limbs, a band of eggs, covered with a brittle, shiny, water-proof varnish, extending around the limb, and about one-half or three-fourths of an inch long; in this there are from three to four hundred cylindrical eggs, standing on end. When the leaves begin to burst forth, these eggs hatch, and from them proceed the small caterpillars which destroy those young and tender leaves. They make for themselves a white, silvery tent, in which they live when at rest, and from which they go forth for food; as they go they spin from their mouths a fine white thread, which guides them back to their home, and as they increase in size, still go over the same tract, until all the leaves are eaten. In their repeated journeys, the limbs get coated above with silk, which when observed, can often guide to a nest which would otherwise escape notice.

As the caterpillars grow larger, they increase their tent by adding layer upon layer of silk at a little distance apart, and so large do they sometimes make them when undisturbed, that they will measure six by nine inches.

The full-grown caterpillar measures about two inches in length, the head is black; the body is striped longitudinally with white, yellow and black, and in the yellow are many fine black ones; it is sparingly covered with short hair, most abundant on the sides. They leave the trees in the first part of June, and seek a place sheltered from storms, in which they spin their cocoons, which are of a oval shape, of a yellowish white color, caused by a powder that fills up the crevices between the threads of silk. From the chrysalis, in July, come forth the perfect insects; in this state they are moths of a reddish brown color, with two oblique white stripes on each fore wing,

the antennæ are feathered, and the thorax is very hairy; they expand from one and one-quarter to one and one-half inches.

There are four states in which these destructive insects may be killed. First, in the egg, by crushing the band of eggs, but as the eggs are small, this cannot be practiced to any great extent. Secondly in the caterpillar. Various measures have been advised to remove these pests, but the best that I have tried is to brush them off by means of a conical brush made for the purpose, and then crush them; this should be used early in the morning, at noon, or at night, for the caterpillars are out in the forenoon and afternoon only. Thirdly, in the chrysalis; this is easy enough, for when you find a cocoon, crush it; they are seen very plenty under tops of fences, and on buildings under the thick part of the shingles or clapboards. Fourthly, in the moth; the best way to kill them in this state is to build fires, in the places infested by them, in July, before they lay their eggs, for they will fly into the fire and get burned.

How they would disappear if every person killed every caterpillar he saw crawling on the ground, or every cocoon he saw sticking to a fence or building!

CARLETON A. SHURTLIFF.

Brookline, Mass., 1859.

SUPERPHOSPHATE OF LIME FOR TRANSPLANTING TREES.

Phosphoric acid possesses a very great and remarkable influence on the development of roots, causing plants to throw them out with unusual vigor; we do not know of any very satisfactory explanation of this phenomenon, either chemical or physiological, but of the fact itself there seems to be no doubt. The most convenient mode of employing this substance is in the form of superphosphate of lime, as it is called, that is to say, a mixture of oil of vitriol and burnt bones. This compound, which is rich in phosphoric acid in a soluble state, may be readily mixed with a little dry mould; it then forms a most valuable aid to the planter. Superphosphate of lime, is, therefore, a very valuable fertilizer in the hands of the planter; but in using it he must always remember that as his plants must necessarily absorb the whole or the greater part of the soluble manure which he gives them he must take care not to give them too much. He must not suppose that if one handful will do good, therefore ten handfuls will do more; it is very easy to give too much, and plants, like animals, may equally be injured by overfeeding or by starvation.—*Prof. Lindley.*

BUCKWHEAT AS FOOD.

M. ISIDORE PIERRE has recently been making some investigations on buckwheat, from which is condensed the following interesting results:—Buckwheat cakes are equal to pure white bread as regards the phosphates or bone-making material, and nitrogenous principles which they contain, and are superior to bread in fatty matters. The general yield of buckwheat when cooked is about three times the weight of the flour used, showing that such flour will retain forty to forty-

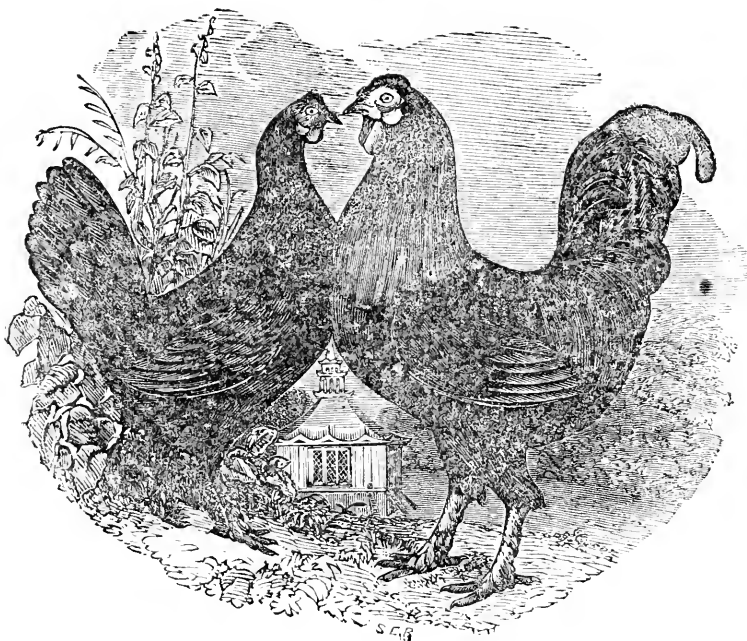
one per cent. of water. Between different batches of ground buckwheat is a great dissimilarity of composition—one batch containing nearly seventeen times as much nitrogen, twenty-five times as much fatty matter, as another. The bran is the richest portion of the buckwheat, but cannot be digested by weak stomachs. The finest qualities of buckwheat flour, and the white mill dust, especially, are very suitable for children and persons in delicate health, while the coarser varieties require a strong stomach and much exercise for their perfect digestion.—*Rural New-Yorker.*

HARDY NATIVE FLOWERS.

Among the most beautiful wild flowers that grace our meadows in summer with its unrivalled scarlet blossoms, is the *Lobelia cardinalis*, sometimes called the Pride of America. This plant is found generally on the borders of our brooks and wet meadows, and it seems to be almost the only plant, with the exception of the *Podophyllum peltatum*, or May apple, that will thrive equally well in our gardens. The *Geradias*, another beautiful genus, of which there are four or five species, on the contrary, are extremely difficult to raise in our gardens, either from the root or seed, while the *Asclepias tuberosa*, or orange colored Milk Weed, the most showy variety of that genus, will grow quite as well when transplanted to our gardens, as in its native woods. The *Hepatica triloba*, or Liverwort; the varieties of *Viola* or Pansy; *Hypoxis erecta*, or Star of Bethlehem; *Sanguinaria canadensis*, or Blood Root; *Anemone nemorosa*, or Wood Anemone, are of easy culture. Many of them will improve in size and beauty under cultivation. They are as showy as many foreign varieties for which high prices are paid. These will all thrive, if placed in moist soil, or in a half-shady part of the garden.

THE MILK TRADE.

The Committee on Agriculture in our Legislature has reported a bill in relation to the purchase, sale and measurement of milk. The bill is a fair one, and if passed, will tend to correct a good deal of corruption in the business, establish the measure so that every body may know what a quart or a gallon is, and greatly promote the chances for the people in the cities to get pure milk and just measure. We trust our friends will attend to this matter now, and place before their members of the Legislature, all the facts they may possess, to enable them to show why the bill should be passed. The opposition to the bill comes from the milk-venders, who now purchase seven or eight quarts and sell it for ten—to say nothing of water added. Milk raisers in the country have no time to lose in attending to the matter—it is one of great importance, and should receive prompt and energetic attention.



THE GUELDERLAND FOWL.

In *Bennett's Poultry Book*, page 82, is the following account of this breed of fowls:—"I am indebted to Mr. H. L. Devereux, of Boston, for the following account of the original importation of this breed, and a description of those in his possession.

"The Guelderland fowls were imported from the north of Holland, some years since, by Captain John Devereux, of Marblehead, in the ship *Dromo*; and since that time have been bred purely by him, at his place in that town. They are supposed to have originated in the north of Holland. They are clad in a beautiful blue-black plumage, but the flesh is white, tender and juicy. They have no comb, but a small, indented, hard, bony substance instead, and large red wattles. They are of good size, great layers, seldom inclining to sit; bright, active birds, and are not surpassed, in point of beauty or utility, by any breed known in this country."

SPAYED COWS give much better and more healthful milk than cows in the natural state. So, at least, says a French work on this subject.

The cow will continue to give milk, in this condition two or three years; then she will fatten easily, and make excellent beef. This may be true; but American dairymen will not soon adopt this practice in regard to their cows.

For the New England Farmer.

HINTS TO FARMERS AND CORRESPONDENTS.

FRIEND BROWN:—Farmers like short articles—the words and thoughts of practical men, few, plain, and straight to the point. Why don't they write, then? Why don't *more* of them write?

"Why, bless us!" says the editor, "we have a multitude of correspondents, and more communications than we can publish—our journals cannot contain *everything*!"

True, very true, no doubt, but with the best care on the part of correspondents, there might be a little more room. If all would remember that farmers know good corn without seeing the husk and cob, they would often send smaller grists to the publisher's mill. Well considered and condensed articles are always acceptable in however humble a dress they may appear. They are usually the best for those who *do*, and always the least in the way of those who *do not*, need the information they convey.

Here are some subscribers behind the editorial chair—shall I speak with them a moment?

The publishers of this excellent journal have undertaken to run an express weekly, or monthly, to every New England farmer's door. They distribute all sorts of farming articles, theoretical, practical and mixed. With the aid and care of the editor, they have done excellently well in every respect. But farmers and gardeners, much as they are doing now, will do still more, if you say the word, and with mutual benefit. They might take a seasonable article from each of you

occasionally, and distribute to every other subscriber—every other will give thanks and forward parcels by aid of the same express to you. Fair exchange is no robbery—it is mutual effort for mutual good. To obtain all the information you can from others and bottle up your own is downright plunder. Be neighborly and just, successful farmers, and share your knowledge all round. If you won't, pray don't ever again laugh in your sleeves, or anywhere else, when you see another suffering great loss in a farming operation for want of information which you possess. And don't complain of young men for leaving the farm for any Eldorado that appears to offer a golden gleam, until you take as much pains to learn them farming as you do to teach a two-year old steer to *haw* and *gee*.

May it please you to give us some crumbs. I speak for young farmers, and ignorant ones, but the wisest may learn something of each other.

We don't ask you to write elaborate essays. Few would stop to read them in the busy season, and if once laid away, would perhaps never. Although they might be good as a minister's sermon all the way down to "eleventhly," if too long they would be of little general value. Working farmers don't often hunt through a bushel of superfluous words for the disjointed members of one idea. If you send most of your notes in the style you take them for your own use, there will be no superabundance of words, I dare say. Fine writing and nicely turned phrases are not essential. An iron bar is no more useful for being eked out at the top with feathers, nor is it necessary to knot your ox-chains with ribbons, unless it be cattle-show day. Be short, clear, concise, practical, and there will be room enough for all.

N. PAGE, JR.

Danversport, March 26, 1859.

For the New England Farmer.

SOILING OF CATTLE.

My attention has recently been called to this subject by a publication made by the Senior Quincy, and the impression from the perusal of his Essays is so strong, that I feel constrained to invite the attention of all who would advance their own interests and that of their neighbors to what he says. He clearly demonstrates, that in the mode of proceeding which he points out, as many cattle can be as well kept, for all the purposes of farming, on 40 acres, as are now kept on 160 acres, in the ordinary modes of keeping, by those who are esteemed good farmers.

What, then, is the result of such management? The young man who intends to be a farmer, starts at the age of 21, with his 40 acres of land costing him \$1000. He appropriates one-half of it to the feed of his stock, and the other half to the growing of hay and other purposes of the farm. He will find himself able to maintain 20 head of cattle, through the year, on a farm thus managed. He will find the net income of a stock thus managed not less than \$1000 per year. Will not farming thus conducted pay? This is not mere fancy speculation. Mr. Q. says he has tried it for many years successively, and knows what he says is true. I know a man, who forty years ago, purchased a lot of land; on the shore of the sea,

40 by 160 rods; and who then erected buildings upon it, and has since so managed it, as to realize, at least a net income of \$1000 a year from this farm.

ESSEX.

March 25, 1859.

For the New England Farmer.

HAY AND ROOTS.

MR. EDITOR:—Can you enlighten us by any fact or suggestion bearing upon the two following questions:

1. If you had first quality hay, (i. e., the *very best* which our farmers get in,) would you use any roots with it in wintering your stock?

2. If you should use roots, what would they be worth per bushel to you—that is, if the market value of turnips was two shillings per bushel, and the value of other roots corresponding; which would you do, carry your roots to market, or feed them with *first quality* hay?

Can you oblige us by answering the above practical questions; also, giving us your reasons.

We have a "Farmers' Club," which meets every Monday evening, at different farm houses, and there, in a very social manner, we discuss the different points arising under the subject announced the evening previous. We make no set speeches, but we pass the point round, demanding, in every case, an opinion, if not a reason. In this way we draw out facts, from which principles are deduced, and thus an actual progress insured. The plan succeeds admirably. Of course we have a constitution, officers, and other essentials to an organized body. The admission fees, together with the voluntary contributions of the members, provided us with a little library. But what I would especially call your attention to, is the informal, social features of the club meetings. Queries are raised, experience brought out, facts established and principles evolved in this way, which otherwise would never, or very seldom, appear.

The above questions arose under the subject of "Winter Management of Stock," and we should be much gratified to have an expression from you.

WARREN JOHNSON.

Topsham, Me., Feb., 1859.

REMARKS.—If common flat turnips would net us thirty-three cents a bushel, and other roots bring a corresponding price, we would take them to market, and for this reason: On suitable land we ought to expect 600 bushels of turnips per acre, and at 33 cents a bushel we should get \$198 income from an acre of land. Such an income could scarcely be expected from any of our ordinary crops, and it would be better to secure that sum for the turnips, and expend it for some kind of grain, if we wished to feed something besides hay.

Your plan of a Farmers' Club is the true one. We have been attending one similarly constituted for nine years; but we make "set speeches," that is, four leaders are appointed on each question, and they have precedence, speaking in order, and without interruption.

TENTH LEGISLATIVE AGRICULTURAL MEETING.

[REPORTED BY JOHN C. MOORE, FOR THE N. E. FARMER.]

The tenth of the series of Legislative Agricultural Meetings was held in the Hall of Representatives, on Monday evening last. The attendance was moderate. The subject for discussion was, "*The culture and cure of the hay crop.*"

Hon. JOHN W. PROCTOR, of Danvers, occupied the chair; and in introducing the discussion, said in substance, that although he could not go into the statistics of the value of hay, as compared with other crops, it was, nevertheless, one of the most important crops grown in the State. He would speak from his own practice; and what he would say relative to the management of hay should proceed from that source, and would apply to all kinds of hay. In olden times the hay seed was generally sown with the oats or wheat in the spring; but latterly, it was customary to plow and sow the seed in August, and the practice would become more common as its benefits were realized. This method produced from one and a half to two tons per acre. One friend who mowed seventy-five acres had an average of one and a half tons per acre. Some of the farmers on Marblehead shore have brought over 100 tons per annum to the Boston market. The annual produce of the old Alley farm was two tons per acre. This was produced by the use of sea-weed as a top dressing, after the summer crop was removed.

Mowing.—The method of cutting hay with the scythe was fast dying out, and machine labor being introduced. Several machines—among them Allen's, Ketchum's, Manny's and Russell's,—were approved, although none of them were perfect. The best were Allen's and Ketchum's. By the use of the former, in July and August, one gentleman cut 300 acres, producing 500 tons, at the rate of 50 minutes per acre. In some instances he cut an acre in 30 minutes. Mr. P. saw an acre cut in 40 minutes, and a skilful man, with a pair of horses of 1000 lbs. weight each, would cut at least, 10 or 12 acres a day. This being the case, the importance of encouraging the improvement of these machines was obvious. The *Massachusetts Board of Agriculture* had awarded \$1000, which had been given to the Eagle or Heath Mower made by Mr. Nourse, of this city, and which machine was worthy the award. On level land it worked well, but was not, probably, fitted for uneven, rocky land. Allen's machine was better adapted to uneven surfaces; and mowed an acre of that in an hour. But probably machines were not properly adapted to hay cutting in such land—although, if they could be, the advantage would be very great indeed.

Making.—After being cut, the hay, instead of

being manipulated by hand power, stirring is now advantageously done by a hay-tedder, operated by horse-power, one of which was shown by Dr. Loring, of Salem, at the last Essex County Exhibition, and several others have been tried in other parts of the State. But still the principle of this machine was defective, and much room for improvement existed. With the *rake*, properly used, by horse-power, we had all the machinery of working hay in as perfect order as the power of modern invention could make them, and by its use one-half of what has heretofore been the labor of haymaking can be saved. Some people turn up their noses at the mention of machines for making hay, contenting themselves with their old-fashioned implements. Such persons, if they wanted a shirt, would not surely carry out their theory in that respect, and refuse to buy and wear one which was not spun and woven in the old-fashioned way. There would be about as much consistency in the one objection as in the other; for it is well known that 500 yards of cloth can as easily be made in an hour, by machinery, as five yards could be by the old family processes. Leaving the matter of sowing, managing and curing hay to other gentlemen, the president took his seat.

Mr. B. V. FRENCH was called on to speak, and directed the attention to the fact that there were too many fresh-water meadows in the State, which were unhealthy in summer, and unproductive of healthy food for cattle. Draining of such swamps, and their proper management thereafter, would result in great comparative profit—were it simply on account of the killing of the tough aquatic grasses. Mr. F. quoted the opinion of Prof. James W. F. Johnston, of Edinburgh, that, of all our crops, the hay crop was the worst treated with us. The preparation of our lands was not calculated to produce well, and little attention was given to manuring, so that no crop of value could be produced. At considerable length, and with great minuteness of detail, Mr. French went into a disquisition on the modes by which these evils could be corrected, and the quantity and quality of grass and hay would be greatly improved. Pastures, in particular, were not so good as they ought to be, and this was a subject for improvement which should not be lost sight of. The proper selection of grasses was also a subject of importance. Sweet vernal grass was recommended as being one of the best for butter-producing purposes.

Mr. JOSIAH QUINCY, Jr., wished to know from the experience of gentlemen what is the best method of top-dressing grass lands? His plan was to keep cattle during winter, mix their manure with swamp muck, and dress and plow the land in autumn, as had been recommended by

the president. Experiments in this way had been favorable with him. Having plenty of manure, how could it be best applied to grass lands? Could it be profitably done without breaking up, and by means of top-dressing? Breaking up had been deprecated by Hon. Simon Brown, and others, in the Patent Office Report; and what Mr. Q. wanted, was, to know what he should do with his manure so as to make his grass lands yield two tons of hay, per acre, and keep the yield permanent.

Mr. SANFORD HOWARD corroborated the experience of Mr. Quincy with regard to the culture of his grass lands, and their produce, and also some observation made by him concerning the cultivation of hay lands by top-dressing in England and Scotland.

Gen. SUTTON, of Salem, stated that he cultivated his hay lands in September, manuring them well, and sowing them with herds-grass and clover. He let them lay five years without lifting, and always top-dressed in the fall.

Mr. LAWTON, of Great Barrington, had a different sort of land to deal with than the sea-coast farmers, and had to experiment differently, and with more limited means than they had; but the general management was not materially different. He had cultivated land for hay for 30 years without breaking up, and had realized as much as two tons per acre. He did not approve of overgrown crops of hay, as it wanted consistency, and did not go so far with cattle as an ordinarily good crop. When he prepared land for hay, he drained, plowed deep, harrowed well, used ashes and compost and planted corn, plowed again in the fall and manured with compost and sowed down with red-top, timothy and clover. As to the time of cutting grass,—if it was cut before it became woody, it would make excellent hay; but if it was allowed to stand too long, two-thirds of its nourishment would be lost. This was a most important consideration; and taking into the value of the hay crop, was a particular that should not be slightly glanced at. Mr. Lawton approved of a light irrigation in the spring as being of much benefit to grass in its earlier stage. If more care were paid to our hay, we would not want so much of it, and what would be of as much consequence, our cattle could rely on the nutritious value of what they did eat. Mr. L. top-dressed his meadows every second year, and disapproved of growing green crops on lands to be plowed in as manure, as he never had any success from it—and especially from the use of buckwheat in this manner, which produced an acidity in the soil that was not favorable to the healthy growth of grasses.

In reply to Mr. W. J. BUCKMINSTER, Mr. Lawton stated that he underdrained soft meadow

land, and also wet upland, with great profit. He had raised wheat on such lands after draining, when it never could be raised previously.

Mr. LEANDER WETHERELL spoke to the question raised by Mr. Quincy, and mentioned lands in the State which had yielded two crops every year, after top-dressing every second year—or three tons to the season; but the owner did not feed his land with cattle. This experience seemed opposed to the theory of breaking up grass lands—or what was called *natural mowing*—land that had never been turned up by the plow within man's memory. The fall is generally the better time for top-dressing—if the ground is not liable to be washed; if it is so, the better plan would be to manure in spring. A rule in the middle of the State was to manure these *natural* grass fields as soon as the crops were taken off. Clover, red-top and herds-grass were the best kinds to be used for seeding land. Mr. W. had no great opinion of the value of the new kind of grasses, at present recommended as forage grasses; and was surprised at the small quantities of forage grown per acre in the commonwealth. The average was short of one ton to an acre. Nantucket gave nearly an average of two tons. Farmers could not, surely, afford to use their lands for so little; and would they so determine, the best way would be to go into improvement without delay, and raise four tons per acre, as had been done in one instance on record.

The PRESIDENT said that, near Ipswich, and in that locality, generally, which was famous for growing hay, it was customary, after the crop had been taken off, to run an iron-tooth harrow over it, put in seed, bush harrow it; and in this way there was much renovation. Mr. Proctor did not approve of allowing cattle to feed on lands intended for hay, as they poached it in wet weather. Mr. Wetherell agreed in this opinion.

Mr. W. J. BUCKMINSTER took a general review of the discussion, pointing out such features in it as harmonized with each other, and were certified scientifically. He concluded by eulogizing the policy of using labor-saving machines in agricultural operations, which latter subject was discussed by several other gentlemen up to the time that the meeting broke up.

Mr. QUINCY, and other gentlemen, approved of the use of hay-caps, and stated that, in catching weather, they would pay for themselves in one year.

The question for next week will be, "*The best mode of improving the present system of New England farming*;" and it is expected that Hon. JOSIAH QUINCY, Jr., will preside.

TREATMENT OF RINGBONE.—"Will you or any of your subscribers, tell me the best and safest

way to cure a ringbone, and not leave a scar or blemish on the foot?"

We have never known a case of confirmed or decided ringbone cured by any process. A scar should never be made in treating it. Cutting and burning should never be allowed—they are both cruel and useless.

The best medicine for man or beast, to preserve health, is exercise; the best to restore it, is rest. This latter is the king of medicines, and we could enumerate some of its surprising cures. For incipient ringbone, this is emphatically the remedy. Dr. Dadd recommends in addition, an application of acetate of cantharides, as being milder and better than common blistering. When the part becomes hot, apply cold water bandages.—*Country Gentleman.*

For the New England Farmer.

VEGETABLE PHYSIOLOGY.

MR. EDITOR:—An inquiry from WM. R. PUTNAM, of Danvers, led you, in your issue of Feb. 26th, into some detailed remarks on the physiology of the growth of trees. From these laws of vegetation, corroborated also by large personal experience, you draw the conclusion that the only fitting season for pruning is the months of June and July. I intend to take issue with you in certain respects, on this point, although I may agree with you in regard to it, in others. Before going further, however, permit me to ask, whether your statement, under the head of *respiration* in plants, is correct, namely, that the leaves absorb oxygen and evolve carbonic acid gas. It is contrary to what I have been taught, and to the statement in the next paragraph, "that oxygen is evolved, and carbon solidified." Lindley says, "When a plant is exposed to the direct influence of the sun, it gives off oxygen, by decomposing the carbonic acid; whereupon the carbon remains behind in a solid state."

In regard to pruning, I have always considered that the appropriate season should be determined by the ends which the pruner has in view. These are twofold; 1st, improved shape, increased vigor; 2d, production of fruit.

In pruning for shape or vigor, the most suitable time, in my opinion, is after the fall of the leaves, no matter how late. My reason for pruning at this season is as follows: during the season of rest, as long as the ground remains not frozen, a plant continues to absorb food from the soil by its roots. The sap thus garnered, is not, however, distributed through the branches until the warmth of spring brings about a renewal of the circulation. Consequently, if branches are removed in early winter, all the sap which has accumulated in the roots during the interval will be distributed among the remaining branches, now fewer in number, imparting to them additional and freshened vigor. If pruning should be deferred until late in the spring, so late that the accumulated sap is already distributed, then each branch and each shoot that is removed carries with it just so much sap, and consequently the loss of so much vigor.

The question now arises at what time this winter pruning should terminate; at what season the flow of sap is so far advanced as to de-

prive the tree by the loss of wood, of the store which it has been accumulating. What do writers teach on this point? Lindley says; "As pruning, however, is not always intended to increase the vigor of a tree, late or spring pruning, if not deferred until the sap is in rapid motion, may be more judicious." "The season for pruning is mid-winter or mid-summer; the former, for thinning and arranging; the latter, for removing new superfluous wood." "By late pruning, a large proportion of the accumulated sap is thrown away." My own work in this particular is always ended by the first week in December.

The following passage is from D'Albret:

"In taking branches from a tree when stripped of its foliage, during winter, January, February, and March, when the sap is in repose, concentrated in the roots and woody parts, none of it is lost; it all goes to the benefit of the tree where-in it has retreated."

I quote again from Du Breuil: "The suitable period for pruning is during the repose of vegetation, from November to March; but, between these two limits, the most favorable time is that which follows severe frosts, and precedes the first movements of vegetation, about the month of February." Now, as spring, in France, about Paris, is fully a month earlier than with us, it follows that there would be no disadvantage in pruning, in Massachusetts, as late as the middle of April.

Once more, from M. Hardy: "In the climate of Paris, pruning may be carried on all winter, except during severe frosts. But the most favorable season in all countries of which the climate approximates to that of Paris, is February and March, after the severe cold weather has passed. As the apple tree is one of the most tardy in coming into leaf, the pruning of it may be deferred still later."

The writers whom I have just quoted are the highest authorities in France and England. I would not, however, be understood to intimate that authorities and theories should take precedence of experience and observation; but the Frenchmen whom I have quoted unite large practical observation with a high degree of scientific knowledge.

With regard to my own experience in fall pruning, I will merely say, without entering into any details of my system, which might be not only interesting but useful, that during the last six years I have taken the entire care of a young orchard of two hundred trees. All the pruning has been done by myself, begun after the fall of the leaf, and terminated in the early part of December. I cannot recall a single accident of any kind which I can refer to winter-pruning; the wounds have always healed smoothly.

I shall be pleased to give you and Mr. Putnam an opportunity to criticise winter-pruning. In regard to pruning for fruit, I may have a few words to say at another time.

As the French writers whom I have quoted may not be known to your readers generally, I will say that D'Albret was head gardener for thirty-two years, in the department of fruit trees, at the Garden of Plants; Du Breuil is professor of horticulture in Paris, and his work has obtained prizes from the Agricultural Societies of Paris, Rouen and Versailles; M. Hardy is head-

gardener of the gardens of the Luxembourg, Paris.

G. H. LODGE.

Swampscot, March 3, 1859.

REMARKS.—We are glad to find attention drawn to this important subject, and thank Dr. LODGE for the interest he manifests in it. We did not intend to say, nor, upon reference to our article, do we find that we did say, that *midsummer is the only time to perform that work*. We say this—that in our judgment, midsummer pruning is best, but we have often said in these columns, that if not done then, any time after the fall of the leaves, and while the tree is in a state of rest, or, at least comparatively so, pruning may be safely performed. But this state of rest is much shorter than most persons are aware of. Elms, maples, and other trees, whose twigs were as smooth as pipe stems, showing no swelling of the buds whatever, on the first of January last, had their tops so thickened up by the 15th of February, as entirely to change their appearance! We have called the attention of many persons to this fact during the winter. Our opinions seem to be at variance with that of the Doctor, not so much in regard to the proper time for pruning, as to *what time the tree is in a state of repose*. We are writing now on the 8th day of March, and any person who visits the Common may see trees whose buds are already so swollen as to essentially darken the heads of the trees. These buds were so minute on the 1st of January as not to be perceptible; they have grown since, and consequently the tree, during warm days, has been in a state of activity. That activity will continue until about the middle of June, when the elaborated sap has mostly returned to form wood, fruit, and perfect seeds.

For the New England Farmer.

LAME HENS THAT DIE.

"M. O. H." informs you he has lost fifteen or twenty hens since last fall. A few years since I had occasion to fix over my hen-house, just as winter was coming in. I had some nice poles, one and one-half inches in diameter, unseasoned from the woods, and being very straight, I thought they would make good roosts for my hens, and accordingly I put up sufficient for them all with these poles. In the winter, I found some of my hens limping, and some died; they were fat, but their toes indicated that they had been frozen. I had seldom ever seen a hen on the cold ground with both feet, as one is usually up among the feathers for a short time, and then the other has its turn; but I have never noticed a hen with one foot on the roost and the other among the feathers. It then occurred to me that I had made them a bad roost.

The hen needs a roost of sufficient size so that the toes and foot can be protected from the cold by her own feathers; in this condition she sleeps

with her toes in a warm, feather bed. If her toes lap over and under a roost, her feathers cannot reach them, and her toes will certainly be frozen, and in repeated freezing she becomes sick and finally dies, before she has time to lose her flesh. Make your roost five inches in diameter; the hen sits on the highest point and warms her own feet. E.

Biddeford, Me., Feb. 14, 1859.

POWERS INSTITUTE.

On Thursday evening, the 17th of March, we had the pleasure of meeting the officers of this Institute, the officers of Instruction and Government, the pupils and many of the citizens of the beautiful town of Bernardston, at the recitation rooms and Hall of the Institute. L. F. WARD, A. M., is the Principal; Mrs. E. H. WARD, Preceptress, and teacher of the Ornamental Department; Miss S. L. LEACH, Preceptress; SERVIN SCHNELL, native of Germany, teacher of German and Librarian; C. F. SCHUSTER, teacher of Music; J. B. CANTEL, native of France, teacher of French; CHARLES G. ALLEN, teacher of Penmanship; EDWARD B. PHILLIPS, teacher of Vocal Music, and WILLIAM DWIGHT, M. D., lecturer on Physiology.

This Institute had its origin in the munificence of EDWARD EPPS POWERS, late of Columbus, Georgia. To his native town, Bernardston, he devised ten thousand dollars, the income of which is to be used for purposes of education in said town. To this bequest, the citizens have added liberal sums, so that they have constructed a fine building containing commodious rooms for recitation, library, philosophical apparatus, &c., and a large and beautiful Hall for declamation and lectures.

But what is more attractive to us than any of these, and gives this pioneer institution its crowning merit, is its *agricultural feature*. Before entering the Hall, we were invited into one of the recitation rooms, where Professor Ward introduced us to his class in agriculture. This class numbered seventy, about one-third being young women, and both sexes being of the ages of seventeen to twenty-two. A more gratifying spectacle than this we have rarely witnessed. Questions were put to them in relation to chemistry, plants and soils, which were answered promptly, intelligently, and with a most lively interest. While they understood the purport of the words they were uttering, they seemed to feel the importance to the world, of the noble ART whose mysteries they were exploring. From such a germ as this, what grand results may flow! What investigations, what intellectual labor and profits may result from this beginning! The establishing of such a class as this in so popular an

institution, cannot fail to produce the most happy influences upon our rural population. It has our hearty sympathy, and warm wishes for success.

The pleasure of addressing this class, the other pupils of the institution, and the citizens generally, was reserved for us for the evening—this being the first lecture of a series, several of which are to be upon agricultural topics.

Our stay in town was made agreeable by kind attentions from all with whom we came in contact, and especially by the cheerful hospitalities of Gov. CUSHMAN and lady, whose guest we were during our brief, but highly interesting visit.

For the New England Farmer.

THE SEASONS.

How beautiful is Spring! Every one hails it with joy, as it comes decked with lovely flowers, and with green robes for all the vegetable world. All Nature, animate and inanimate, is subject to its influence. Birds return from Southern climes to enliven the scene with their cheerful melody. The various animal tribes express their delight, each in its own peculiar manner. Man, too, partakes of this universal joyousness. The young are jubilant, the old are electrified, and in a measure rejuvenated, and a grand chorus of admiration ascends from every valley and every hill-top. This is the season of PROMISE.

Summer succeeds. The seed has been committed to the earth, the tender blade is shooting forth, and careful culture and training are needed to insure a crop. Anxiety oft takes possession of the mind, producing a salutary effect by inducing a greater degree of watchfulness. Occurrences beyond our control may sometimes blight our prospects, yet upon our own exertions, mainly, depends a remunerating harvest. A little neglect is often highly detrimental. This is the season of HOPE.

Autumn follows, when the promise of Spring, and the hopes of Summer, are to be realized. If we have sown in good soil, and have cultivated the tender plants with proper care, imploring, the while, with grateful and prayerful hearts, the blessing of benignant Heaven, we shall now receive an abundant harvest. This is the season of FRUITION.

Winter, the season for CONTEMPLATION, soon arrives, with its icy blasts and howling storms, but he who has acted well his part in the preceding seasons, will be prepared for this. Plenty has crowned his labors; his garner is full, and he may sit quietly and comfortably by his own fireside, undisturbed by wind or storm, and unscathed by the pinching hand of want. He reflects upon the past, anticipates the future, cultivates his intellect, and, with the eye of one who has done his duty,

“Looks through Nature up to Nature's God.”

In contemplating the vicissitudes of the seasons, he can exclaim with the poet of Nature,

“These as they change, Almighty Father, these
Are but the varied God. The rolling year
Is full of Thee.”

Bloomfield, C. W.

L. VARNEY.

For the New England Farmer.

APPLE ORCHARDS.

“When doctors disagree, who shall decide?”

Mr. PUTNAM, of Danvers, tells us through the *Farmer*, that he, and his neighbors, have practiced pruning their apple trees in the spring, for the last fifty years, and as yet have discovered no injurious effects by so doing. But the editor comes out with a good, sound, philosophical argument, to prove that the spring is, of all seasons in the year, the worst time to prune apple trees. I believe the editor is right, because he gives his reasons, backed up by long experience, and that experience tried by both rules is worth more than a whole volume of theories. This is the kind of evidence I like, proved by practical experience. Theories are good enough, when proved and made to be facts. It is possible that trees in a good soil, may be practiced upon in the manner friend Putnam has done, and not only “still live,” but give signs of good treatment, yet that does not prove that trees thrive *best*, under such treatment. People are strongly attached to old customs, and are ready to follow them, without thinking whether they are right or wrong. I once thought, like many others, that the spring was the proper time to prune apple trees.

But a few years ago, a man came along with the *N. E. Farmer*, and told me that if I wished to take one of the best agricultural papers in the country, to just put my name on his book, and my wishes would be gratified. The man looked honest, and I took his word for it, and put my name down. I have since learned by reading the *Farmer* that the man told the truth. The *Farmer* told me to leave off that unnatural practice of bleeding my trees in the spring. I took the advice, and that has paid me for the paper ever since. But that is only a small part of what I have learned by reading the *Farmer*. If I find some articles published in it, written by correspondents, that do not seem practical or true, I think them of some value, because they call attention and thought upon the subject, and by that means facts are ascertained.

A man stated some months ago that he raised an enormous crop of wheat, by planting it in hills. The story was incredible, it seemed an impossibility. But, if it was one-half true, it was valuable information. Because, if it is discovered that a better yield of wheat can be produced by planting in hills or drills, it is an important fact. As we are now upon the wheat subject, allow me a few words upon this head. Why is not wheat more generally raised in New England? Is it not a profitable crop? Some say it is, others say it is not. Here they disagree again. But there is Mr. A., who raises a good crop of wheat every year, enough for himself, and some to spare. But, there is Mr. B., right by his side, who says he can't do any thing with it; it will rust and mildew, and is a very uncertain crop, it don't pay. Now where is the trouble? I rather guess Mr. B. don't take the *Farmer*. (By the way, I wish the *Farmer* would say much more upon wheat-growing.) Wheat is one of the staple articles of food in our country, and its cultivation should be well looked after. It is successfully raised in most all parts of New England, and es-

establishes the *fact* that it *can* be done. We ought not to be wholly dependent upon the West, and the mercy of speculators, for our flour. What is needed, is a proper knowledge upon the cultivation of wheat; it is evident that the soil has become exhausted of the elements which are requisite to produce it. Undoubtedly, there are fertilizers within the reach of every farmer, if known, which could be applied to the soil and supply the deficiency. And I believe, that with a proper care, in selecting and changing the seed, and sowing it in drills, at the proper time, wheat may not only be made to *pay*, but be a profitable crop to the farmers in New England, and their eyes be gladdened with the sight of a *golden* harvest of wheat every year. Who can enlighten the farmers on this subject? Ye wise ones, let your light shine through the *N. E. Farmer*, that it may "run to and fro, and knowledge shall be increased."

A. PHILBROOK.

East Saugus, March 16, 1859.

REMARKS.—The kind words of our correspondent are encouraging. He confirms what we feel assured are facts with regard to pruning. There are few orchards twenty-five years of age which have been spring-pruned, that do not bear evidences of injury from such pruning; and we have no doubt, whatever, but we can find them in Mr. Putnam's. Friend Putnam may expect us to make him a call some pleasant morning, when we will compare notes.

For the New England Farmer.

KICKING COWS AND STUBBORN CALVES.

MR. EDITOR:—I perceive that your readers are having some experience with kicking cows, on which subject I have a word to offer. I have a beautiful four years-old cow, and a good milker; kind and gentle when her teats are not sore, and her treatment is exactly in accordance with her notions of right; but otherwise a very expert and furious kicker. With one fore foot strapped up, she will kick with the hind leg of the same side, so as to knock a pail out of my hands, or strike me above the knee. With a rope and twister around her, she will distort the symmetry of a milk pail, instanter.

But I can milk her with perfect safety to myself and pail, by putting her in the stable with a common chain tie, then lashing her body, just back of her fore legs, firmly to a strong, short partition, not extending far enough back to be in the way of milking; and lastly by attaching a strap to the hind leg, on the milking side, drawing the leg back out of harm's way, and so as to give a liberal exposure of the udder, and a wide berth to the pail, and making fast said strap near the floor in the rear. All which appliances can be adjusted in two minutes.

To teach a calf to drink milk, I construct a stall, or box, for him, so narrow and short that he can neither turn round, lie down, or move forward or back, with his head over a large wooden bowl made stationary at the proper position for drinking. Then with my hands and fingers work

away. I do not hold the calf, the box holds him; he cannot waste the milk; yet it may take three or four days, at intervals, to teach him to drink. I should have stated that the box or calf stall has a door, or movable board, in the rear, so as to get the calf in and out easily.

I. B. HARTWELL.

Wilkinsonville, Mass., March 21, 1859.

EXTRACTS AND REPLIES.

BLACK SPANISH FOWLS.

Have you eggs to sell from pure black Spanish fowls? I also wish to get some Bolton Grey fowls. Can you tell me where to procure them?
Dover, N. H., 1859.

B. G. O.

REMARKS.—We have often given ourselves considerable trouble to answer questions similar to the above, by going to the places where fowls and eggs are sold, when the dealers ought to make known their trade by advertising. But as they prefer *not to help themselves*, we have concluded not to help them any longer. There are plenty of the fowls and eggs which you inquire for in this city.

PROLIFIC PUMPKIN SEED.

SAMUEL HURD, Esq., of Leicester, exhibited at the horticultural exhibition in this city, last fall, 19 sweet pumpkins weighing 110 pounds, which, with two that were not ripened, grew upon a vine measuring with its branches, 190 feet in length—and the whole is the product of *one seed*.

I purchased the above pumpkins of Mr. Hurd, and have used them through the winter, eating the last of them, last week. They were of the most delicious flavor. I have saved the seeds, and they number 10,341 good seeds.

E. H.

Worcester, March 12, 1859.

OATS TURNED TO RYE.

I saw in a late *Farmer* an account of oats turning to rye, as being a late discovery. Seventy-four years ago, my father moved into Randolph, Vt., and two other families at or about the same time. One man of the number sowed half an acre of oats too late; he let his oxen feed on the oats as long as they sprouted up through the season, and the next spring they grew up, and the latter part of the season he harvested a crop of good winter rye.

LEANDER TURNER.

East Bethel, Me., 1859.

CURE FOR POTATO ROT.

Mr. ROBERT FRENCH, of East Haverhill, N. H., states that the potato grown from seed that has been soaked one hour in blue vitriol water will not rot. His recipe is "one-fourth of a pound of blue vitriol dissolved in three parts of water; cut the potatoes and soak them in the solution one hour, and then plant them. They will germinate readily, and their vines will not blast, nor their tubers rot." Try it in a small way.

TIME TO COLLECT AND SOW THE SEED OF THE
WHITE PINE.

In answer to the inquiry of your "North Brookfield Subscriber," I would say that white pine seed is ripe in the latter part of August, or the first part of September. It should be collected just before the cones begin to open, the cones being laid away in some dry chamber until the seed can be thrashed out, when it should be sowed as soon as convenient, this being the time when they are naturally sown. It is a very good practice to sow on land after having sown winter rye without any covering; or, if sown on old worn-out land, it would be well to harrow the ground previous to sowing. There has been no seed grown in this vicinity for several years.

Pelham, N. H., 1859. B. F. CUTTER.

WARTS ON A CALF'S NECK.

I have a yearling calf that has got warts on its neck about as large as a quart measure; they have been growing all winter, and now have a very offensive odor. I wish to inquire through your paper, what will prove a remedy.

What is the best thing I can do for lice on my young stock?

Milford, March 7, 1859.

LUTHER.

REMARKS.—We cannot tell you what will cure the warts. A little mercurial ointment rubbed upon the cattle with a tooth brush will kill the lice.

CIDER VINEGAR—AN INJURED COLT.

Can you tell me of the surest and most expeditious method of making good cider vinegar?

Will you refer me to some treatise on road-making?

I have a colt in perfect health, which has a swelling on his breast, caused, some say, by feeding from too high a crib. If this is not the cause, please state what is, if you know, and the remedy.

A. B. C.

REMARKS.—Loudon gives a chapter or two on road-making, in his "Encyclopedia of Agriculture." The other questions we cannot answer satisfactorily.

A BIG CALF—CORN FODDER.

I had a calf dropped March 14th, that weighed 127½ lbs., and the cow had been kept all winter on corn fodder and meadow hay. I have wintered twenty head of cattle this winter on corn fodder and meadow hay, and they are coming out well this spring.

Some of your correspondents boast of keeping stock on corn fodder and turnips, as a proof of the goodness of turnips. I consider corn fodder a good feed. In fact, I have always noticed that my cows failed in their milk when my corn fodder is out. The fodder from an acre of good corn is worth as much as the average of English hay on the same quantity of land.

I have fed my corn fodder without either cutting, steaming or mealing, and I have no doubt but what it would have been better had all of them been done.

ED. EMERSON.

Hollis, N. H., March 19, 1859.

SPLIT BARK ON APPLE TREES.

Can you inform me what I can do to save my apple trees? The bark on many of them is split from the ground to the limbs, and is loosened from the wood, half or more of it on the trunk. About one-sixth of my orchard of ninety trees is affected in this way.

S. D. M.

Mansfield, Mass., March, 1859.

REMARKS.—Will some one informed on the subject enlighten us on this question?

FEEDING FODDER TO STOCK.

In reply to a communication in the *Farmer* of March 19, by a "Subscriber" in Woodstock, Vt., in relation to keeping farm stock, I think if he will cut his hay for cattle and horses, mix his corn and oat meal with it, and feed judiciously, it will not cost more than two-thirds the amount to keep them that it will to feed hay and grain whole.

For sheep, and especially ewes with lamb, I should feed potatoes, (after they become accustomed to them,) at the rate of one bushel to a hundred sheep per day, chopped fine, and a small quantity of corn or oat meal well mixed with them. With me it has proved a saving of hay, and improvement in the condition of the sheep.

South Strafford, Vt.

A FARMER.

CALIFORNIA POTATOES.

From half a bushel of seed, cut small, and three pieces put in a hill, I harvested *thirty-three* bushels of potatoes. They were planted in ordinary ground, 3 ft. 4 in. apart, and 2 ft. 8 in. between the hills. The manure was plowed in; when hoed, they were dressed with leached and unleached ashes and plaster.

Jericho Centre, Vt.

A FINE NATIVE BULL.

I have a native bull two years old, of fine form, light red color, not fat, only just decent store order; he weighed to-day 1300 lbs. He had the benefit of a farrow cow through the summer of 1857. Since then he has had nothing but grass and hay to eat; he is gentle to handle, and not unruly.

LEWIS WARD.

Naugatuck, Ct., March 18, 1859.

WARTS ON PLUM TREES.

Has there been any effectual remedy discovered for preventing warts or hard protuberances from growing on plum trees? If so, what is it?

A. R. S.

REMARKS.—We know of none from actual experience. Mr. W. A. Simonds advertises a wash which he says is a remedy.

MUCK COMPOST.

"O. N. M.," Warner, N. H., will find many articles in the recent numbers of the monthly *Farmer* on the subject of his inquiries; also, a paper in the Patent Office Report for 1856. The name of the person he inquires for may be seen at the head of our paper.

For the New England Farmer.

HOOFSE FOOT AND HORSE-SHOEING.

It has been my lot to have two horses spoiled by bad shoeing. On that account I was induced to study the formation and nature of a horse's foot. This portion of the horse, because it outwardly seems to be one solid block, thicker than a driver's skull, and made, therefore, to be battered, without mercy, on roads, paved, &c., contains a mechanism inside that is no less exquisite than those mainsprings of grace which are enclosed in the fine gold watch.

The horny case is lined with plates that are at once elastic and devoid of sensation; thus concussion is broken and blows are not felt. By this admirable combination of solidity and elasticity, the given and most difficult mechanical problem, to wit, the moving of a heavy body with great velocity, is solved. The outside is called the "crust," in England, and in France, the "wall." The front part of the hoof is thickest where the first and heaviest shocks are met, and thinnest at the heel, where expansion, not resistance, is required. The ground surface of the foot is composed of a sensitive sole, which is endowed with a power of descent and ascent according to the pressure on it from above, and of the frog, a spongy, but less finely organized substance, which swells at the back part, bulby and well-defined in the unshod colt. The whole use of the frog is an open question; but every one accords to it the most important functions.

It is useless for me to go into the minute part of the foot, but I will say that whenever there is inflammation in the foot, however small, the horse will rest it, to shift the seat of pain. At first the disease does not show itself much, but it is gradual. The spur of the horseman may cause the horse to bear much pain, without flinching, but endurance has its limits. You will find that he steps more carefully, nor does he put his foot ahead, and there is also a lowering of the head and neck to remove the weight from his feet. Nature has formed the foot in the right shape to be shod; it does not need much trimming. In pulling off an old shoe, care must be taken not to wrench the foot nor to injure the external crust of the hoof. Care must be taken not to pare the ground surface too thin; rasp off the rough particles adhering to the crust, but do not pare the frog, as, if it is bared of its slight covering, it is apt to dry up and crack. The rough edges of it should never be removed. It should be left to nature, for the frog throws off its worn-out teguments, like a tree casting off its dead limbs. The hoof, in its natural shape, should guide the smith in the selection of the form of the shoe. The shoes should be of equal thickness throughout, with a flat ground surface; shoes with high heels are dangerously absurd; the toe, which ought to be raised, is lowered, and nature's plan reversed, which elevates the point in order to avoid obstructions. The web should be wide, and of the same width throughout; if drawn in at the heel, it exposes the navicular joint, and if that be inflamed, at once you have a lame horse. In putting on the shoe, it should rest only on the horny run of the foot; it must not press on the sole, thereby arresting the springy operations, or encumber the heels, where the crust is thinnest and

the power of expansion the greatest. Five small nails for the fore foot and six for the hind are sufficient; large nails make too big holes in the crust. They should be driven into the outer quarter, where the crust is the thickest; not forced in too high, but the points brought out as soon as possible, clenched down broadly, and then not too neatly rasped away, which weaken their hold. The heel and inside quarter to be left free. When a shoe is properly forged, there is no danger of applying it hot to the crust, for the purpose of removing the irregularity of the hoof. s. r.

For the New England Farmer.

HUNGARIAN GRASS---COWS STABLED NIGHTS.

MR. EDITOR:—Having read in your valuable paper something concerning Hungarian grass, I thought I would tell my experience. Last season I procured four quarts of the seed, (paying \$1.00.) and sowed it the 2d of July, expecting it to come on as buckwheat or the like, but to my regret, it proved to be three weeks longer maturing. A frost the 29th of September cut it as low as it would melon vines, and I am left minus any seed. It is a query in my mind whether it can be raised and made as profitable as it is said to be, by those that have the seed to sell. That cattle and sheep would eat the straw when it was raised from hay, better than they do oat straw, I have no doubt. But when for the seed, it must be sown so thin that it may fill well, that it would be coarse and hard, rendering it unpalatable to them. After seeing what I saw of it, I should recommend to all who intend to sow some, to buy sparingly, and sow early, and on good ground, noting all its qualities and see if humbug is not in the ascendancy.

Will some one inform me through the *Farmer* whether a dairy of thirty cows can be kept in stables nights through the summer months, and do as well as they would in a pasture of eight acres? I have good stables and cellar for the droppings, straw for litter, and hay to feed them, if they will eat it. I want to milk at four o'clock and at six.

E. J. BUTTOLPH.

Essex, Vt., 1859.

REMARKS.—We have no doubt but cows are kept through the night, in well-ventilated stables, as comfortably and healthfully as in a pasture, and even more favorably, if there are no sheds in the pasture. The stable should be clean and sweet, and the floor well littered.

LOCKJAW IN HORSES.

This is a terrible malady to which horses are sometimes subject, and it is generally fatal, owing to the want of skill on the part of veterinary physicians. The method pursued by them in its treatment has been blistering, clustering, &c., which rather aggravates than relieves the spasms that usually attend it. Death generally ensues by this practice, and the disease has been held to be incurable. In a late number of the *Edinburgh Veterinary Review*, a new system of managing lockjaw is described, and nearly all the cases in

which it has been applied have resulted favorably. The plan consists of a hot water packing, similar to that pursued in the "water cure" for the *genus homo*. As soon as the horse is observed to be affected with tetanus, it is wrapped from head to tail in four or five pairs of blankets, which have been wrung out of warm water at a temperature of two hundred degrees Fahrenheit. The animal is then allowed perfect rest and quietness for about two hours, when warm water of the above temperature is poured along its back outside of the blankets, and another like period of repose is allowed, and so on till a cure is effected. A thin gruel of flour, oat, or Indian corn meal is given, when the jaws of the animal are capable of being opened. As horses are liable to take lockjaw from pricks in the feet, caused by careless or unskillful blacksmiths while shoeing them, this simple method of managing the disease can be applied by any person, and is well worthy of trial.—*Rural New-Yorker*.

For the New England Farmer.

THE PINES OF NEW JERSEY.

MR. EDITOR:—A vacation well spent gives rise to agreeable memories long after we have returned to our accustomed duties of every-day life. A visit to that mysterious and historical region, "The Pines of New Jersey," had been contemplated by us for many months; for we had heard of the good farming prospects which have already induced many sons of New England to settle there; and wishing to investigate the feasibility of settling with some friends where lands are cheaper than at home, we left this city during the month of July for the "Pines of New Jersey." While transferring our baggage to the Camden and Amboy railroad depot, in New York, the round face and stout form of Capt. Bluff, an old acquaintance, suddenly confounded us. The huge "flippers" of the old sea-dog half-squeezed the life out of us, as he cordially grasped our hand, and inquired, "Where are you bound to?" And after learning our destination, the jolly captain made us follow him to the beautiful schooner that he commanded, which was to sail that very afternoon for Tom's river, on the east coast of New Jersey. The captain would not take any refusal to his invitation that we should accompany him in the *Mermaid*, and that night, with a fine breeze on her quarter, the fleet vessel was leaving Sandy Hook at the rate of ten miles per hour.

After entering Tom's river, we bade farewell to the captain, and engaged a collier to take us through the Pines to the open country beyond. We are now abruptly entering on new ground—a few words regarding this interesting and much-talked-of region. During the revolutionary days the Pines were infested by the tories, who often made incursions to the settled country in this vicinity, where they robbed and murdered to their hearts' content. The rebels often followed the retreating scoundrels into the fastnesses of the forests where fierce battles were fought with the tories. The Pines received a bad name because they were the home of these lawless people, and though the tory has long since gone to his judgment, still the prejudice against this region has

not been removed. There are really good tracts of land all through the Pines, which until lately have remained valueless; and even now a farm may be bought at the lowest Western landholders' prices. Not the heavy soils of the West are to be found here, but good light soils, varying from four to twelve inches in depth, with a fine warm subsoil of sand, just such as your Cambridge market-gardener would select. These soils are much more easily worked, and are earlier than Western lands.

Early in the morning the collier called for myself and baggage, and soon after we were in the midst of pine forests. An hour later and we had emerged upon a plain, leaving the forests behind us. For miles in all directions the woodman's axe had been busy, for scarcely a tree could be seen—all the wood had been turned into charcoal by the industrious colliers. By eleven o'clock we had again entered the forests of yellow pine, and my sooty driver informed me that we were on the Hanover Furnace Tract, one of the largest landed estates in New Jersey. About this time we observed men at work throwing out a fine sort of white clay—so white, indeed, that one might mistake it for chalk. It was Kaolin, decomposed feldspar. The owner of this spot had purchased seventy-five acres of sandy land for a few dollars per acre, and informed us that after raising the Kaolin, a neighboring glass manufacturer had offered him five hundred dollars for two acres. The finest china ware has been made from this indestructible clay, and a dentist of Trenton has made teeth out of it for his customers. No blast from the chemist's lamp can melt this clay. Mr. Niel, the owner of the farm upon which it was discovered, sends the clay to New York, where he gets twenty dollars per ton for it. Another hour's ride brought us to a tract of hazel loam covered with oaks. "Where are we now?" I asked of our collier; "On the Hanover Furnace Tract," he replied. In we drove, and coming to a farm-house, stopped to rest our horses, and there we were again told that we were still on the great Hanover Furnace Tract. We drove ten miles further, and met a party of persons who were surveying a cedar swamp. We asked the principal of the party upon whose tract we were travelling, and the old reply came back, "The Hanover Furnace Tract." Upon further inquiry we learned that the surveyors lived upon the tract, and were employed by the proprietors, "year in and year out."

Another ride of four miles brought us to the shores of a beautiful little lake, upon the banks of which some thirty houses were embowered in the shade of gigantic willows and tall pines. Here lives, in retirement, one of the proprietors of this great tract, which contains over seventy square miles; no low-class tavern offended the eye, but all was quiet, simple, and beautiful. The sun was sinking behind a heavy pine forest, and his softened rays, reflected upon the little lake, caused it to look like burnished gold. The proprietor, Mr. Samuel H. Jones, came out to meet us, and at once extended the hospitable honors for which, I have since learned, Hanover Furnace is celebrated. We passed a happy evening at the mansion, and when we asked Mr. Jones why he did not offer his lands to settlers from the North, he told us that his lands were oper-

for examination, but he would not sell to any person unless they were well satisfied that they could do better here than elsewhere. He despised all methods of land speculation, and he wished to have only temperate, energetic men of good character settled around him. For nearly one hundred years this great tract has been owned by his family. It was purchased in the days when land was valueless. The Jones's title to their land came from the original appointed proprietors—almost direct from the crown. Thus they can sell their lands at ten, twelve, and fifteen dollars per acre. Large, natural cranberry meadows are scattered over the tract. One man had purchased a cranberry meadow containing one hundred acres for eight or nine hundred dollars; the first year's yield was two hundred and seventy bushels, bringing him some seven hundred dollars. At Hanover Furnace there are saw-mills and a grist-mill, besides the Furnace for iron castings. Lumber—pine sell at from twelve to sixteen dollars per thousand feet, cedar about the same. Hanover Furnace is thirty-five miles from Philadelphia, forty-five from New York. From the latter city it is reached by the Camden and Amboy railroad to Bordentown, from thence to New Egypt by stage. The postoffice is at Pointville. I send you this sketch, hoping that it may benefit some of our New England people. Let our young farmers go to New Jersey, where no fever and ague prevails, taking with them the *New England Farmer*, and they will succeed far better than they will at the West.

Boston, March, 1859.

B.

NEW ENGLISH PEAR.

F. J. Graham, Esq., F. R. S., of Cranford, Middlesex, brought a seedling called Graham's Bergamot, which was considered the most delicious seedling pear that had ever been brought under the notice of the Society [British Pomological.] The fruit was medium size, very obtusely conical; an average fruit measuring two inches and a half in its greatest diameter, longitudinally and transversely; stalk short, stout; color dark russety-green, purplish on the sunny side, inclining to pale cinnamon as it ripens; texture very melting and juicy; flavor rich, aromatic and very sugary.

Mr. Graham subsequently sent the Secretary specimens of leaves and wood; the former are small, not exceeding two inches and a half in length, nor one inch in breadth, very delicate in substance, and much serrated, the foot-stalks being nearly as long as the leaf itself, and very slender. The latter is very pale in color, slender but firm and very short-jointed. Mr. Graham states it to be very hardy and free from canker, and that its habit of growth is very upright, producing abundant blossom buds—the tree naturally forming a perfect pyramid or cone.—*English Cottage Gardener.*

HINTS TO FARMERS.—Toads are the best protection of cabbage against lice. Plants when drooping are revived by a few grains of camphor. Sulphur is valuable in preserving grapes, &c., from insects. Lard never spoils if cooked enough in frying out. In feeding corn sixty pounds

ground goes as far as one hundred pounds in the kernel. Corn meal should not be ground very fine, it injures the richness of it. Turnips of small size have double the nutritious matter that large ones have. Rats and other vermin are kept away from grain by sprinkling garlic when packing the sheaves. Money expended in drying lands by draining or otherwise, will be returned with ample interest. To cure scratches on horses, wash their legs with warm soapsuds, and then with beef brine; two applications will cure the worst case.—*Ohio Farmer.*

For the New England Farmer.

CULTIVATION OF CELERY.

MR. EDITOR:—Some time last season I noticed an appeal made to your valuable paper for information respecting the cultivation of celery. I thought I would give you my method of cultivating this delicious plant. In the first place, I go to the pasture and dig a quantity of turf from the bushy spots, laurel beds if there be any. Then collect any old rubbish that will burn, and with this I burn the turf until it will pulverize. This destroys all foul seed, the eggs or larvae of insects, and provides a mould which has not been exhausted. I mix this with fine rotten manure, two parts mould to one of manure. After making my hot-bed in the usual manner, I put on five or six inches of the mixture, then sow the seed, and never allow the plants to grow nearer than three inches of each other. Thus provided with strong healthy plants, I trench as early as the season will permit, eighteen inches deep, clearing from the trench all soil that may contain foul seed, and fill up six inches with the mixture of burnt mould and manure. In this I set the plants, hoeing often, and watering if the season be dry. When the plant is eight or ten inches high, I begin to fill moderately with the burnt mould without the manure, preferring to give the plant the benefit of the light and air, until the middle of August, then fill up with the mould, and continue to do so until the crop is matured.

To keep for winter, dig a trench at least three and a half feet deep, in a light, sandy soil, where there is no danger from water; in this put the plants with the top down, leaving an open space below this to be covered, but not so deep as to keep it too warm, and let the temperature be as low as possible, and not be in danger of freezing. In this way it may be kept in fine order until spring.

MECHANIC.

Westboro', March, 1859.

TOMATOES.—Now is the time to start the tomatoes. The women can do it in the house.—Take any old box, bucket or pan, place some coarse horse manure on the bottom, and fill with rich loam. Set it in the sun for a day or two, keeping it properly moist, until the whole mass is warm, then sow your seeds. After they have come up, do not let them stand crowded, as a few vigorous plants are better than many weak ones. See that they are always kept properly moist, and you will get an abundance of stout, healthy plants.

For the New England Farmer.

POTATOES---SEEDING---WHEAT, &c.

MR. EDITOR:—Is it not a fatal error, that the farmer is a little too economical in seeding with small potatoes, instead of large ones, when he is so unsparing in his cash outlays for all other good seed, and especially, of some new and unknown variety? Here, on Long Island, potato-growing is reduced to a science. We have many farmers who sell from two to seven thousand dollars value a season. This constitutes the principal crop of the farm, with the exception of the Swedish turnips, which are transplanted after the early potato crop is taken off. They plow in horse manure, and plow deep; select their largest potatoes for planting, cut off, and give to the pigs, the cluster of eyes, called the seed end,* (on the long varieties,) such as Jenny Lind, Chenango, Long Reds, &c.; by doing this, they get no small potatoes, and as many pounds as if the whole were planted. They say, the body of the potato contains the large, healthy germs, (which must be self-evident to all farmers,) and ridicule the idea of planting "pig potatoes" to realize from. This would seem to be a common sense view of the matter. They plant a quarter of a large potato two feet apart, and want only three to four stocks in a hill. This practice of planting and cultivation was satisfactorily proved to me, by going into a field of fifteen acres, where several men were digging, and scarcely a pig potato could be seen—but on the contrary, large, marketable potatoes, which required no sorting.

Now, that nothing may be lost, and a fair experiment may be tried, I would suggest that these small eyes be planted in separate rows. The trial will cost nothing, and may turn out to be a valuable discovery. Last year, the potato discussion terminated (as I thought,) in favor of large seed for planting. Yet, several of your correspondents made a fair showing for the pigmy family. The last few years of my own farming convinced me, that planting small potatoes from year to year, was the sure dwarfing principle. The bins in my cellar bore evidence of the fact. I am delighted to learn, that your farmers in various sections of New England are trying the wheat crop. Take your warm uplands for spring sowing, and your strong grass sward for August sowing, and there will be a sure necessity of increasing your grist mills at home. Four bushels of wheat is worth, in every family, a barrel of flour—worth remembering. Our spring opens in earnest, the green grass and swelling lilac buds even to leaf, would seem to have bidden the winter good-by. Time will develop, whether "Winter's back is broken", or to return again with its frosty night-cap—we hope not!

Brooklyn, L. I., 1859.

H. POOR.

* Many farmers think the potato will not produce, without the "seed end."

HUNGARIAN GRASS.—We continue to have inquiries in relation to this grass. All we can say of it is, that we receive contradictory statements as to its productiveness, that it is somewhat doubtful whether it will ripen its seed in all parts of New England, that it is an annual, requiring

to be sown every year, and that our friends had better purchase the seed sparingly, and only sow small patches of land for experiment.

For the New England Farmer.

CARROTS---MANGOLDS---ASHES.

MR. EDITOR:—Though our farms are now covered with snow from two to four feet, according to location, yet we expect in due time to have an opportunity to plow our land and put in the different kinds of seed, and I thought if I had a little more information, (which I have no doubt you can give,) I shall know better what proportion of different crops to try to raise. In the *Farmer* of January 8th, you give a very interesting table of the comparative value of the different kinds of fodder, but you said not a word about "carrots," a crop that I have entertained a higher esteem for, than for any other root crop for stock that I have ever raised, not excepting the potato. Please inform your readers of the relative value of this crop, according to the basis in the table already given.

I noticed in a late number of the *Farmer* an inquiry if ashes exhausted the soil? Although I thought your reply hit well "the merits of the case," I will just relate an incident in regard to that subject that came under my personal observation.

In the summer of 1849, on a farm in Avon, Ct., the proprietor showed me a place in his field where he said twenty years before, he hauled out leached ashes after making soap, and spread them on, like manure. At the time I speak of, there was a well defined edge to the part where the ashes were applied, the land producing perhaps double the grass that grew all around it. The soil was a dryish, sandy loam, and had long been under cultivation.

A. M. BRAINERD.

Alexandria, N. H., March 10, 1859.

REMARKS.—You are not mistaken, we think, in your estimate of the value of the carrot, but we have no table at hand to show you its relative value with other fodder.

For the New England Farmer.

TOP-STALKING OF CORN.

Having noticed some discussion lately in the *N. E. Farmer* respecting the utility of cutting corn stalks, I thought that the following statement of Mr. SOLOM CARTER, of Leominster, to the Worcester North Agricultural Society, published in the Abstract of Returns of the Agricultural Society of Massachusetts, 1856, (pp. 246, 247, note,) might perhaps be both new and useful to the readers of the *Farmer*. I am inclined to think, that in many cases, old practices, upon sufficient examination, will be found to have much of reason in them. Even pruning fruit trees in spring; for why should a wound made by removing a limb and covering the same with grafting-wax or other protection, not heal well and soundly, at the same season that a graft most readily unites with the stock? But for Mr. Carter's statement.

"Each of the three lots contained four rows,

of twenty-four hills each; in all ninety-six hills. Lot No. 1, was cut at the ground and stooked Sept. 24. Lot No. 2, had the top stalks cut in the usual way, at the same date. Lot No. 3, was left standing whole until October 29, when each of the lots was harvested and husked. The ears were then spread about six inches deep, and remained until Dec. 20. At this date the whole was shelled, and the result is as follows:

	Lot No. 1. Cut up whole and stooked Sept. 24.	Lot No. 2. Top stalks cut Sept. 24.	Lot No. 3. Left standing whole.
Oct. 2. harvested, weight,	143 lbs.	155½ lbs.	154 lbs.
Dec. 20. shelled, corn we'd,	111 "	131 "	125 "
Cobs weighed,	16 "	18 "	17½ "
Total,	127 "	149 "	142½ "
Shrinkage,	16 "	6½ "	11½ "
Per cent. of shrinkage,	13	4	8

"It appears, by this experiment, that the corn which was stooked weighed *least* at harvest and *shrank most* before shelling, while that which had the top stalks cut, weighed *most* at harvesting, and *shrank least* before shelling.—*Secretary of the Society.*"

Perhaps it may be proper to say that all the lots, in other respects, were cultivated alike.

Boston, February 22, 1859.

D.

REMARKS.—There is a great difference between cutting off a limb near its termination, where it is small, and where but comparatively little sap is flowing—being scattered into all the branches and twigs in its neighborhood—and cutting it off close to the body of the tree. If you were to cut off the first joint of a finger, the danger of bleeding to death would not be so great as it would if the leg were cut off at the thigh! A skilful operator leaves what are called *leaders*, when grafting, to take up the flowing sap and divert it from the limb that is cut off. These leaders are vigorous limbs that spring from a larger one just back of the one that is cut off. But even with this care, and that of covering the wound with grafting wax, they will sometimes bleed and decay. The scion itself, although so small, also takes up and disposes of considerable sap.

KEEP THE BOYS AT HOME.

In the circuit court of Chatauque county, N. Y., says the *Springfield Republican*, eight or ten young men were sentenced to the penitentiary for theft, burglary and other crime. Before passing sentence, Judge Marvin inquired of each his birth-place, occupations, and the temptations that had led him into vice. All of them had been brought up farmers, and had gone to teaming, or into taverns, or some other business exposing them to temptation, and had learned to drink, swear and use tobacco, and so began their career of crime. Having finished his address to the criminals, the judge turned to the spectators and said:—

"Before sentencing these boys I have a few words to say to the men of Chatauque county, the agriculturists in particular, some of whom are here to-day looking on the saddest scene it

has ever been my lot to witness in this county; so many boys, farmers' sons, too, all of them to be sent to the penitentiary for stealing and burglary. Farmers of Chatauque county, when your boys get large enough to work, find work for them at home; on no account let them go into the city or village to work; nor let them go to teaming; I care not if they can get fifty dollars per month, it will be a dead loss. They will just as surely follow the example of these boys, now before you, as they leave the sacred and restraining influences of home. Give them plenty of good books, and papers, make home pleasant, and keep them there until they are of age and have the wisdom to resist the temptation of the high wages on the road or in the tavern, but obtained at the expense of good character."

For the New England Farmer.

AGRICULTURAL PROGRESS THE BASIS OF HUMAN PROGRESS.

MR. EDITOR:—When the time comes, which is foretold by the prophets, "when the swords shall be beaten into plow-shares, and the spears into pruning-hooks"—when universal peace and harmony prevails, and "righteousness cover the earth as the waters do the sea"—*then* will the interests of mankind become associated; then the whole earth will be one great mammoth association. Our Saviour has said, "for where your treasure (or interest) is, there will your heart be also." Therefore, those who act voluntarily, are governed and controlled by what they deem to be their interest; and this interest or treasure, is not confined to money—to dollars and cents; but is that which is anticipated to produce pleasure and happiness. None but the slave can be said to exercise or do a disinterested act. Isolated and antagonistic interest is the source or germ of all the contentions, wars and crimes extant on the face of the earth—is "the *sin* of the world." Isolated labor is, for the most part, unproductive, discouraging and unprofitable. Associated interest and labor levels the mountains—fills up the valleys—makes the rough places smooth; and, by it, "all flesh shall see the salvation of God." By it a "highway is cast up for the ransomed of the Lord to walk in,"—by it the iron horse moves through the length and breadth of the earth.—by it the manufacturer has made his fabrics plenty and cheap. Most of the great enterprises of the day, in the arts and sciences, are accomplished by associated interests and labor. Almost every useful commodity is made plenty and cheap, except our bread and butter, our beef and pork and cheese! That which constitutes the life of man is as scarce as ever—as hard to be obtained as it was sixty or a hundred years ago! This is not a right state of things. Make the necessaries of life plenty and cheap, to correspond to the productions of the manufacturer.

Agriculturists are the foundation, the bottom strata of the whole superstructure of human society, and so long as they remain in their isolated and antagonistic condition—laboring single handed, with their few imperfect implements, trying to force a few bushels of grain from a sterile soil, without system, without adequate knowl-

edge, so long a portion of mankind will feel the curse of hunger, which breaks through stone walls.

In the New England monthly *Farmer* for January, 1859, I have read a communication from the pen of Mr. Wilson Flagg, which advances, I think, some erroneous ideas in regard to the effect which the steam-plow will have on the agricultural interests of the country; and the creation thereby of "great mammoth agricultural associations," which will absorb the whole of the farming interests, farmers and all! Would to God that this may be the result; for then we might have hope for the permanent regeneration of mankind, when all the farmers are formed into one *great mammoth agricultural association*. Then *all* will be rewarded according to their works—*all* will be free. No more slaves, not even to those great machines, Br. Flagg to the contrary, notwithstanding—for the farmers are now slaves to the small implements. But I hope the great machines will make them free. "*God speed the plow!*" even the great STEAM PLOW!

Ripton, Vt., Feb., 1859. SAMUEL DAMON.

AMERICAN WEEDS AND USEFUL PLANTS.

That person who learns and retains the names of the machinery which he drives, or the tools or implements which he uses in his business, will be able to converse more intelligently about it, will naturally investigate its nature and scope, and will be quite likely to *make it more profitable*, than one possibly can who is indifferent in regard to it.

It is so with the farmer. He who has studied the names of cattle, who can select an Ayrshire, Alderney, Short Horn or Devon, at sight, from a promiscuous herd, and tell why each bears that special name, will usually be found to have gone beyond that point of inquiry, and has also learned the comparative merits of each, so that when he wants an animal he knows just where to select, either for the dairy, the shambles or the yoke. The knowledge of names leads to the acquisition of other knowledge which becomes *actual capital* to the farmer in his business; it makes up a sound judgment to guide him in his purchases and sales, and its exercise protects him against the imposition of unprincipled men.

With regard to machinery, stock, and the implements of the farm, we have already valuable helps. There are several works on cattle, and the catalogues of the agricultural warehouses give illustrations and descriptions of tools and implements,—while there are more scientific works that describe the more complicated machinery, such as wind, horse and steam power.

What we have said above is intended to illustrate and enforce what we have to say to the farmer in regard to his knowledge of the names of the plants which he cultivates, and of those which he wishes to destroy. He certainly will

derive both satisfaction and profit from a better acquaintance with their names; and this will lead —s in the case of the cattle—to a better understanding of their structure, habits and growth, and consequently to larger *profits*, because he will better know how to manage them.

Now we have a work before us, and one that we have long desired to see, upon the *American Weeds and Useful Plants*, being an illustration of Agricultural Botany, and enumerating and describing the useful plants and weeds, which merit the notice, or require the attention of American agriculturists.

As an illustration of the practical character of the work whose title stands at the head of this article, we will quote what it says of one of the plants common all over New England, and denounced every year as an intruder, fit only to be steeped in vinegar and applied to the face to cure a fit of ague or the mumps! It is the common mullein. We will give the author's whole account of it, so that the botanist shall not feel slighted, and that the common reader may see that even the despised Mullein has extracted from the scientific a great many queer and hard names. Thus—

VERBASCUM, L. MULLEIN.

[Quasi *Barbascum*; Latin *Barba*, from its bearded or woolly habit.]

Calyx 5-parted. *Corolla* with a very short tube; limb sub-rotate, 5-lobed—the lobes nearly equal or the front one larger. *Stamens* 5, unequal, inserted on the tube of the corolla, declinate, exserted,—the *filaments* (or some of them) bearded. *Capsule* ovoid or globose. *Seeds* numerous, rugose-pitted. Tall and usually woolly biennial *herbs*, with alternate *leaves*, those of the stem sessile or decurrent. *Flowers* in dense spikes, or paniculate racemes.

V. *Thapsus*, L. Stem simple, erect, tomentose; leaves oval-lanceolate or oblong, very woolly on both sides,—the cauline ones decurrent; flowers in a dense terminal spike; 2 lower filaments smooth.

THAPSUS VERBASCUM. Mullein. Common Mullein.

French, Bouillon blanc. *German*, Das Wollkraut. *Spanish*, Gordolobo.

Whole plant pale grayish-green or hoary tomentose,—the pubescence much branched. *Stem* 3-6 feet high, rather stout, leafy, rarely branching unless injured. *Radical leaves* 6-12 inches long,—the cauline ones smaller. *Spike* cylindrical, 6-12 or 15 inches long; *flowers* bracteate. *Corolla* bright yellow. *Stamens* unequal,—the two lower ones longer, with smooth filaments.

Neglected fields; road-sides, &c.: introduced. Native of Europe. *Flowers* June-July. *Fruits* August-September.

Obs. This plant, although abundant in all the older settlements, is undoubtedly a naturalized foreigner. It is a worthless, unseemly intruder, in our pastures and cultivated grounds. There is no surer evidence of a slovenly, negligent farmer, than to see his fields overrun with Mulleins. As the plant produces a vast number of seeds, it can only be kept in subjection by a careful eradication while young—or at least before the fruit is mature. When neglected, the soil

soon becomes so full of seeds, that the young plants will be found springing up, in great numbers, for a long succession of years.

Beside the common mullein, there are two other kinds, the Moth Mullein and the White Mullein. The latter is a tall plant with a thin, powdery wooliness, and yellow (sometimes white) flowers

What farmer would not value a book giving him a definite and reliable account of every plant growing on his farm in the manner in which this is given! Some of the terms used in describing it may be difficult to comprehend at first, but with a little care they would soon become familiar. But there is usually enough in plain English to enable us to find out the names of unknown plants, and to explain those whose names are common to us.

The work is by Dr. WILLIAM DARLINGTON, with revisions and additions by GEORGE THURBER, Professor of Botany in the N. Y. College of Pharmacy, and we understand is approved by Prof. GRAY, of Cambridge, whose "Analytical Key to the Natural Orders" he has permitted the author to use. It is published in the neat and attractive style of A. O. MOORE & Co., Agricultural Book Publishers, 140 Fulton Street, New York. It will become one of the most gratifying and useful books we have.

For the New England Farmer.

RUNNING WATER---NATIVE STOCK.

Many are the farms that are not supplied with running water. Such was mine ten years ago. Thinking that by means of a syphon I might save the expense of pumping for my stock of cattle, I dug a well twenty rods above my barn, and twenty feet deep, the bottom of the well being on a level with the trough at the barn. The pipe was half inch, laid four feet from the top of the well, and run to the bottom; the remainder of the pipe laid so as to be secure from frost. These ten years it has worked admirably; as good to-day as ever. The cost of it was about fifty dollars. Now there are a multitude of places in New England, as well situated to obtain water by this means as my own, which when obtained, the owners would not part with for many times the cost.

In the March number of the *Farmer* is a report of the Third Legislative Meeting, at which time was discussed the best stock for general farming purposes. The reports of these meetings, (although there is a great diversity of opinion,) are generally very interesting and profitable to me, and I am prepared to believe pretty large statements—but there is one, made by Mr. DAVIS, of Plymouth, in relation to native stock, which is a little too large for me to credit. There must be some mistake. The statement is this. "Four pounds and a half of the milk from a cow of a friend of his had yielded one and a quarter pounds of butter." Now this is far beyond what Mr. Buckminster ever claimed for his favorite

Devons. Allowing a quart to weigh two and a quarter pounds, it gives but two quarts, for one pound and a quarter of butter. Such a statement ought not to pass unnoticed. C. E. FISKE.
Natick, March 12, 1859.

THE STATE FARM.

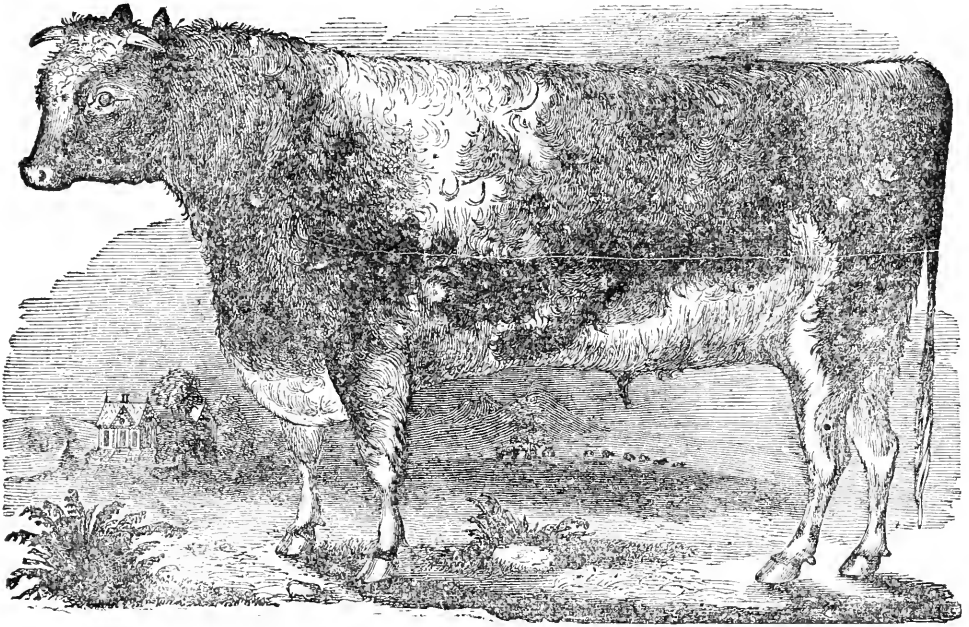
On Wednesday, March 30, the State Board of Agriculture made a formal transfer of the State Farm at Westboro', to the Board of Trustees of the Institution, with all the stock—some forty head—fodder, grain, implements, &c. &c.

We had the pleasure of going over a portion of the farm with the members of the Executive Committee, and looking at some of the improvements which had been commenced or completed by the Board. One experiment in draining, under the special direction of Hon. B. V. FRENCH, is well worthy the observation of those who intend to engage in that particular item of farm progress. Another in *trenching*, is a work of considerable magnitude, and the results from it so far are encouraging. Some five or six acres of land almost covered with rocks, hummocks and bushes, have been thoroughly trenched by the boys of the Institution to the depth of eighteen inches, and now lies as mellow as a garden bed ready for spring seeding.

The Hon. JOHN BROOKS, of Princeton, has acted as Chairman of the Superintending Committee, and no man could be more constant, faithful and persevering in the discharge of the duties which have devolved upon him.

The head farmer, SAMUEL N. WHITE, Esq., after a six or eight years' residence upon the State Farm, has returned to Brookfield to soothe the declining years of aged parents, and to settle once more in the home of his youth. These he thought paramount objects, and declined longer to remain in the service of the State. His duties at the Farm have been arduous and unremitting, and he has discharged them with an ability, zeal and fidelity which reflect as much credit upon himself as they have been valuable to the Board. Beside his responsibilities as farmer, his clerical duties have been nearly as arduous as those of a counting-house clerk, in keeping the accounts of the farm and the numerous experiments which have been instituted. He carries with him our hearty wishes for the continued health and prosperity of himself and his intelligent and cultivated family.

THE AGES OF TREES.—The Newburyport *Herald* says that among those trees whose ages have been ascertained, the elm has been known to live more than 350 years; the chestnut, 600; the cedar, 800; the oak, from 1000 to 1500; and some of the woods of the tropics for 3000, 4000 and 5000 years.



SHORT HORN DOUBLE DUKE.

OWNED BY THE HARVEST CLUB, SPRINGFIELD, MASS.

DOUBLE DUKE was bred by J. M. SHERWOOD, Esq., of New York, calved June 6th, 1856, and is of a roan color. His pedigree may be traced back distinctly to the year 1739. We are enabled to present this beautiful portrait of one of our best breeds of neat cattle to the reader, through the kindness of Mr. Secretary FLINT, who very properly prefaces the Sixth Annual Report of the Massachusetts Transactions with it.

A particular description of this breed of cattle is not deemed necessary here, as it is often alluded to and discussed in these columns.

For the New England Farmer.

PEARS---ORCHARD CULTURE.

As regards the pear for farm culture, I feel assured that the hardy fall and winter cooking varieties will give the best returns in sales. There is standing in Salem a large pear tree which is at least forty years old, bearing annually, good crops. That of 1847 sold for thirty dollars. This variety is Rushmore's Bon Chretien, a native; late fall or early winter fruit, much cultivated on Long Island, for the market. Of Uvedale's St. Germaine, or Pound, Black Pear of Worcester, Catalac, Chelmsford and Vicar of Winkfield, we should say with the late Robert Manning, that "the extensive cultivation of these sorts in large orchards, would produce greater and surer income for the capital employed, than any other investment."

The best varieties of pears for culture generally, are those that have originated in our own country, and in the more temperate or colder latitudes of Europe. Thus we should commend our fine American seedlings; they are generally hardy, and of thrifty growth. Among the large collection of pears which have from time to time been introduced from abroad, only a small proportion, *comparatively*, have proved of good quality in Massachusetts; a variety may be called *first-rate* in our country, and *second-rate* in Europe, and *vice versa*. The Bartlett, called in England, William's Bon Chretien, is there *second-rate*; we, on the contrary, (taking into consideration its productiveness in almost all soils, as well as the quality of the fruit,) consider it one of the best for cultivation. The Beurre d'Aremberg is with them a *first-rate* winter fruit for culture; with us, (from its uncertainty in ripening, as well as bearing,) it has disappointed most cultivators in Massachusetts. I should infinitely prefer such fine winter eating pears as the Winter Nelis and Lawrence. J. M. I.

Salem, Mass., 1859.

MILKING YOUNG COWS.—It is said that young cows, the first year they give milk, may be made, with careful milking and good keeping, to give milk almost any length of time deemed desirable; but that if they are allowed to dry up early in fall, they will, if they have a calf at the same season, dry up at the same time each succeeding year, and nothing but extra feed will prevent it, and that but for a short time.

For the New England Farmer.

WATER POISONED BY LEAD.

EDITORS OF THE FARMER:—Having noticed an inquiry in the *Farmer*, as to the probability of water becoming poisonous to stock by passing through lead pipe, I beg leave to offer the following remarks:—Lead, while it retains its metallic form, is not poisonous, but it may be readily converted into the various salts of lead, some of which are energetic poisons, especially the carbonate; it does not affect all animals alike, nor the same animal alike at all times, as in the case of painters, who all inhale the vapors from white lead, (carbonate;) but it does not affect them all alike, many of them no at all perceptibly, as it depends on the diathesis, or habit; and it is so with all animals.

Distilled water—air and carbonic acid being excluded—does not act on metallic lead; but admit them, and it readily corrodes the lead, and the carbonate is the result. Rain water, or any of the soft waters, are more apt to become poisonous than well water, or the so termed hard water. The quality called hard in water is derived from the presence of the earthy salts they hold in solution, most frequently the sulphate of lime, which impairs the formation of the carbonate of lead, or if it is formed converts it into the sulphate of lead, which is inert; as in cases of poisoning by lead, sulphuric acid is used as an antidote, rendering the lead inactive by converting it into the sulphate.

Mr. BRAID states that the miners at the lead hills, Lanarkshire, never have the lead colic until they work in the smelting furnace, (the ore is the sulphuret,) and LIEBIG says the lead colic is unknown in the white lead manufactories in which the workmen use sulphuric acid.

Therefore it seems to depend on the character of the water, whether it becomes poisonous by passing through lead pipe. Lead may, and doubtless does, (by being introduced in small quantities, but constantly, for a long time,) become the remote cause of serious and destructive diseases; it impairs the function of digestion, lessens the force of the circulation, constricts vessels as absorbents, exhausts arteries, &c., lessening their caliber, and finally deranges all the functions of the body, and it becomes a system of rusty, imperfectly working machinery, producing morbid matter, instead of healthy blood, suitable to build up and sustain the constantly wasting system on the one hand, and in a measure ceasing to throw off the effete matter on the other. By change of diet, as being turned out to grass, a horse, for instance, may gradually recover his normal condition, or if gone too far, he is taken sick and dies, perhaps of congestion of bowels, typhoid fever, or something of that sort. These phenomena have a cause. Some of the worst forms of diseases we meet, we are told are caused by a morbid habit of the body and this habit has a cause. It may proceed from various causes, the gradual introduction of lead into the system being one of them.

In the case of your inquirer, in the absence of other probable causes of the bad condition of his stock, I should think his suspicions of the lead were likely true, and I would advise him to make the thing sure, to call a veterinary surgeon, take

his advice, act upon it, pay him, improve his stock, and my word for it, it will be a money-making operation all round.

OREN H. FLAGG, *Veterinary Surgeon.*
Boston, March 30, 1859.

For the New England Farmer.

THE FARMER'S GIRL.

The Farmer's girl leads a happy life
As she trips o'er the grassy lawn;
With an eye as bright and a step as light
As that of the agile fawn.

The farmer's girl is a merry maid,
With cheeks of a rosy hue;
She sits on the stile, a sweet sunny smile
Darts out from her eye so blue.

There's a magic in her winsome voice
That "drives dull care away;"
She can scrub and scour, or at evening hour,
The sweet-toned harp can play:

She would grace the halls of a mansion high,
Or the porch of a lowly cot;
She will make the home of her chosen one,
A most delightful spot.

Young men! choose a wife 'mong the farmer's girls,
If happy in life you would be;
They are gentle and kind, just to your mind,
Sing! A Farmer's Girl for me.

KATE.

Hill Side, April.

For the New England Farmer.

PIGS AND GIRLS.

MR. EDITOR:—In a recent *Farmer*, your correspondent, "Rockingham," tells us of a fine pig nine months old which weighed 320 lbs. when dressed. A good pig that. But Old Cheshire gets up bigger pigs than that. I suppose you know that she is famous for her big oxen, good hotels, handsome girls—and fat pigs.

Mr. George Thacher, of this town, slaughtered two pigs, the past winter, eight months old, which weighed when dressed, one 377 lbs., the other 337 lbs. Mr. Thacher is a man who understands what he is about, and what "pays;" and knows that other folks besides "millers" have a right to fat hogs. I suspect that it is all owing to his being a regular subscriber to the *Farmer*.

Mr. Russell, another of my neighbors, slaughtered a pig eight months and twenty days old, that weighed when dressed 376 lbs. These were fattened on corn meal, with a little rye at the last.

Now, Mr. Rockingham, please just take that feather out of your cap and pass it over to old

CHESHIRE.

Marlboro', N. H., March 28, 1859.

THE WHEAT CROP.—The *Detroit Advertiser*, after conversing with parties in different sections of the State, comes to the conclusion that the wheat crop never looked so promising at this season, as it does now. The *Rochester Union* is informed by old farmers of Western New York, that the growing wheat is now forward, and is looking remarkably well. It has suffered little or none from the winter exposure. The *Cincinnati Gazette* says reports of the wheat crop continue favorable.

ELEVENTH LEGISLATIVE AGRICULTURAL MEETING.

[REPORTED BY JOHN C. MOORE, FOR THE N. E. FARMER.]

Owing to the House of Representatives having occupied their Hall on the evening of Monday of last week, the usual agricultural meeting was postponed until the evening of Wednesday, when it was held in the Green Room of the State House—the Legislature being at the same time in session. The attendance was not so large as could have been desired—particularly when such an important question was under discussion, viz.: “*The best means to be adopted for the improvement of the farming of New England.*” His Excellency, Gov. Banks, was present during part of the evening.

Hon. JOSIAH QUINCY, Jr., occupied the chair. He said, substantially, that the question was a very comprehensive one. Two points were obvious—the necessity of giving the farmer information, and the necessity of getting him to take advantage of it. Much of the information, however, we had in this country regarding farming was copied or stolen from English works, written by men who were not really farmers, but gentlemen who made farming a recreation. Those who did work on the farms were a very different class—laboring under great social disadvantages—and little better in many respects than the slaves of the South. They had no interest in the soil, or hope to have any. It was different here, where the farmer was the owner of the soil, and where he had a consequent interest in it. Such a man could not believe in English farming instruction; and the best way with him was to convince him that his profession was an honorable and a profitable one. This would be one great means for improvement; and farmers *on principle* would be the most valuable men we could have. A good farmer could live on very small capital, and his position would be found to be the most eligible in the country. Young men had been taught to look on the history of the late Amos Lawrence as a pattern of instruction and suggestion; but few who knew the real history of the man, and of his trials, could fail to know that his life was, though an honorable one, far from being a happy one. It was a gross mistake to advance the doctrine that it was advisable for young men to leave farming, and its happy circumstances, and dive into the troubles of a business life; and the more that could be done to prevent this folly, and to convince young men in the country that the farmer's position was the most peaceful, healthy, honorable and covetable, the more would be accomplished for the improvement of farming. Many young men were literally putting their hands to the plow, and every inducement should be held out to them not to turn back.

Mr. B. V. FRENCH was of opinion that the teachings of the life of Amos Lawrence had been more pernicious than any one could describe, and was ready to endorse all that has been said by the chairman. Taking advantage of the suggestion, which Mr. Quincy threw out at the close of his brief remarks, that the discussion might include all the means and appliances of improved farming, Mr. French commended a more general attention to draining; the establishment of agricultural educational institutions; the institution of such experiments in such culture as were simple in themselves, and within the means of every farmer to follow; and above all, the careful training of young men to the profession of agriculture on the basis of a love for it. He was glad to note that much progress had been made of late; and took occasion to pay a well-deserved compliment to the public spirit of Hon. Josiah Quincy, Sen., who had done more to improve the science of farming in this region than any other man.

Mr. W. J. BUCKMINSTER was of opinion that if the young men who were wild after foreign speculation could be advised to turn their energies towards the cultivation of the soil, respectability, comfort, health and usefulness would be more certain than in any other path they could follow. He held that the system of town farmers' clubs, with fairs and exhibitions of agricultural implements and produce, which would furnish attractive features, would do much for the extension of a love for farming, and to show the proof of its profitableness. He was not entirely in favor of agricultural colleges; as practical instruction, with a modicum of book-learning intermingled, would be much more beneficial, in his estimation. One great cause of an aversion to farming was the severity of the labor, and the general irregularity of the working hours. By the introduction of machine labor the hours of labor might be much shortened, and time given for such recreation as a healthy mind could relish and pursue; and, moreover, by breaking up the slavery and monotony of the farmer's life, young women would be induced to marry farmers, and the business of farming be placed on a more pleasing and permanent basis. Some might smile at this talk about marriage; but those who knew the facts would be ready to acknowledge that young women had little encouragement to become farmers' wives, on account of the hard and weary labor they would be bound to do in the household and in the dairy. Whatever frightened the women away from it was not well calculated to induce young men to attach themselves to it. Mr. B. concluded by recommending that, after making the farmer's vocation attractive, it would be excellent policy to induce the young to

engage in its associate details at the earliest possible age; and that every encouragement should be given to the improvement of agricultural machinery.

Mr. WETHERELL, in consideration that the lands in the State did not furnish half the quantity of the produce they might be made to do, thought that one of the best things to go about, would be to clicit by what means this could be cured. Lands under cultivation were fast wearing out; and how they could be renovated was *the* question paramount in interest to all others. Farmers ought not to be content with 10 to 15 bushels of grain, when they could, by improved culture, produce, with no more labor, 40 to 60 bushels. Education was the best means to produce this improvement; and that improvement which was so desirable, would never be found effectual until some means were extant among us for learning the art of approved modern farming—some means which would, in their dispensation, have some sympathy with the objects they sought to attain, and which would thoroughly combine theory with practice. Mr. Wetherell concluded by highly recommending the establishment of Farmers' Clubs in every town in the State, and cited examples of their exceeding usefulness, as it showed itself to his experience. He was thoroughly confirmed in the necessity and importance of carrying out this.

Gov. BANKS simply said that it was his opinion that the primary requisite was to show young men that it was good for them to become farmers, and that the vocation of a farmer was a highly honorable one, and equal or superior in status to any other profession. The great present objection to the business was the necessity for severe labor, and the absence of social amusements. As a question of profit it was not equal to other professions, nor was the political status of farmers what it ought to be; but change these disadvantages—and they could be changed—and both would be enhanced to a covetable degree, and the farmer's craft would be preferred to any other.

Mr. SHELDON, of Wilmington, said that farming had been very profitable to all who had tried it in earnest. He had some idea that more attention should be paid to hay, in curing, as it was the most important crop, and therefore an element in the general list of matters which had a serious bearing in the agricultural prosperity of the commonwealth. Whatever tended to produce certain knowledge of a better system in curing hay in foul weather would be found to be of the utmost consequence. Men might laugh at the idea; but if a similar system to that followed in drying hops was introduced, it could be done with profit. It would not be a great cost to try it; and its importance could be in some measure

prized, when it was known that weeks of bad weather followed each other in haying time. So far as Mr. S. could estimate, \$2 per ton would cover the expense of drying in this way.

The PRESIDENT held that the sum and substance of the discussion was, that farming, to be popular, ought to be shown to be profitable.

Before the discussion commenced, a very valuable conversational debate took place on the subjects of draining, irrigation, soiling of cattle, &c., &c., among the gentlemen present.

This meeting, of which the above furnishes a sketch of the proceedings, was the last during the present legislative session.

It is probable that a series of meetings will be held during the summer, at which the principal agricultural questions will be lectured on and discussed by competent parties, designated for the duty. An idea prevails that May will be the best time, and that the State House the best place, for holding the proposed meeting or convention.

Reviewing the past series of meetings, they have proved themselves unusually interesting, and in some respects, very profitable. Doubtless some rather strange theories have been advanced, and some rather loose facts have been stated; but these were merely incidental, and in no material measure have militated against the stamina which the general information given at the meetings emphatically had.

For the New England Farmer.

THE ONION MAGGOT.

MR. EDITOR:—I am truly gratified that your intelligent correspondent from Hollis, N. H., has found a specific remedy against the ravages of the onion maggot. This is what has been sought by cultivators here but as yet they had no suspicions it would so readily be found, and least of all in the fertilizer itself, many tons of which have been used on these onion fields.

If I rightly understand Mr. Emerson, this curative against the ravages of the maggot, is to be found in the free application of pulverized guano, to the young plant, just after it starts into being. Now according to my observation, this maggot comes into being, and operates in this wise. The little light colored fly which springs from the maggot, hovers about the plant, and lays its eggs near the bulb, just where the top starts from the ground, and when these eggs warm into life, the insects busy themselves in the bulb, and make it their abode. I have seen a spoonful of maggots squeezed from a single onion. Had not Mr. E. asserted the contrary, I should have had no doubt, that the maggot itself might have been preserved in guano, as well as in pulverized earth or plaster. I have no belief, that its sensibilities are so acute, as to be overpowered by the guano. But if it is a specific remedy, I am glad to know it.

There are many cultivators in this town, who

would agree to pay a guarantee of \$25 an acre, to have it made certain that the maggot can be destroyed by the application of guano, after it has begun to operate upon the young plant. Many acres were omitted to be sown the last season, through fear of this destroyer, and many more would be sown the present, were it not for this apprehension.

J. W. P.

South Danvers, 1859.

TIME OF PRUNING APPLE TREES.

We are always obliged to exercise considerable care that our columns shall not be too much occupied with discussions upon a single topic. The article lately presented by us upon the subject of pruning, has awakened considerable interest in the matter, and the importance of the subject demands it. We have received several letters from high authorities confirming our views, and two dissenting from them. One of the latter is from Mr. DANIEL LELAND, of East Holliston, who says he has an experience in the subject dating back to 1805. He thinks the true time for pruning "is just before the opening of the buds," and his reasons are,

"First, The wound will heal as well as it will when pruned in the middle of June.

Secondly, The sap is saved, that is, taken up in the formation of the leaves."

We will not reiterate arguments to show that he is mistaken, but will merely remark in relation to his first reason, that he must be so, because his theory is contrary to the nature and habit of the tree; the sap flows freely in the spring, but not at all, or very lightly, in June.

His second reason is, that we "save the sap that is taken up in the formation of the leaves." But we do not wish to save it; we often prune because there is an excess of limbs and leaves; they are in the way of each other, and prevent a free and healthy growth. But this is not always the case.

Pruning is scarcely necessary at all—unless in cases of accident—when proper care is taken of the young tree. It may all be done with a common pen-knife, if it is always done at the right time.

For the New England Farmer.

COAL ASHES AS A MANURE.

An article with the above heading appeared in the last *Farmer*, in which the writer, copying from an English work, on the benefit resulting from the use of this article in England, closes with the following. "As coal is employed for fuel in nearly every town, experiments on various soils and crops might be made by every farmer at a small expense." This writer, it would seem, is not aware, that the ashes used in England, comes from bituminous, and not anthracite coal. I apprehend there may be found a great difference in the fertilizing properties of these. This want of

definiteness, reminds us of the use of lime for the apple tree. Mr. Pell, the successful grower of this fruit in New York State, recommends the use of shell, (not stone,) lime, for this purpose; still many careless writers recommend simply lime; the natural inference is, that they mean common stone lime. There is a difference in the article of lime; most stone lime contains magnesia, a substance which is considered deleterious to the soil, while shell lime is desitute of this. I have generally considered that nearly all the virtue there is in anthracite coal ashes in its application to land, is in the ashes combined with it, which comes from the bark, wood or charcoal used to ignite it.

J. M. I.

REMARKS.—There is about two per cent. of potash in coal ashes. But its alkaline is not its only good quality. It has a mechanical effect, and perhaps has still other qualities to recommend it.

For the New England Farmer.

FRUITLESS TREES—MORE LIGHT WANTED.

What kinds of fertilizers are best for apple trees, to make them produce fruit? I have the Baldwin trees, and practice digging about them in the spring, and putting in stable manure, and air-slaked lime occasionally. They grow an abundance of wood, but very little fruit. Some of them have blossomed full, but it was all show, and no fruit. This is the case generally in this vicinity. So that people have come to consider the apple tree an encumberer of the ground, and almost ready to wish them the same fate, of a certain fig tree of olden times.

What is best to put around pear trees, to make them bear fruit? I have put manure, lime, ashes and iron, about them; they grow the wood rapidly, but not the pear. One tree, a Flemish Beauty, made an attempt, last season, to produce a specimen of its kind; but before August was out, the whole concern burst up, and proved a failure. The Flemish Beauty has been a favorite pear with us, but of late years, it has taken to cracking badly, and has lost its reputation. This cracking takes place long before the pear matures. Can this be prevented? Will you or any of your numerous readers, give the desired information upon these matters?

A. PHILBROOK.

East Saugus, March, 1859.

REMARKS.—These questions, and a hundred others put to us, show how much we need a more intimate knowledge of the business in which we are engaged; and we feel that want, impressively, quite often, when called upon to reply to them.

Why is it, that apple and pear trees that are well cared for fail to produce fruit, in one location, while others near by bear abundantly? Who can tell? Who can penetrate the mysteries of this single point, or fathom a thousand others that meet us at every step? We may now and then stumble upon some fact of importance to our Art, but must depend upon persis-

tent, scientific investigation, for most of the knowledge that will enable us to make progress in it.

There are so many things to be considered that we doubt whether we can be of any service to our correspondent. His trees make wood rapidly, but will not produce fruit. Is the land too rich? Would laying it to grass and taking two or three crops from it bring the desired result? Or cropping it one year with wheat or oats? And so of the pear trees, who can tell us where the trouble lies?

Some of the wise ones say that *root pruning*, that is cutting off a portion of the roots, will bring the pear trees to bearing. The process is to scrape away the earth, and with a sharp tool cut off one or two of the leading roots.

EXTRACTS AND REPLIES.

PREMIUMS ON FOREST TREES.

I see by some of the papers that the Massachusetts Agricultural Society have offered a premium of \$1000 for a plantation of white oak trees. Are we to infer from this that all our other kinds of oak are not valuable? It occurred to me that it might be as well to test the growing qualities of all our common kinds. If I lived in Massachusetts, I would enter the lists for the premium.

B. F. CUTTER.

Pelham, N. H., 1859.

REMARKS.—If friend CUTTER will look at the *Farmer* carefully, he will see that, with their usual liberal encouragement to agriculture, the Massachusetts Society has offered a premium of \$1000 "for the best plantation of trees of any kind commonly used for, and adapted to, ship-building, grown from seed planted for the purpose." But there must be one white oak at least to every twenty square yards.

HAY CAPS.

Which is the best kind of cotton for hay caps, the light or heavy; and what kind of a preparation can be applied to them to prevent grasshoppers from eating them, and make them water-proof?

ADDISON COUNTY, VERMONT.

March, 1859.

REMARKS.—Such cotton cloth as may be purchased for nine cents a yard will make excellent water-proof hay-caps, without any preparation of oil or paint of any kind. Caps made of such cloth, and properly placed on the cock, will keep it dry during a storm of three days. If you cut a ton and a half of hay to the acre, we do not think the grasshoppers will eat your caps!

BLIGHT IN GRAPES—HARTFORD AND CONCORD GRAPES—PLANTS IN ROOMS.

Last year my Isabella grape vine, (when the grapes were about the size of peas,) blighted

badly. The leaves and fruit withered and fell off from a portion of the vine, while a part remained thrifty and fruit ripened finely. Will you tell me the cause and remedy?

What is the best grape to raise for family use—what about the Hartford and Concord?

Is it well to have plants in sleeping-rooms, and rooms of the sick?

OLD SUBSCRIBER.

Tunton, 1859.

REMARKS.—We cannot tell you the cause or remedy of the blight you speak of.

The Concord is a large, dark purple grape, earlier than the Isabella, and hardy and prolific. Ripens in September. The Hartford we have not cultivated, but it is represented to be prolific, is large, ripens easily, never mildews, and is fit to eat early in September. We cannot say which is the best grape for family use.

A few plants in any well-ventilated room are healthy both for body and mind.

BLIND STAGGERS—SHADE TREES—CORN—PUMPKINS.

What is the surest and least barbarous cure for "blind staggers" in horses?

What season is most preferable for transplanting shade-trees, especially evergreens?

Will King Philip or Brown corn do well on the northerly intervalees of the Connecticut? What is the average product, per acre, and where, and at what cost can it be procured?

What is the best variety of pumpkins? Mine have all run to vines.

FARMER.

Vermont, March 21, 1859.

REMARKS.—To cure blind staggers in horses, you must always feed well and treat kindly, and be especially careful that the horse shall not be overloaded, made to pull hard suddenly, and not driven rapidly when first taken from feeding. Then administer to him three drops of the tincture of stramonium, every third day for nine days, immediately after a fit.

Plant shade trees the last of April or first of May.

King Philip corn will do well on the lands you speak of, if you manure in the hill with some fertilizer that will give it an early start. Sixty bushels to the acre is a good crop—we do not know what the average is. Sold at the seed stores for about \$2 a bushel. We cannot shed any light on the pumpkin question.

TICKS ON SHEEP.

Is there anything that can be fed to sheep that will kill the ticks on them?

C. N. ANDREWS.

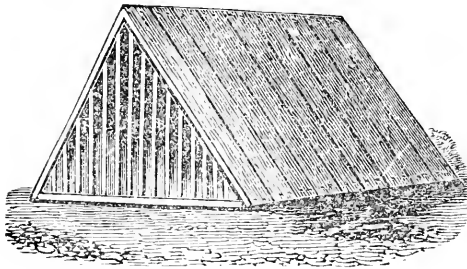
Chelsea, Vt., 1859.

REMARKS.—Give each sheep a tea spoonful of sulphur in some corn meal, every other day, three or four times.

If this does not kill them, a *careful application* of the mercurial ointment will accomplish it.

A CONVENIENT CHICKEN COOP.

Almost every body now-a-days raises poultry—not so much, perhaps, for the profit which it affords, as for the pleasant associations connected with it, their cheerful morning notes, and the happy influences which they have upon children. But where *profit* can be added to other inducements, the pleasure of course is enhanced. This depends, like almost every thing else, upon the manner in which it is done. If a few fowls are kept, and kept well, provided with all the conveniences needed, there will be a profit. One of the important items is to provide a comfortable, airy place for the hen and her young family, and that may be found in a coop which this engrav-



ing illustrates. It may be made in a cheap manner, will shed the rain readily, and when open at the ends admits the air freely through it, and a piece of board turned up at the ends at night, excludes all intruders.

Other forms may be used, perhaps as good, but this is a convenient and cheap one. In dry weather it is best to let these coops stand on the ground, but when it is wet, they should be lifted upon boards. Two feet long, or three is better, and about twenty-two inches high in the centre, is a good form. Some persons board up the back-end, leaving a hole for air at the peak. In windy weather, the back end should be closed.

FARMERS' MARKET FAIR.—The farmers of Hampden county will hold a fair at the Hampden Park, in Springfield, on the 13th of April, for the sale, exchange and exhibition of horses, cattle, sheep, swine, poultry, implements and farm produce, either in bulk or by sample.

We think such a fair in the centre of that county might be useful to all concerned, and hope it will receive attention.

A GOOD PERMANENT HOME, AND \$40,000!
—A writer in another column, on the soiling of cattle, says he knows a man who forty years ago purchased a lot of land, 40 by 160 rods, who "has so managed it as to realize a net income of at least \$1000 a year on this farm." Will he tell us briefly how he did it?

THE ONION MAGGOT.

Two years ago I noticed that one-third of my onions were either dead or wilting. On experimenting, I found the maggot was the cause. I applied good guano on the rows, sprinkled on with the hand so as to nearly cover the little onion, or the ground over them. I saw nothing more of the effect of the maggot, and the onions did finely.

Last year I tried the same again, with the same result. I think good guano is a cure for the maggot, notwithstanding your correspondent, "J. W. P.," says there is none. The guano must be good and put on with a liberal hand.

Hollis, March, 1859.

ED. EMERSON.

BOYS' DEPARTMENT.

BATTLE BETWEEN THE BOYS AND THE BIRDS.

In one of the interior counties of Illinois, there stands an old school-house, deserted, dilapidated, and pierced on every side with numerous holes—giving sure signs that, in days past and gone, there has been a hard-fought battle of some kind. But who could have selected a school-house for a fortress; or what enemy could have fired so many shots into it in such a peaceful, quiet neighborhood, without being brought before the proper authorities and punished to the full extent of the law? This is the mystery which has fallen to my lot to unravel.

The school-house stands on a ridge of land, surrounded on every side with shade trees, while a few rods in front, runs a small creek, making a most beautiful play-ground for the school. Still farther on is a large field, once covered with thrifty forest trees, but the farmer who owns the field has girdled them all, and now they stretch out their long, skeleton arms, waving, cracking, and breaking with every wind that blows, and falling into the corn growing around them.

These old decaying forests afford homes for large colonies of woodpeckers, who, by habit or instinct, like to burrow in old trees.

Now the woodpecker is decidedly the most military in appearance of any bird flying, and has not only a natural right to be proud of his rich, military dress and splendid appearance, but to drum on these old trees any spring morning, provided, when he gets his forces together, he will let school-houses alone.

Dressed up in a neat little red cap that covers his head and neck, a shining black coat, with white lapel, with a white waistcoat and black pants, he can make as splendid an appearance on a dry limb as any other bird known.

It was a bright, beautiful morning in the year 1856 when the children were assembled at the old school-house, to learn to put four letters together in such a way as to make *baker*, to get their young ideas started in the way to shoot straight. The classes had nearly been through with their morning lesson, the older boys and girls had taken slate and pencil, and were trying to put two and two together so as to make five, and all as busy as they well could be, when tap, tap, whir-r-r-r-r-r-r, went somebody or something on the outside of the school-house. "Boys, be still,

drumming on the school-house!" angrily snapped out the teacher. The boys clapped their hands to their mouths, the little girls smiled and hung down their heads, and quiet was hardly restored, when tap, tap, tap, whir-r-r-rrrr went on one side and then on the other side of the house, and it really seemed as if an invading army had made a general attack on the house.

"Really this is too bad," shouted the enraged teacher; "if I can find out who is making this disturbance I will punish him severely."

"Please, then, 'taint nobody but the birds," said a bold little fellow who sat by the window, and knew all about it.

"The birds! the birds!" said the teacher, as he walked to the door; "I would like to know what business the birds have to come here, and disturb us in this manner?"

As he reached the outside of the house, some half dozen of the red-capped rascals flew from the house, proving that the little fellow was right. The woodpeckers had actually made an attack on the school-house. "Well, well," said the teacher, "if the birds don't let us alone, we must punish them, if we can catch them."

Half an hour passed quietly away, and all were so busy with their lessons, that the birds were nearly forgotten, when a general attack was again made by the birds. This could not be tolerated, and three or four of the older boys were sent out, with full license to kill them if they could. But the rascals were too nimble for them. Before the boys could pick up a stick or a stone to throw at them, they would be off and up on a dry limb, peeping out from behind it, winking and shaking their heads at the boys, as much as saying—"Catch a woodpecker asleep, if you can."

Such was the disposition of the birds that it was necessary to keep a watch during school hours to guard the house from their attacks. When school was out for the day, they made a general attack upon it. Affairs continued in this way for some three weeks, when their attacks became so furious that the teacher was forced to dismiss school, and let them have their own way. In a short time the birds had billed some one hundred and fifty holes in the outside covering of the house, and it was nearly ruined. The cause of the attack was easily explained, from the nature and habits of the birds themselves.

The woodpecker, or sap-sucker, as it is sometimes called, is a bird which lives upon the grubs and worms which breed in old and decayed trees and wood. For this purpose he is armed with a long, sharp bill, which he drives into the wood where the wood-worm burrows; and then he uses another weapon, which is a long, sharp tongue, with a barb on the end of it. When he reaches the insect, he thrusts his spear through him, pulls him out, and in this way works for his living.

To enable him to discover his prey, his hearing is so extremely acute that, by hopping up a decayed tree, and laying his ear against it, he hears the worm at work in the tree, bores into it, and pulls him out.

The school-house in question was covered with a kind of half-decayed lumber, taken from the forest at a time favorable to the attacks of these insects. The birds were the first to discover their existence in the house, and consequently

made their attacks for that purpose. The results were, the school was broken up, the house nearly ruined, and the birds, for once in their lives, came off victorious from the attacks of their common enemy—the school-boys.—*Merry's Museum.*

LADIES' DEPARTMENT.

DOMESTIC RECEIPTS.

SQUASH CAKES.—Squash left at dinner may be made into griddle-cakes in the following manner: To one tea-cup full of winter squash, put two tea-cups of milk. Stir in flour enough to make a batter of the right thickness for griddle-cakes, and if you like it, a spoonful of Indian meal. Add a little salt, half a teaspoonful of saleratus, and one egg. It is not necessary to observe this rule exactly. Use more eggs, if you choose. The cakes may be made very good without any.

CUSTARDS WITHOUT EGGS.—Boil a quart of milk, except a tea-cup full in which to put four tablespoonsful of flour. When it boils, put in a very little salt, and stir in the flour just as for starch. Add two tablespoonsful of sugar, and such spice as you like. Peach leaves boiled in the milk, or a spoonful of rose-water, are recommended.

LOAF PUDDINGS.—Tie up a pound-loaf of baker's bread in a cloth, and put it into boiling water with considerable salt in it, and boil it an hour and a half. Eat with cold sauce.

CRUMB CAKES.—Keep a bowl or pitcher with some milk in it, and from time to time throw in the crumbs of bread which break off when it is sliced, and also the dry pieces left at the table. When you next want griddle-cakes, take this mixture and break up all the pieces with your hand, add an egg, salt and saleratus, and a few spoonsful of flour. No griddle-cakes can be better.

BOILED BROWN BREAD.—If they are hard crusts, lay them over night in a dish with a little water. In the morning add milk, and boil them. Do it very slowly, and take care that it does not burn. Sprinkle in salt, and just before you take it up, add a little butter. If there is not much milk, take off the lid the latter part of the time. Take up the pieces as whole as you can.

A CHARLOTTE.—Butter a deep dish very thick, cut thin, smooth slices of nice white bread, and line the bottom and sides of the dish, fill it with sliced apples, sprinkling each layer with brown sugar enough to sweeten it, and any spice you may prefer; also a few bits of butter. Have ready some slices of bread to cover the top, soaked a few minutes in milk or water; lay them over, and cover them with a plate that will fit close, and upon that lay a weight. Bake in a moderate heat three hours.

TEA CAKES.—One pound of flour, one pound of sugar, three ounces of butter, one egg, one cup of milk, one teaspoonful of saleratus. Roll them half an inch thick and bake them quick.—*Happy Home.*



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. XI.

BOSTON, JUNE, 1859.

NO. 6.

JOEL NOURSE, PROPRIETOR.
OFFICE...34 MERCHANTS ROW.

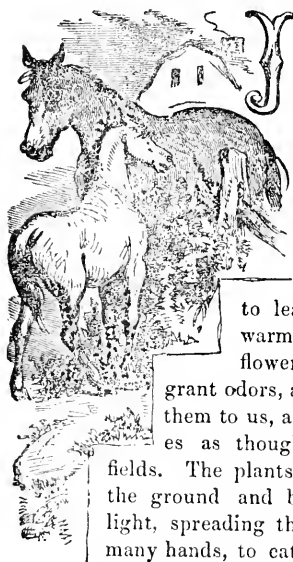
SIMON BROWN, EDITOR.

FRED'K HOLBROOK, J ASSOCIATE
HENRY F. FRENCH, J EDITORS.

CALENDAR FOR JUNE.

"For, lo, the winter is past, the rain is over and gone ;

"The flowers appear on the earth ; the time of the singing of birds is come, and the voice of the turtle is heard in our land."



JUNE, in the months, is like our early manhood in life, crowded with fullness and strength, and flushed with activity and joy. The birds mate and sing, insects flutter from leaf

to leaf, or sport in the warm evening rays ; — flowers exhale their fragrant odors, and gentle airs waft them to us, and regale our senses as though from Hesperian

fields. The plants stretch away from the ground and bathe in the sunlight, spreading their leaves, like so many hands, to catch the condensing vapors, or absorb the softly-falling showers. JUNE is not perfection, it is only the month of progress—the flush and promise of robust youth. A little later in the season will bring maturity in some plants, and that comes so near the next step in Nature's course, decay, as to break the charm. But JUNE suggests no decay—it is all promise—and arouses in any feeling heart, something of that benevolence and love which beams from its great Architect, and kindles and glorifies all.

That Solomon was a close observer of nature, is manifest from his writings, and we can imagine some of the sights and sounds which would greet him as he walked out nearly three thousand years ago, in the country about Jerusalem.

There was the fig-tree covered with young

fruit, the odor of the budding grape vine, the song of the lark and the cooing of the turtle-dove, (not the veritable *mud-turtle*, as we thought in our juvenile ignorance,) the murmuring of the brook Kidron, no longer rushing in a torrent over its rocky bed, but flowing gently, as was its wont in summer—and the olive-trees on Mount Olivet clad in fresh green. Later in the season, he watched for the "Rose of Sharon" and the "lily of the valley." Ninety generations of men have since passed away, and yet such is the uniformity with which nature does her work, that we, of a world then unthought of, can find no words more appropriate than those of Solomon to express our joy when "the flowers appear on the earth, and the time of the singing of birds is come." And until the internal fires of our planet shall burst their shell, we are told "seed-time and harvest, summer and winter, shall not cease."

Yet, from this very harmony of nature, so wonderful when we think of it, we are apt to undervalue many of our blessings as commonplace. The sun rises and scatters the vapors away, bringing life and joy to the animal and vegetable world, yet, were it mentioned as a subject of gratitude, many of us would reply in the spirit of the man, who, when his attention was directed to the Falls of Niagara, merely said,—"*Why shouldn't it fall—what hinders it?*" But hear the exclamation of one who had endured a six months' winter in an Arctic region. "To-day, blessed be the great Author of light, I have once more looked upon the sun."

And this month of June—this gem—this *emerald jewel*, with which the year adorns herself, how many merely regard it as the *same old June* they have always known, the month that comes after May—and never give it another thought. But no, it is *not* the same June, and you may see in it wonders you never discovered before, if you will not insist on walking through the world blindfold.

"And what is so rare as a day in June?
Then, if ever, come perfect days."

And a few lines farther on in this beautiful poem by Lowell—

"Whether we look or whether we listen,
We hear life murmur or see it glisten;
Every clod feels a stir of might
An instinct within it that reaches and towers,
And, grasping blindly above it for light,
Climbs to a soul in grass and flowers."

Of course, our poet is using language figuratively, and does not mean to assert any heresies concerning the existence of mind; but men have actually held the doctrine which the above lines contain, if taken literally. For example—"The Americans believe that all creatures have souls, not only men and women, but brutes, vegetables, nay, even the most inanimate things, as stocks and stones."

We should premise that this was written when "Americans" meant *North American Indians*, and is not intended as a libel on the inhabitants of the United States. We presume our aboriginal predecessors did not found their belief upon any process of reasoning, but upon the sort of instinctive sympathy we have with plants and animals. The violet seems to you to have a gentle soul, which only expresses itself in a faint perfume, and should you crush it with your foot, you would feel like some cruel tyrant, who has immolated an unoffending victim. The tulip has a *regal* soul, which you would not insult by any indignity—but you see a gross weed among your corn, and you pull it up and fling it away, saying, "What business had it among my corn?" With animals the sympathy is still greater, and it is a difficult thing to draw the line between instinct and reason. It is well known that many animals evince what we should call a process of reasoning were it exhibited in man, and the more closely we watch them, the more wonderful it seems. Every one who owns a dog can tell anecdotes which will illustrate this, and if he does not actually believe that

"When translated to that upper sky,
His faithful dog shall bear him company,"

he half wishes the *paradise of dogs* were not a myth!

While we would not be supposed to advocate "the transmigration of souls," or any of its kindred doctrines, we do not believe that animals have credit for half the intelligence they really possess—and yet, they tell us, that man himself is only an oyster in a higher stage of development! (See *Vestiges of Creation*.)

Because a man is dumb, we do not suppose him to be destitute of ideas, and an animal, although he cannot tell us what he is thinking about, may have a language of his own, which

we are too ignorant to understand. We know that our domestic animals appreciate kindness, and are capable of affection for us, and for each other. A gentleman tells us that the robins in his garden are acquainted with him. That when a marauding cat steals in among them, and he hears their cries of distress, he steps out from his study, and they, knowing that a friend has come, immediately cease their cries, and acknowledge his presence with a note of welcome.

It is curious to note with what simplicity the little child reads stories of animals. It does not surprise him at all, to be told that the wolf held a long conversation with Little Red Riding Hood, before he went and eat her grandmother; and that

"The frog he would a wooing go,"

appears to him the most natural thing in the world, though it may seem rather naughty that he should do so,

"Whether his mother would let him or no."

The child has *faith*; he believes in the angels that guard his bed while he sleeps, and that the insect carries in its own little bosom its private griefs and joys. We grown-up people shall be wiser and better in many respects, when we "become like little children."

There is not an insect so small, as to be beneath our notice. "Go to the ant, thou sluggard, consider her ways, and be wise."

There is the great brown caterpillar which you will find on your fruit-trees and rose-bushes about this time, (if you were not wise enough to exterminate him a month ago;) he is an ugly-looking creature enough, and a delicate lady would as soon encounter a bear or a lion—he is a nuisance to you, too, and you do not see what end he answers in creation. Well, we do not see either, and will only suppose he answers *some*—but even *he* is an object of interest to those who take pains to observe him closely. It is not merely that he will come out of that rough case one of these days, and will fan your cheek with his butterfly wing, but he lives in the midst of an organized community; perhaps he makes stump speeches to his fellow-citizens; he, too, has his three meals a day, and walks out for exercise, and finally, when his time has come, he seeks some secluded spot, weaves his own shroud, and appears no more in the form he first wore.

"And there's never a leaf or a blade too mean

To be some happy creature's palace;
The little bird sits at his door in the sun,
Atit like a blossom among the leaves,
And lets his illumined being o'errun

With the deluge of summer it receives;
His mate feels the eggs beneath her wings,
And the heart in her dumb breast dutters and sings;
He sings to the wide world, and she to her nest,—
In the nice ear of Nature which song is the best?"

For the New England Farmer.

THE FARMER'S POSITION.

For many years the earth has yielded a rich reward to the faithful tillers of the soil in New England. The systematic, enterprising farmers in almost every community are showing evident signs of prosperity, particularly, those who are expending their income upon their farms and buildings, bringing around them many conveniences, enjoyments and comforts of life, which add not only to their wealth, but to their refinement and good taste.

There have been great improvements in our agricultural position during the last twenty years, and while we would acknowledge the press as the greatest instrumentality in awakening an interest in our farming communities, would be grateful for their untiring efforts to make their periodicals so valuable.

The science of agriculture has been spread before the people in a form, cheap, practical and useful, and the great body of farmers have become readers, thinkers, experimenters, and are still inquiring for more practical knowledge in the art of good farming.

What has been gained by all this? New fertilizers have been found out and applied to the soil; old, worn-out farms have been reclaimed; old buildings have been transformed, and located with taste and convenience, or new ones built. Fruit trees have been planted and nursed, and many are yearly gathering their first fruits as their reward of well directed toil.

How beautiful to look out upon our fields that our own hands have helped to subdue and enrich, smiling luxuriantly, the grass ready for the scythe and the grain for the sickle, and the corn and the after harvest making haste to fill the granary and cellar. These are heaven's gifts, the legitimate reward of toil, the indispensable products of the soil, which all men must have or die.

Who can but envy the good farmer as they look upon his possessions, his well-arranged farm-houses and out-buildings, his lots, good fences, gardens and margin of flowers, his fruit-yard and orchard, all witnesses of his prosperity and his pride in his profession. And then, how permanent is his income, and Providence his surety for seed-time and harvest.

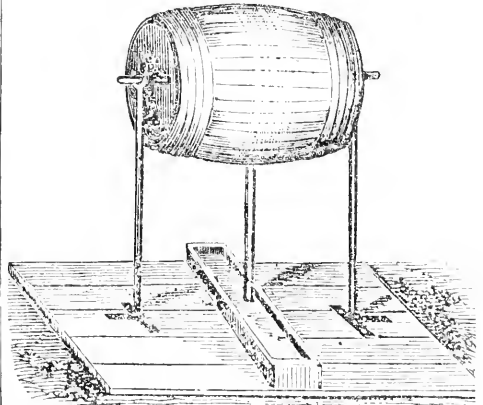
If the agriculturist prospers, it gives energy to trade and commerce. The vitality of every department of business centres here, cities extend their borders, manufacturing villages spring up along our streams and rivers, and our institutions gain strength as the soil becomes rich, and the tillers prosperous. Then for safety, happiness, prosperity, intelligence, usefulness, what other avocation compares with rural life?

In the commercial world, how numerous are the contingencies, what uncertainty enters into every enterprise. Perhaps to-day rich, and to-morrow poor, making others wretched.

Professional life is honorable if honorably pursued. Men rise to eminence and usefulness, and are indispensable to carry on the machinery of society and government; but the comparative number that are useful to any great extent is small, and the risk is great. None of these contingencies enter necessarily into the peaceful life

of the agriculturist; but he should be learned in his profession, and when this is the case, how vast the field for study; it is no less than "the earth and the fullness thereof." BERKSHIRE.
April 8, 1859.

A BARREL FOUNTAIN.



Fowls will drink impure water, undoubtedly, when thirsty, but if they could always select, there is little question but they would prefer to visit a stream of pure water, or drink from a fountain of clear, cool water.

The above cut shows how easily any person rearing poultry, may prepare a fountain which will answer a good purpose, at the most trifling cost. All that it needs is to mount a keg on a couple of upright stakes driven into the ground, and extend a small tube from the cask to a shallow trough or pan, and allow the water to drip slowly from the cask into it.

THE GREAT FRENCH HENERY.

Some months ago we published an account of a stupendous experiment in rearing fowls in the city of Paris. The account was written with so much apparent accuracy of detail, and bearing so much the semblance of truth, that, although so much out of the common course of things, we published it, though we must confess, not until it had remained on our table many weeks. SAMUEL COOPER, Esq., of this city, recently wrote a mutual friend in Paris, Mr. Fleischman, in relation to the matter, who replies that the whole affair belongs to that class of bugs which we call hum—a humbug! Will the editor of *L'Agriculteur Praticien*, Paris, France, be kind enough to give us the facts?

☞ The town of Nelson, N. H., containing a population of about 650, has made fourteen and a half tons of maple sugar the present season. The number of trees tapped was 10,859; the number of trees in the town suitable for tapping, which were not tapped, is 10,883.

For the New England Farmer.

FRUIT TREES.

MR. EDITOR:—Nothing in the *Farmer*, for years, has been to me more instructive, and in general, more sensible, than the remarks from your own pen of Feb. 26, on pruning fruit trees. First, because in your reasonings you start, not with experience, which is ever more doubtful, but with first principles; and secondly, because your remarks come in exactly the right time and season, so that they are like what some writer has defined wit to be, viz.: a good thing well applied. Particularly am I pleased to find you beginning at the beginning, that is, with first principles, and considering what is called experience afterward. They who *begin* with experience—valuable as that is in its place—must forever wander. This is true of most things, as well as with agricultural and horticultural matters.

However, believing as I do, in starting right, and desirous that there should be no flaw in your reasoning, especially at the outset; and above all, as your argument is strong enough without the aid of analogies which are not according to truth, let me say that when you tell your correspondent that in cutting off a branch of a tree in the spring, we do not save the sap for what remains, any more than one would save a man's blood to strengthen the rest of his body by cutting off one of his arms, you forget or overlook a fact, which is both in accordance with fact and experience, but also with the first principles of physiology. Some of the best authorities might be quoted on this subject. Feeble constitutions are often greatly improved by amputations, and it is according to nature that they should be.

Truly yours, W. A. A.

For the New England Farmer.

VALUE OF MUCK.

Explanations—Errors sometimes Useful—Evidence of Drs. Emmons and Dana, in regard to value of Muck—35 acres of Mowing keeps 40 Cows.

MR. BROWN:—I regretted the typographical errors in my notice of the climate and soil in Orleans county, Vt., and forwarded the corrections, which you promptly gave. The corrections had not been seen, I presume, by your correspondent at Brookfield, Vt., before writing his article, in which he represents me as making statements "so wide of the truth." I merely gave the estimate of my friend, who is one of our most reliable men in the county. I have no doubt that the stock mentioned by him was fully equal to forty ordinary cows. Let me assure your correspondent, that he will find nothing in the article alluded to by him, which "is wide of the truth," except what is made so by typographical errors.*

I shall not, however, seriously regret those, as they were promptly corrected by you, if my article and that of your correspondent shall call attention to the immense value of the "muck" or peat beds of Vermont. For the information of "W." and others, I will give a few extracts from the remarks of reliable writers. Mr. Em-

mons, one of the geological surveyors of New York, in his report on the third district, 1839, after describing several peat bogs, speaks of one in Warren county:—"It occupies about 60 acres; is upwards of 60 feet deep; is of an excellent quality and of easy access. The value of a marsh of peat may be estimated by determining the worth of a cubic yard or load, or any given quantity, and calculating the amount of peat which is contained in the area. The quantity of peat in a square rod of surface, and worked to the depth of 30 feet, would furnish 284 loads, which may be considered as worth 50 cents per load. Or, if we estimate it as worth only half so much, we perceive that 50 or 60 acres of it is almost invaluable, when favorably situated. Even a small bog in the centre of a farm might be employed to increase its value one-half. There are four purposes to which peat may be applied.

"First, as a manure. It should be raised in the fall, spread in the barn-yard, or placed in heaps and mixed with animal matter and lime. Placed under these circumstances, it is exposed to the frost and atmospheric agents, which produce incipient chemical changes, necessary to convert it into the nutriment of plants. This is especially the case when lime is added to it, which forms a soluble salt, the geate of lime, with a portion of the vegetable matter. It will not answer a good purpose when employed without preparations."

Dr. Emmons might have added, as a preparation of peat or muck—let it receive the urine of cattle in a barn cellar, or the night soil and wash of a house, or combine ashes, instead of lime, say two bushels to a common cart-load, and it is well prepared for use. Ten or twelve cords may be made thus by any common family, yearly, near the dwelling-house.

After stating the importance of peat for fuel and for producing gas-light, he adds:—"Perhaps it would be saying too much to assert that peat is more valuable than coal; but when we consider that for creating heat, it is not very inferior to bituminous coal, that it contains a gaseous matter equal in illuminating power to oil or coal gas, that its production is equally cheap, and in addition to this, it is a valuable manure, if properly prepared, its real or intrinsic worth cannot fall far short of the poorer kinds of coal."

Dr. Dana, in his *Muck Manual*, has given the analysis of both peat and cow-dung. He found more soluble geine in peat than in cow dung. He says, "The salts and geine of a cord of peat are equal to the manure of one cow for three months." "Departing from cow-dung and wandering through all the varieties of animal and vegetable manures, we land in a peat bog. The substance under our feet is analyzed and found to be cow-dung, without its musky breath of cow odor, or the power of generating ammonia." "Peat approaches dung moistened with the liquid evacuations of the animal."

If we moisten peat with the liquid evacuations of the animal, its value is greatly increased. In experiments reported to Dr. Dana, by Hon. Wm. Clark, Jr., of Northampton after giving the process of manuring corn land with several kinds of manure, he says:—

"The land was treated alike in all respects, except the different kinds of manure; all of which

* The estimate made of the stock wintered by me, as alluded to by Mr. Hall, in a late article on the climate and soil of Orleans county, Vt., I regard as fully correct.
Covestry, 17., Jan., 1859. J. B. WHEELLOCK.

was spread on the turned furrow and harrowed in before planting. The corn where the wood ashes and muck were spread, early took precedence of all the other parcels, and continued apparently much the best through the season. This manure was prepared by mixing eight bushels of ashes with two estimated tons of muck."

Within the limits of the calcareous mica slate regions of Vermont, which with the limestone regions on Lake Champlain, &c., constitute much more than half of the area of the state, are immense deposits, or rather formations, of sphagnum muck. In many instances the beds of what were once large ponds, are now filled with muck to a great depth. Many existing ponds are contracted to one-fourth, and some to one-tenth of their former area, and will eventually entirely disappear. When the peat or muck lies over shell marl, as is the fact in many locations, it is more valuable for manure than in other cases. Such marl may be readily converted to caustic lime by placing it over a pile of logs or wood, and then burning the pile. It is equally valuable for manure, when burnt thus, as if burnt in a kiln. The ponds made anciently by beavers, and now called beaver meadows, (not barren, as your types made me say,) very often contains both marl and muck. These are very numerous, and furnish an adequate supply to a large number of farms. I will furnish you with some experiments, made by myself and others, as soon as I may find it convenient.

Yours, &c.,
Brownington, Vt., 1859. S. R. HALL.

MR. BROWN:—Allow me to enclose a copy of a line received from my friend Wheelock, since writing the letter enclosing this.

Yours, &c., S. R. H.

REV. S. R. HALL:—Since forwarding a hasty line to you to-day, and having read the article by "W.," in the last *Farmer*, calling in question the accuracy of your statement, it has seemed to me that you might like to receive an account of the stock I am wintering at the present time. I do not now mow more ground than when I made the statement to you some years ago—not over thirty-five acres. If any one doubts whether I am wintering stock equal to forty ordinary cows, let him come and see it. I have now—

- 1 yoke of 7 foot Oxen.
- 10 Cows.
- 8 Yearlings.
- 8 Calves.
- 3 Horses (large)
- 3 Colts, 1, 2 and 3 years old.
- 47 Sheep of the large breed.

One of my neighbors, I think, keeps more stock, in proportion to the amount of land he mows over, than I do. My grain, &c., is about the same as formerly.

Yours, &c.,
JOSIAH B. WHEELOCK.
Coventry, Vt., Jan. 31, 1859.

REMARKS.—If our intelligent correspondent would be a little more careful in his chirography he would have to regret less errors. For instance, if we should select his words "with," "barren," and some others, and place them without any connection with others, we think it would puzzle him to tell what they are.

For the New England Farmer.

BUCKWHEAT AND WIRE WORMS.

MR. EDITOR:—I have long had it in contemplation to communicate to you what I observed in a gentleman's corn-field, last season, in the fore part of July. It was four acres of Indian corn, two acres growing and two acres trying to grow, upon a piece of land, all of which, until that year, had always, as the owner expressed it, been so infested with wire worms as to render the growing of Indian corn, or other crops, "a very steep up-hill business." But when I observed it, only one-half the field was giving signs of the worms, while the other half presented that beautiful appearance which always characterizes a luxuriant corn-field. All parts of the field had been treated alike that season, but the year previous, the part of the field presenting a healthy appearance, had produced an abundant crop of buckwheat, no buckwheat having been sown on the other part. The difference between the two portions of the field was very marked—the crop on that part where no buckwheat had been raised being past all hope of recovery.

Now I thought the above facts of sufficient importance to excuse me for a self-introduction to you, in my first newspaper article, knowing, as I do, your anxiety to give any information, however remotely benefiting the farming interest.

If the farmer can be exterminating so destructive an enemy to his thrift as the wire worm, and at the same time, and on the same soil, be producing a profitable crop, he surely ought to know it, and know *how* to do it. I do not know as the buckwheat had anything to do with driving off or starving out the worms, but it certainly looks like it. At any rate, I have given facts as I have seen them, and farmers can form their own opinions; they will lose nothing, if they have a nest of wire worms which they would like to break up, by applying the buckwheat theory.

Leyden, March 5, 1859. DAVID MOWRY.

For the New England Farmer.

FRUIT TREES—LIMITED DURATION.

The celebrated THOMAS ANDREW KNIGHT, of the London Horticultural Society, one of the most scientific cultivators in Europe, whose attention was directed to the unhealthy condition of the old varieties of fruits, particularly the apple, came to the conclusion that we could no longer raise healthy tree, and good fruit from the old sorts. Professor LINDLEY, although differing from President Knight's theory, says, "However much we may differ from him, no man living now before the world, can be said to rank with him, in that particular branch of science, to which his life was devoted." Thinking that the opinion of the practical *Octogenary Rodgers*, on this theory, would be interesting to your readers, I have ventured to transcribe it. He says, "The Golden Pippin is one of the most esteemed and hardy fruits. There is, however, an idea prevalent that this country was about to lose this fine fruit forever. In Mr. Knight's Treatise on Orchard Fruit, the doctrine was first broached, that all our varieties and sub-varieties of fruits, have but a temporary existence. They are raised from seed, flourish for an uncertain number of years, and after arriving at their

maximum of health and fertility, gradually sink to decay, and at length disappear. Taking this idea as a rule, the Golden Pippin was judged to be in this last stage of existence; and it was predicted, that not only were the old full-grown trees to disappear, but all the young ones worked from them would perish also.

"These failures, I think, are caused by a careless choice of grafts,—by working them on improper stocks, and planting them in old worn-out soils, instead of in fresh, well trenched, loamy soil; this latter opinion was the more feasible, because there were many middle-aged trees in different parts of the kingdom which were in full vigor and bearing; and although young plants in old gardens and orchards were unthrifty, such as were properly planted in newly broken-up ground, if worked on the best stocks, succeeded as well as ever. This being the opinion of the author respecting the failure of the Golden Pippin, and other old sorts, he gave the subject his best consideration, and set about proving how far his own experience of 40 years was well or ill founded, and arrived at the following conclusion, viz.:

"If the stocks are raised from the most healthy stocks, properly treated, and worked with the most healthy moderate sized scions, cut from the top of sound, healthy trees, and when fit for transplanting, be placed on well trenched, light, fresh loam, having a dry bottom, they will assuredly prosper. On the other hand, if the grafts be taken indiscriminately from any tree or from any part of a tree, they will, nine times out of twelve, be in some respects or other defective, and particularly, if they be not afterwards planted in their favorite soil, where their wood would not be sufficiently ripened."

J. M. I.

Salem, Mass., 1859.

For the New England Farmer.

HUNGARIAN GRASS.

In answer in part to inquiries frequently made by correspondents of the *New England Farmer*, in relation to Hungarian grass, permit me to state a single experiment I made with it last season. My son in Illinois sent me a small parcel of seed which he brought from Iowa. I sowed it on rather light, dry ground in low condition. I waited till midsummer, and not being able to see a single plant of the grass, I raked it over, and sowed some turnips and late peas. Towards autumn, I discovered a few plants on the borders of the lot which I presume was the Hungarian grass. It grew ten to fourteen inches high, with a colored head—purplish, I think, full of seed, a specimen of which I enclose you. Whether the seed does not vegetate till late, like our wild millet, that starts up on our stubbles after the grain is reaped, or whether the seed was picked up by a flock of strange birds, I saw one day upon it, I cannot tell. This Hungarian grass did not appear to be much superior to our wild millet or barley grass, as we used to call it when I was a boy, only the heads were larger. I have seen millet growing far superior to this grass in every respect, and that would afford a good crop of seed and fodder. I shall try it, however, again, on better land, to ascertain what another experiment will do.

RUFUS MCINTIRE.

Parsonfield, Maine, 1859.

For the New England Farmer.

FLOWER GARDENING.

BY ALBERT STACY.

[Read before the Concord Farmers' Club, March 30th, 1859.]

The cultivation of flowers is adapted to persons in every condition of life. The high and the low, the rich and the poor, all can partake of its advantages. It may not pay in dollars and cents, like corn and potatoes, but it affords a higher gratification which money cannot buy. Some persons seem to have the impression that the body, only, is to be attended to; therefore, they will slave themselves from morning till night, throughout the year, not merely to keep body and soul together, but to pile up the almighty dollars. Such persons will ask, What is the use? Does it pay? Does it afford meat and drink? I answer no, only to the mind; and such individuals, having no great stock, are certainly in want of no great amount of food for it. These remarks apply only to those who decrie the cultivation of flowers, and who look upon the time employed upon them as wasted. Whatever will give gratification to others, is worth doing. Selfish men do not often cultivate flowers. But the social man, who likes to have others about him enjoy themselves, will appreciate the pleasure which a neatly arranged flower garden affords to all persons of taste. It is an employment equally adapted to ladies and children, as to men. Let any of our young ladies employ themselves an hour or two a day in the flower garden, and we should not hear of so many dilapidated and dyspeptic spinsters, whose principal enjoyment is gossip and bohea. It would give a fresh bloom to their cheeks, an elasticity to their step, which would make them fit companions to some of our faint-hearted bachelors, instead of a drag to their existence. Downing, in one of his essays, says "that he has a neighbor on the Hudson, a lady, whose pleasure grounds cover many acres, whose flower garden is a miracle of beauty, and who keeps six gardeners at work all the season. But there is never a tree transplanted, that she does not see its roots carefully handled, not a walk laid out, that she does not mark its curves, no matter what guests enjoy her hospitality. Several hours every day, are thus spent in out-of-door employment."

I suppose the reason why so many of our young men leave the farm and seek employment in the cities in mercantile life, is, that they have acquired no taste for farming; and no person will succeed in an employment which they do not like. If you can cultivate a taste for flowers in the child, you will have a stepping-stone, which will lead to something more. Give him a small plot of ground, show him how to plant the seeds, and you will soon see that he will take a lively interest in the first appearance of the flowers, and his play, as well as work, will be to take care of them; he will soon evince a taste for cultivating the smaller garden fruits, such as strawberries, raspberries, currants, then the various fruits of the orchard will claim his attention; the whole will result in a taste for farming which will prevent his roaming away to seek employment in commercial life, at which so few succeed. Make the labor of the farm attractive, and you can commence in no surer way than to teach a child

the cultivation of flowers. It can be done at little trouble and expense. You can have flower-beds bordering the walks that lead to your house. You can set out in them flowering shrubs, like the Deutzia, Althea, Rhododendron, Japan Pear, Spiræa, and the most beautiful of all, the Rose, with its infinite variety of color and fragrance. You can have flower-beds under your windows, which, with a little care, will furnish you with bouquets to adorn your rooms in summer; your dwellings would be much improved by training up some of the many varieties of running roses, and Honeysuckles, at the corners and up the pillars of the piazza.

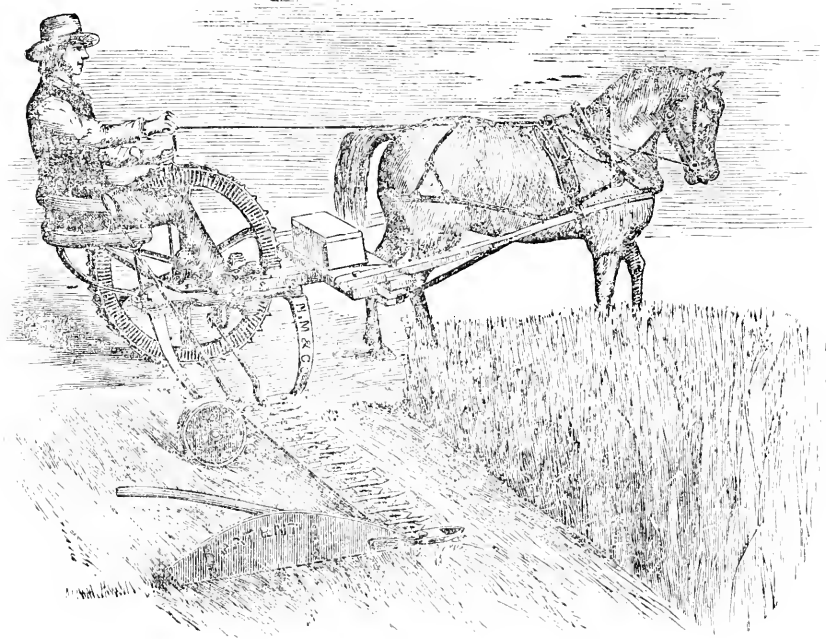
If you wish a flower garden on a little more extensive scale, a plot of ground, which every farmer can spare, 100 feet by 60, would be amply sufficient. Make a bed 4 feet wide round the whole of it, then a walk 3 feet wide; then let your boy or girl who has been at school, apply practically their geometrical knowledge, and draw a circular bed at each end, and an oval in the centre, with a walk round each; border each bed with a narrow strip of green turf, fill the walks with gravel and roll them down hard. When all this is accomplished, you will have a simple arrangement of a flower garden, which, if well done, will be attractive, before a seed or bush is planted. There is no necessity for an extensive variety; leave the rare and costly plants to those who have money to buy them. By a judicious selection of the right kinds, you can have an abundance of blossoms the whole season. You will want, of course, some of the bulbous-rooted plants, such as the Snow Drop, Crocus, Hyacinth, Tulip and Crown Imperial. These ought to be planted in the fall from 2 to 4 inches deep, and they will be among the earliest blooming flowers we have. As soon as the frost is out in the spring, you can set out some flowering shrubs. You will want the Azalea one of the most beautiful plants; the Calycanthus, the flowers of which are of a dark brown color, and very fragrant, resembling the odor of ripe melons; the Japan Quince, the flowers bright scarlet, and blooming in April; the Deutzia, which is a plant of easy cultivation, having a profusion of white blossoms which are highly fragrant; the Rhododendron, which bears an abundance of rose-colored flowers, spotted with yellow or orange blossoms, in June or July, and wants shade and humidity; the Spiræa, of which there is a variety, all beautiful; the Spiræa prunifolia plena and Reeves's Spiræa, are two of the best; the Weigela Rosea, which ought to have a place in the smallest collections; it blooms in April and May, and bears an abundance of fine rose colored-flowers, which hang in graceful bunches, from the axils of the leaves and ends of the branches. It is easily raised from cuttings, which strike readily. During the spring months you will certainly want some varieties of the Rose, the queen of flowers, some of the Moss Roses, some of the red, white, scarlet and yellow. You can have a choice from over 3000 varieties. There is no flower which better repays the cultivation bestowed upon it than the rose. The infinite variety, in color, fragrance, and shape, and ease with which it is cultivated, serve to render it worthy of a place in every one's garden. Any one who will procure a dozen of the finest varieties, will become slightly

touched with the rose fever. In order to make it flourish, the soil must be deep and well drained. Give it plenty of manure; the richer you make the ground the better. Mr. Rivers recommends as a specific stimulous, what he calls roasted turf, which is easily made by paring sods from the road-sides, and half charring them. It acts like magic upon the little spongioles of the rose, making new buds, and fine fresh foliage start out very speedily. For climbing roses, none take precedence of the Baltimore Belle and the Queen of the Prairies. Downing says, that "if he could have but one rose, his choice would immediately fall upon the Souvenir de Malmaison, from its constant blooming habit, large size, hardness, beautiful form, exquisite color, and charming fragrance." I have found it, however, rather tender, and the buds liable to blast. May is the most suitable month for the general sowing of flower seeds; many varieties do better to be started in hot beds in April, and transplanted to the border, the latter part of May. The following varieties of annuals ought to be in every one's collection: Ambrosia, German Asters, Balsam, Canary bird flowers, Candy Tuft, Coreopsis, Cypress Vine, Eschscholtzia, Pansy, Dwarf Rocket Larkspur, Lupins, Mignonette, Nasturtium, Nemophila, Petunia, Drummond Phlox, Portulacca, Wall Flowers, Schizanthus and Verbena. The above mentioned will give you a succession of bloom the whole season. One of the most valuable of the bedding-out plants is the verbena, especially the scarlet flowered. Their dazzling, brilliant scarlet flowers cannot be exceeded by any other plant yet introduced. It blooms from May to November. There are many other varieties of every color and tint, excepting yellow and blue. The Asters and Balsams do much better to be started in a hot-bed in April, and transplanted to the border in May, about one foot apart. Of the biennials and perennials you will want the Canterbury Bell, the different varieties of the Pink, the good old-fashioned Hollyhock, Honesty, Sweet Williams, Wall Flowers, Larkspurs, and Phlox. You will likewise want the Dahlia, one of the most brilliant and perfect of flowers, sporting in every variety of tint. The Paeony, a genus which contains many magnificent flowering plants, and the Dielytra Spectabilis, which Breck says is "the finest herbaceous perennial in cultivation."

But there is no end to the varieties which a person can have, if so disposed.

I will conclude by giving a formula for a liquid manure, which I have found very efficaceous in making plants grow; it is likewise well adapted to vines and trees. I obtained it from Mr. Bull. Put a wheelbarrow load of peat into a half hog-head, fill with water, add two pounds of potash to the mixture, and water once a day in dry weather.

STRENGTH OF CAMELS.—The Galveston News states that one of the camels in that city knelt down and received a load of five bales of hay weighing 1,400 pounds, which it raised without the least effort, and walked away with apparent ease. In their native country the average load for a full grown camel is some 800 pounds, with which they perform long journeys over deserts with but little food or water.



KETCHUM'S ONE-HORSE MOWING MACHINE.

The idea is now pretty well established in the public mind, that the mowing machine will very generally come into use, and that it deserves to be ranked among the valuable labor-saving machines of the age. The timid and conservative have had their day of doubt and criticism; but while they have been doubting and wasting human thews and sinews, active and progressive minds have tested and re-modelled some of the machines, until they have produced one which will accomplish the work quickly, cheaply and effectually.

Such, we believe, will prove the one illustrated at the head of this article. We cannot yet speak of it with entire confidence, because nothing short of actual field labor, under several trials, can inspire such confidence. But from the partial trial we have given it, we can say that it comes nearer our idea of what a mowing machine ought to be, than any we have yet seen.

We shall continue our tests of the machine in the earliest grass we can find, and content ourselves for the present, in showing the reader what the proprietors of the machine think they have accomplished.

After repeated and long-continued experiments in the field and manufactory, the proprietors have succeeded in producing a one-horse mowing machine, which for simplicity of con-

struction, lightness of draft, ease of operation and the low price at which it is sold, must recommend itself to every New England farmer.

The machine is so constructed as to combine great strength and durability with the smallest possible weight; the cutters are so formed as to prevent entirely the liability to clog, so troublesome in some machines; it may be stopped and started in wet or lodged grass, without backing; the seat is conveniently placed, so that the operator can ride with perfect ease to himself and the horse; it has a wheel and lever attached, by which the operator can instantly raise the cutter-bar six or eight inches, to pass over a stone or other obstruction, and while raised, the machine may be drawn to and from the field, &c. The cutter-bar being always on a line with the axis of the driving-wheel, this machine operates well on rough or uneven ground, where other machines cannot mow. A very important improvement in this machine, is that it can be instantly thrown *out of or into* gear, by means of a short lever, which can be operated with ease by the driver on the seat. The machine is constructed entirely of iron, and its parts so adjusted and guarded against accidents, that it requires but little more attention to keep it in working order than the common scythe.

For full particulars of the form, construction and mode of management of the machine, see advertisement in another column. The price of the one-horse machine is \$75, and the two-horse about \$100.

PEAR TREES.

Why is it that the pear tree does not flourish in every locality?

This question is often asked. It has been attributed by some to their situation or proximity to the ocean; and among others, by Downing. This theory he could not sustain, and hence, a few years after, he reseeded it, and remarked, that "a larger observation of the effects of the composition of soils, convinced us, that much of what we attributed to climate, was simply to a want of inorganic, or mineral manures in the soil." We apprehend that the want of proper soil in the first place, and the method of applying so much animal manure, *not composted*, in the second, to be frequently the difficulty in cultivating the pear tree. Regarding the proper dressing of land for fruit trees, our design is to follow nature in her modes of enriching the soil, or in other words, to use vegetable and mineral manure more generally in the application of leaves in compost with wood ashes, and peat and shell lime.

Another objection we should have, to the use of unfermented animal manure, is, that it stimulates, and as a consequence of this over-supply or forcing, induces a sort of plethora, or tenderness in the tree, from a too rapid and forced growth; hence we prefer to see a moderate and regular growth. We believe that good pasture land is better fitted for fruit trees, than that which has been long under the plow, because it is not exhausted of that decomposed vegetable and mineral matter, which is fitted to be the food of trees; the wood also ripening better. We have long observed that young trees, particularly the cherry, if making a great growth in the summer, was extremely apt to die out in the following winter, owing, undoubtedly, to its succulent growth, and want of ripeness in the new wood.

For the New England Farmer.

A NEW AND USEFUL FERTILIZER.

I have used, for several years a mixture of plaster and urine, at planting, to give corn a start. I first saturate the plaster with urine, then spread upon a tight floor, stir and turn with a hoe occasionally, and, when dry, pulverize. I have sometimes mixed dry plaster with the mass, without waiting for it entirely to dry, before pulverizing. In this case more should be used in a hill. About a great spoonful (heaped,) to a hill, of the strongly saturated mass gives the corn a fine start. It should be *scattered* in the hill, and not lie in a heap on the corn, as that would injure, and sometimes entirely prevent the growth.

A friend suggests, that, as *calcined* plaster has several times the absorbing power that the uncalcined has, it would be far better to mix with urine. How is this? Will not the calcining process expel some of the valuable properties of

the plaster, and render it less efficacious as a fertilizer? Will it have the power to fix the ammonia of the urine?

Every farmer, who has an iron boiler, may calcine his own plaster at a trifling expense; and if it will absorb four times the amount of urine, and retain the ammonia, I think it must make a very powerful fertilizer, especially if the urine is allowed to become putrid before mixing.

Framingham, March 15, 1859.

E.

REMARKS.—We do not learn, upon inquiry, that any advantage will be derived from the plaster for the purposes you speak of, by calcining it. That process will cost something, and that cost had better be expended in the purchase of more plaster.

For the New England Farmer.

TRANSPLANTING TREES.

The supporting of trees after setting is a more important operation than it is generally considered. There are many methods or ways in which this is done; sometimes by pegs driven into the ground from which ropes are fastened and carried to the tree, but more generally by poles set against them in a triangular form. When newly-transplanted trees are swayed about by strong winds, the formation of new roots is prevented, or often destroyed, and cavities formed at the base, admitting too much air, which deranges the roots. The best plan for supporting a newly-set tree is the following:

After digging the holes to their proper depth and circumference, I then with a crow-bar make a hole in the centre of the place to receive the tree, into which I insert firmly a short pole or stake, that shall at the other end reach nearly to the branches. I then place the tree along its extent; and then with a wisp or collar of some soft material, such as straw, moss, or sea-weed, bind it around the point of pressure, and tie it firmly. This plan of setting maintains the perpendicular position of the tree, and I commend it to those setting out either fruit or ornamental trees. For the latter I consider it admirably adapted, as trees in our cities and towns are so often destroyed by being swayed about by boys, and sometimes by the horns of cattle.

Salem, April, 1859.

J. M. I.

STEEPS FOR SEEDS.—The above subject has for a long time engaged the attention of many experimenters, and with various results. Strong solutions of any of the well-known materials used, are apt to injure the germs of seeds, while weaker solutions, being held by the spongy coatings, frequently not only secure earlier germinations, but by a timely supply of necessary pabulum, secure vigorous plants, which, as a necessity of proper conditions in their early stages of growth, yield larger returns. Among the materials used we would enumerate the following:—Saltpetre, Sulphate of Ammonia, Carbonate of Soda, Soluble Phosphate of Lime, etc. We should be glad to learn from those who have used steeps, what has been their success.—*Working Farmer.*

For the New England Farmer.

PRUNING APPLE TREES.

MR. EDITOR:—I have just been reading the remarks of Mr. PUTNAM, and the editorial on this subject. I have given considerable attention to it, and differ somewhat from yourself in the time of pruning, as a matter of convenience. I think there are weighty objections against pruning in June or July. While the fruit and foliage are on the trees, it would make tearing work to pull out a limb after it was cut off; I think it would damage the young fruit it must necessarily touch. Another difficulty would be in dropping the branches upon the grass or vegetables that may be under the trees; and still another in going around with a cart to collect the brush. Then, again, in June and July we are too fully employed in keeping down the weeds, or picking the early fruits, and in haying, to spare the time. Such has been my experience in a long course of extensive farming operations, and are sufficient reasons to deter me, and I think most people, from pruning at that time.

I have come to the conclusion that the winter is the best time, and we usually have comfortably weather enough between the falling of the leaves in autumn, and the first of March, to accomplish this work. Is not this the season for trimming grape vines? I sometimes prune after the first of March, in which case I would recommend that all limbs above one and a half inches in diameter be cut, say one foot from the trunk; then in June go round with a sharp saw and cut the stubs very smooth, and pare the edges with a sharp knife, and perhaps paint a little; but I do not like oil on trees. OTIS WITHERINGTON.

Brookline, Mass., March, 1859.

REMARKS.—An orchard that has been properly tended, requires no operation that will injure the fruit, tree, crops under it, or ox teams to carry off the limbs; and an orchard that needs a severe pruning of large limbs, certainly ought to have it done at the proper season of the year, even at the expense of inconvenience, and all the other objections urged. November pruning will answer very well, but June is better. Where a person raises an orchard himself, he ought to be able to do all the pruning in it necessary *with a common pocket knife*, except in cases of accident to the tree by wind or otherwise.

CROCODILES.

After burying the eggs in the soil, there to be matured by the sun, the female visits, from time to time, the place in which they are secreted, and just as the period of hatching is completed, exhibits her eagerness for her offspring in the anxiety with which she comes and goes, walks around the nest of her hopes, scratches the fractured shell, and, by signs which resemble the bark of a dog, excites the half-extricated young to struggle forth into life. When she has beheld, with this sort of joy, fear and anxiety, the last of her offspring quit its broken casement, she leads them forth into the plashy pools away from the river,

and among the thick underwood, to avoid the predatory visits of the father, whose palate delights in nothing more than the flavor of his own young, which he eats remorselessly on every opportunity. In this season of care and watchfulness over them, she is ferocious, daring, and morose, guarding with inquietude her young, whenever they wander. She turns when they turn, and by whining and grunting, shows a peculiar solicitude to keep them in such pools only as are much too shallow for the resort of the full-grown reptile.

EXTRACTS AND REPLIES.

PRUNING AND TAP ROOT.

I have read the remarks of "J. M. I.," on the trimming of trees, the circulation of sap, and the agency of leaves, &c. &c., but have failed to learn from him, with any precision, the proper time and manner to trim the limbs from apple trees; if ever this should be done. I am free to confess that I have little faith in the trimming process, as ordinarily performed. The handsomest and most productive apple trees I have ever seen, have grown up among the rocks, with very little modification from the hand of man. I should as soon think of pricking the veins of a child, when in full health, to make him grow, as to cut off the limbs of a tree to promote its growth. Any wounds to either are unnatural, and cause an extraordinary effort in nature to counteract them; therefore, I disapprove entirely the cutting of the tap root of young trees, when setting them in a nursery, in order that the roots may spread more extensively on the surface, and be the more readily taken up, when wanted for the orchard. Nature, in starting the tap root down below the surface, designed it for the support of the tree, and whoever would have his orchard perfect, should be cautious about interfering with its natural supports.

March 21, 1859.

AGRICULTURAL KNOWLEDGE.

I have recently been perusing the "Transactions of the Massachusetts Society for Promoting Agriculture," and I find that from its foundation it was zealous in getting agricultural knowledge in some form before the people; they resorted to such expedients as were available, which were widely different from the manner of disseminating such matter now. If that interest were taken in the diffusion of agricultural knowledge at the present time, that there was formerly, would it not materially change the aspect of many rural homes?

It may be said, we have a large number of various agricultural works and newspapers; this is all very well, but it does not suffice. We want a system by which the community may be drawn together to have a talk or hear occasionally a lecture on agriculture. Such gatherings and discussions would produce the most beneficial results.

Winchester, 1859.

PORTABLE IRON GRIST MILL.

Subscriber, Orwell, Vt., will find who sells this mill by looking at the advertising columns of the weekly *Farmer*.

WHAT IS GRASS.

Noah Webster, the highest authority we have, (Ed. 1844, at New York,) says it is, in common usage, herbage, the plants which constitute the food of cattle and other beasts—the plants from which hay is made, such as herdsgrass, red-top, clover, and many other species—all which are included in the family of the grasses." But another W., wiser than old Noah W., has recently grown up, and says "clover is not a grass." (See Boston *Courier* of Tuesday, March 22.) Who shall decide when doctors disagree? I say, let farmers themselves decide. Ask any twelve you meet, and I hesitate not to say, that eleven of them will promptly say that clover is a grass—ask the learned Secretary of the Board of Agriculture, and he will tell you that clover is a grass, for he has already said that in print. This hypercritical quibbling, of persons who know much less than they think they do, is vexatious and annoying to practical men. * *

ALEXANDRIAN CLOVER.

I have received a package of seeds from the Patent Office, and among them is one marked "Alexandrian Clover, *Trifolium Alexandrinum*, (from Egypt.) Sow early in the spring."

My query is, whether it is a flowering plant designed for garden culture, or should it be sown broad-cast for seeding down ground like our common clover? J.

Winchester, 1859.

REMARKS.—The Alexandrian clover is described in the books as one of the forage plants.

LANDS IN MAINE.

Good arable lands can be purchased in Franklin county, Maine, for five or six dollars per acre, where farming produce can be raised in abundance. I advise people to go there, instead of the West.

J. B. JOHNSON.

Salem, N. H., 1859.

TO CURE SPRING KNEES IN HORSES.

In a past number of the *New England Farmer*, I noticed an inquiry, as to what would cure a horse having sprung knees. I had a horse about two years ago, whose knees were very badly sprung, and I cured him in a few weeks by using "Dr. Streeter's Magnetic Liniment." I would recommend it in other cases of the kind.

JAMES S. THOMPSON.

Kingston, Mass., 1859.

TO CURE WARTS ON CATTLE.

Dissolve potash to a paste, cover the wart with it for half an hour, then wash it off with vinegar. The cure is sure for man or beast. A. BRIGGS.

Deerfield, Mass., 1859.

HOW TO HULL CORN.

Place a strong bag with three pints of wood ashes in it, in a boiler with three quarts of corn in water. Boil until the hulls will slip off by rubbing them with the hand. When rinsed, boil the corn again in fair water till it is sufficiently soft.

ASA BENFIELD.

Centre Brook, 1859.

TARRING APPLE TREES.

I am tarring my apple trees to prevent the canker worm from ascending. Can I mix any thing with the tar to prevent it from becoming hard too soon?

Is tarring the cheapest and most effectual way of preventing the canker worm?

A SON OF POMOLOGY.

Westford, April, 1859.

HOW TO HULL CORN.

A good housewife, who has often read and acted upon the receipts in the "Ladies' Department" in your well conducted monthly, has often asked me, "What is the best way to hull corn for family use?" Can you give her the information?

SUBSCRIBER.

Quincy, March 12, 1859.

REMARKS.—Some obliging lady will undoubtedly tell us.

PLANT PURE POTATOES.

Plant potatoes that are not specked with rot, or any disease, and my word for it, you will have good, sound potatoes; this is no fiction, for I have raised them for two years past, and had on old or new land sound potatoes.

TOBACCO.

Where can I find a practical work on tobacco? B. B.

Middletown, Ct.

REMARKS.—Do not know. We hope not anywhere.

EXPERIMENTAL FARMS.

Much responsibility rests on those who undertake the direction of one of these establishments. We are glad to learn that our neighbors of Essex have already taken the bull by the horns, and appointed a committee of their experienced citizens to shape affairs on their Society's farm in Topsfield. We learn Messrs. Fay, Merriam, Loring, Williams and Dodge are planning for the use of their farm. We have confidence that these gentlemen will venture upon no plans of operation that will not be practically useful. Mr. Brown, the working man on the farm, is young, energetic and ambitious. He is already favored with a contract, that will enable him to use his produce at home, thereby bringing it to a good market, and increasing his means of fertilizing his grounds. The employers are ambitious of improving the appearance and conveniences of the farm. It is so centrally situate, that it probably will, ere long, be made the focus of all the society's operations. As was once said by the renowned blacksmith of Hinsdale to Mr. Webster, when he was about to address his fellow-citizens at Worcester at a political meeting, familiarly slapping him upon the shoulder, "Much is expected of you, Daniel, to-day." So say we of our friends in Essex.

For the New England Farmer.

**HIGH FARMING---PROF. MAPES'S FARM
---SUPERPHOSPHATE.**

BY JUDGE FRENCH.

Not many weeks ago, we published a pretty careful criticism upon the farming operations of Mr. Sheriff Mechi, of Tiptree Hall, England, one of the highest farmers of that country, and our conclusions were, that although Mr. Sheriff Mechi might make money in England by underlaying 170 acres of poor land with iron pipes, and pumping through them all his manure with a steam-engine; by underdraining five feet deep, and doing other things accordingly, yet that his own statement showed that with American prices for the labor he charged, and American prices for the crops he credited, he would run his farm ruinously in debt. His success, we said, results through the low price of labor mainly, the price there being but about half our New England prices.

In the New York weekly *Tribune* of March 26, 1859, is an account of the farm of Prof. Mapes, near Newark, New Jersey. The account is very interesting to farmers, because of its encouraging results. The farm contains 121½ acres, and the statement shows that the expenses upon it for the year 1858 were \$3,152 60, and the income from it was \$11,627 88, leaving a nett profit of \$8,475 28, after paying all expenses and a fair rent for the land! Only 33½ acres of the farm was in cultivated crops, the rest being grass and woods. The account below gives the items of income and expenses, with a balance which may challenge competition on either side of the water.

Having some acquaintance with Prof. Mapes, having seen his farm, though not in the growing season, and having met his foreman, Mr. Quin, both on and off the farm, and talked with him about the farm operations, we feel some confidence in our ability to form a correct opinion of this statement.

That the professor is a man of great scientific knowledge of agriculture, and of wonderful tact in his application of science to the culture of his crops, everybody who sees him and his farm will at once admit. He understands the theories of farming, and his farm shows that he makes his knowledge practical. He raises the very crops that pay the best in his market, and he gets the largest crops and the highest prices. His farm is not indeed, a regular *farm*, but rather a market garden, a nursery, a seed establishment, and a fruit garden.

Yet these are departments open to many of us, and why cannot we make profit of them as well as he? To be sure, we cannot expect to get *eight and twelve dollars per hundred* for pears,

if we could raise them in any great quantities, but our impression is, that nobody can show in this country better dwarf pear trees than Prof. Mapes.

He is the inventor of Mapes' Superphosphate of Lime, and it is not strange that his rivals in patent manures should detract from him and his successful farming.

Five thousand tons of this manure have, some seasons, been manufactured at the works in which he is largely interested, near his place. His farm is manured almost exclusively, with this preparation, and acres were pointed out to us, on which were the finest fruit trees, and beds of strawberries, besides the ordinary crops, which had received, for many years, no other manure.

The professor stated, in our hearing, at the New York Farmers' Club, that stable manure could not be sold in his neighborhood for \$1,50 a cord, to be hauled one mile, because the superphosphate is cheaper, and his neighbors who were present, suggested no doubt of his correctness. Yet, at Exeter, it costs us \$5,00 a cord, besides hauling, and this is probably an average price in the larger towns in New England.

After all our *buts*, and *yets*, and apologies for Prof. Mapes's astonishing profits, there is a large balance of credit to be divided between his mode of culture and his superphosphate. "How does he get so large crops at so little cost?" is the question. His explanation is found in three points,—thorough drainage, deep and fine culture, and the use of superphosphate.

He underdrains with tiles from four to five feet deep; he subsoils eighteen or twenty inches deep, and works his root and hoed crops constantly in summer, with a little subsoiler drawn by one mule, and with the horse-hoe; and he applies to every acre, at the start, 600 pounds of superphosphate and a less quantity in after years, according to the crop. That this manure does wonders on his farm is not to be doubted. We have ourselves tried it several years, and always with favorable results, some of which have been published. We propose to continue our experiments the present year with one ton of the nitrogenized superphosphate now on hand.

And a word by the way upon this subject may not be amiss. We do not believe that farmers should in general purchase their manure, unless they are selling their crops. If they are, they must replace them by bringing on to the land the elements of fertility which they have carried away. This can only be done by buying some or other of these fertilizers. Superphosphate of lime is admitted everywhere to be, excepting guano, the very best of fertilizers, and guano is difficult to apply properly, and is not adapted to all crops. The best farmers in England buy im-

mense quantities of superphosphates for their root crops in particular, and many of our farmers use it upon their potatoes and corn. Prof. Mapes has no secret as to his mode of manufacture, but publishes it as follows :

"The Improved Superphosphate of Lime was first invented, and was composed of 100 pounds of bone-dust dissolved in 56 pounds of sulphuric acid, to which was added 36 pounds of Peruvian guano and 20 pounds of sulphate of ammonia; 100 pounds of this mixture were found to be equal in application, both in power and lasting quality, to 185 pounds of the best Peruvian guano.

The Nitrogenized Superphosphate, which is found to be practically superior to the Improved Superphosphate, is composed of equal weights of improved superphosphate and dried blood ground."

Probably any chemist in the country will pronounce a fertilizer consisting of the above elements, valuable for almost all cultivated crops, and we trust our farmers, in their progress in agriculture, will not forget that there are manures besides what are found in their barn cellars—manures which contain no seeds of weeds, which are light of freight and cheap of application. In a garden of vegetables, we should hardly know how to raise our crops, without a bag of superphosphate at hand. A cabbage will fatten on it, like a pig on corn meal, and a cauliflower will head two weeks sooner, by the application of an ounce of it, at the time of transplanting. We have tried every variety of fertilizer, and have more faith in Mapes's Superphosphate than in any other manufactured article of the kind.

We give the statement from the *Tribune*, as to Prof. Mapes's farm. Can any man show a better one? Does farming pay, or does it not?

"The following excerpt from the farm book of Mr. Patrick T. Quinn, the manager of the farm, which has been duly certified to by him as correct, will show the actual sales and expenses of the last year :

SALES FROM APRIL 1, 1858, TO APRIL 1, 1859, INCLUSIVE.

Timothy Hay, 50 tons.....	\$750 00
Salt Hay, Sedge and Black Grass, 91 tons.....	564 20
Asparagus.....	40 00
Beets, 500 bushels (some sold by the bunch).....	250 00
Greens (Spinach, Sprouts, &c.).....	108 00
Cabbage, early and late Cauliflower.....	675 00
Kohi Rabi.....	19 50
Carrots, 900 bushels at 42c.....	391 30
Celery.....	195 20
Corn, shelled, 550 bushels at 85c.....	467 50
Corn, sweet.....	60 00
Egg Plants.....	51 00
Lettuce.....	120 00
Melons.....	43 50
Onions.....	149 20
Parsnips, 250 bushels at 37½c.....	93 75
Peppers.....	6 00
Squashes.....	55 00
Rhubarb.....	310 00
Radishes.....	65 00
Salsify, (Oyster plant).....	25 00
Tomatoes.....	45 00
Turnips, 1,200 bushels, at 35c.....	420 00
Potatoes, (mostly sold for seed,) 700 bushels, at \$1.....	700 00
Seeds, (all kinds).....	2,520 16

Hot-bed and cold frames.....	315 17
Rhubarb Plants, Grape Vines, Raspberry, Blackberry, Currants and Strawberry Plants.....	1,017 00
Grapes, Strawberries, Raspberries and Blackberries.....	375 00
Pears, sales—1857—\$805 1858—496 } average sales.....	610 40
Fruit Wines on hand.....	470 00
Corn Fodder—soyho stalks and green rye.....	240 00
Hogs, milk and butter.....	356 00
Two choice calves.....	50 00

Total.....\$11,627 88

EXPENSES.

Eight workmen, eight months, at \$20....	\$1,280 00
Five workmen, four months, at \$20.....	400 00
19,825 lbs. Superphosphate of Lime, at 2c.....	396 50
Rent for 53½ acres, at \$8.....	426 00
Rent for 52 acres, salt grass, at \$1,25.....	65 00
Taxes.....	31 50
Wear and tear of Tools.....	100 00
Use of team, at \$3 per day.....	453 60

Total.....\$3,152 60

Total receipts.....\$11,627 88
Deduct expenses.....3,152 60

Net profits.....\$8,475 28

For the New England Farmer.

MASSACHUSETTS APPLES.

The apple is more emphatically the farmer's fruit than the pear. They can be raised with more certainty of a crop, particularly if here in Massachusetts we pay more attention to the cultivation of those sorts which are indigenous, or have been raised on our soils; for however strange it may appear, I have, for many years, observed, that the best apples in our markets have been those sorts which were first produced in our region. In a report to the Essex Agricultural Society some years since, I made the above statement, which was afterwards corroborated by Henry Ward Beecher, who, in an article on the culture of the apple, remarked, that the best apples in the West were those varieties which originated in the "Great Valley of the West." With us the Hubbardston Nonsuch, Baldwin, Roxbury Russett, Mother, Porter, Williams' Favorite and Danvers Winter Sweet are among our best fruits; all these are of Massachusetts origin. From farther observation on this subject we would repeat the assertion, that a fruit, (particularly the apple,) *originating* on a given soil, will generally be superior in that locality or section, than in any other. We have in our mind the Newton Pippin, Esopus Spitzenberg, Red Doctor, Pennocks, Red Winter and Red Gilly Flower, fruits which are considered first-rate in their native habitats, as they undoubtedly are, but when grown upon our soil, are inferior to those sorts named above. We say the same of the imported varieties generally, with the exception of the Gravenstein of Germany, and the Ribston Pippin of England; the former does equally well with many of our varieties, and the latter *occasionally* on rich soil.

Salem, Mass. J. M. I.

WINDHAM COUNTY, Vt., AGRICULTURAL SOCIETY.—The annual Fair of this society will be held at Newfane, Oct. 5 and 6, 1859. Officers, O. S. Howard, President; Alonzo Dutton, Ira A. Pulsifer, Vice Presidents; W. A. Stedman, Secretary and Treasurer.

For the New England Farmer.

DISEASES OF HORSES.

I have a very sick colt which was in good order when attacked. The first symptom of disease, I noticed about six weeks since, when he seemed to lose his balance in the stable and fall. He was a little stiff in the hind parts, and gradually seemed to lose the free use of his limbs, staggering some, but quite frolicsome when out with other colts. He grew worse until three weeks ago, when he would lie down in the stable and groan. When on his feet he acted like a poisoned lamb, except frothing at the mouth; three weeks ago, I bled him in the mouth, and physicked thoroughly, but to no purpose. He still lies in his bed of straw perfectly comfortable. But when I get him up, he suffers exceedingly, breathing like a wind-broken horse. After active exercise his bowels are in a good state, and have been all the time. His food during the winter has been poor hay and corn stalks, with occasionally a swill mess. I have rowelled him, and for the past three weeks have fed him nothing but bran mash and new milk to drink, from eight to twelve quarts per day. It is a horse colt twenty-one months old. He has appeared to me through the whole time as if his spine was affected. It is very difficult for him to use his limbs. I think he will live some time yet, if the new milk holds out. There have been a number of horses sick in town similar to this, and most have died.

W. D. SEARL.

REMARKS.—We publish the above in hopes to draw out some remedy for this disease, and to learn whether it prevails in other places. It is always difficult to suggest remedies to patients that are not seen. We can think of nothing to suggest in this case.

APPLES FOR EXPORTATION.

We believe that apples are to become a more staple article for exportation than they have ever yet been in New England. Our soil and climate are, we apprehend, better adapted for the permanent cultivation of this fruit than the deep alluvial soils of the South and West. We find that there, particularly in the West, they are more subject to what has been denominated frozen sap blight or canker, which we think may be attributable to their deep soils, the roots running below the action of the sun and air, so necessary for the health and longevity of trees; we find here, on the contrary, apple trees in a healthy state, that are half a century in age. In New England we have a more shallow soil; hence trees grow slower, the wood ripening better than upon rich, deep soils, where they are forced to grow later, the wood being succulent, the leaves remaining long upon the trees, rendering them liable to be overtaken by the winter, before the sap is sufficiently elaborated to stand a severe freezing. Hence we believe, that as Massachusetts can never be made a grazing or grain-grow-

ing region, compared with the South and West, and as the apples here are equal, if not superior, on the whole, to those of any other section, we would recommend to the farmers of Massachusetts to cultivate the best keeping varieties of good winter apples, as a source of income more sure of a safe return than that of Indian corn; for while the South cannot compete with us in the cultivation of the former, neither can we with them, in the production of the latter. One gentleman in the city of Salem exported during a few weeks last fall, four thousand barrels of winter apples, all grown in the county of Essex, principally in the town of Danvers.

For the New England Farmer.

RINGING, SUMMER PRUNING, AND THE TRUE SAP OF TREES.

The Isabella Grape may be accelerated in ripening, and produce larger berries, by a process of ringing the shoots in June and July. Vines treated in this manner produce fruit nearly twice the usual size when girdled an inch in width; the shoot operated upon to this extent, dies of course, the following winter; but on the contrary, when the ring of bark is taken off, only one-half an inch in width, the fruit grows larger, but the bark coming together before the winter, a connection is formed, and the shoot is not thus destroyed. In explanation of this effect we would say that the crude sap of the vine, after passing up through the *Albuminum* or sap wood to the leaves, where it is concentrated, returns through the nerves of the leaves, to the base of the leaf stock, and then downward between the bark and young wood called *Cambium*. This is the true sap of trees; it is wholly generated in the leaves, descending to the extremities of their roots, depositing in its course the matter which is successively added to the tree. When the enlargement and more early maturity of the fruit be the object, the operation of ringing may be performed as above; but if made on the small branches of the new wood, the fruit does not acquire a proper state of maturity; it should be done on the previous year's shoots. The effects of ringing are more obvious on the grape, pear and apple than upon some fruits; we have attempted it on the peach tree without any seeming effect. If, by the agency of leaves, the gases extracted from the atmosphere by these organs, and the juices drawn from the earth by the roots are mixed, assimilated and rendered subservient to the tree, thereby increasing its growth and perfecting its fruit, the question arises, Is summer pruning beneficial or injurious? We apprehend that it is improper; for by this process, we diminish the resources of the tree, in thus removing so many leaves, as we must, of necessity, in this operation. The above, if true, shows the folly of taking off the leaves of any fruit tree, to accelerate the ripening of its fruit.

The *Albuminum* is the outer coating of young wood, often called sap-wood. The *Cambium* is mucilaginous matter found between the bark and young wood.

J. M. IVES.

Salem, Mass., 1859.

For the New England Farmer.

ABOUT FRUIT TREES.

I observe by the report of the Sixth Legislative Agricultural Meeting, that the chairman made some most excellent remarks on pruning apple trees; and I regret that want of room, or any other reason, prevented the editor of the *Farmer* from publishing them at length. I do not know that I have an idea on this subject, that has not been derived from some agricultural or horticultural publication, or from some judicious cultivator of fruit; but I wish to add my testimony in favor of what I believe to be the right way of pruning trees.

It has become an established rule with me, never to cut a branch from a vigorous growing apple tree, if it can be avoided, except when so fully in leaf that the sap will not flow from the wound. By this course the trees will entirely escape those terrible black spots below the wounds, which always disfigure and often kill the bark for a considerable space. I should, in general, prefer June to July or August, to do this work, as the earlier it can be safely done, the more time will be given for the wounds to heal the first season, and any exposed branch will become more gradually habituated to the scorching suns of midsummer.

The remarks of Mr. Lake, at the same meeting, are almost equally in accordance with my experience. If we train up our young trees in the way they should grow, there will be little need of cutting large limbs at all. If we should find it necessary to remove such, the stumps should be carefully protected from the weather, so as to keep the scar dry and sound as long as possible. Whether fruit is really injured by too much exposure to the hot sun, is a matter to be tested by observation, but the brown, leathery appearance of the naked branches does not indicate a salutary effect from exposure to it. Many a sturdy old tree, I have no doubt, has received its death from the hand of the grafter, who, to give his scions a good start, has deprived the branches of both their customary shade and the foliage requisite to keep up a brisk flow of the sap.

The manner of pruning trees is a no less important matter. A rough giant of a man, in cowhide boots, well garnished with nails in the heels, and his red right hand armed with an axe, or coarse-toothed saw, is a vision ominous of much evil, when seen among the branches of a tender barked fruit tree. Like the friendly bear in the fable, who in his well meaning efforts to brush a fly from the nose of the sleeping man, crushed in the organ entirely, he means good and does evil. Devastation is as sure to follow in his track, as in that of a flight of locusts. It should be a cardinal rule never to set about the work carelessly or without a plan. There are many questions to be decided before we can do it in the very best manner, such as what are the natural habits of the tree; is it designed to cultivate the land with other crops, or to spread the trees so near the ground as to occupy it entirely with them; is the exposure such that high trees will suffer particularly, both in the branches and fruit, from strong sweeping winds; and then, how with the material before us can we obtain just what we desire; how much can we cut now and yet leave

enough to protect the rest from the scorching sun, and afford sufficient work for the roots to keep them in a healthy condition. Having decided all these matters, and any others that may happen to have a bearing on the case, we are prepared to begin our work.

For tools, I want a fine-toothed saw and a thin bladed knife, both in the finest order, and a step ladder. The branch should be supported with the left hand, while cut, so as not to start the bark at the place where the instrument comes out. When using the knife, which I rely upon almost solely, on young trees, I press the branch to one side so as to take off all resistance from pressure on its flat sides. In this way limbs an inch or more in diameter may be easily cut through. My next step is to examine the wound, and, if it is not all right, pare it carefully till the surface is smooth, and the bark adherent all round. When the operation is done I wish it to appear to be a wound on the side of the branch or trunk, rather than a stump projecting from it. If the pruning is done as soon as the tree is fully in leaf, it will be found at the end of the season that a handsome circle of new wood is formed all round the wound, and the wood within is smooth and sound and by the end of the second season, it will be entirely healed, unless quite a large one. I next take those branches which will have to be removed at another time, and cut in their extremities so as almost entirely to check their growth. Finally, if I find any branch, which I propose to have remain permanently on the tree, is assuming an undesirable form, I endeavor to correct it by clipping or otherwise as is requisite. By following this plan regularly, I find my trees improving from year to year, and I hope eventually to get them in good shape, and have no large limbs to cut off.

I wish to remind those persons, who are anxious lest we should raise too many apples, that there are at least 500,000,000 people living on our globe in countries where apples do not grow; and, that probably 499,000,000 of these would like this fruit if they could get it; and moreover, that by keeping apples at a temperature just above the freezing point, they may be kept sound for any desirable length of time, and transported to the most remote parts of the world. Apples have been sent to California packed in boxes among cargoes of ice, and it is as easy to send them to the East Indies, and other parts of the tropical world. In view of these facts I would appeal to the patriotism and the pockets of the people of New England, and ask them why they cannot grow apples as well as ice enough to supply a large part of the world with both these luxuries.

H. LINCOLN.

Lancaster, Mass., April 11, 1859.

STARTING CUTTINGS IN MOSS.

It is a very simple operation, and at the same time one that requires some little skill and care, to strike a cutting. Cuttings of grape vines, currants, and of many shrubs and flowers are usually started in sand, and some think brick dust the best material for this purpose. We see in the January number of the *Gardener's Monthly Advertiser* a quotation from a German periodical, in regard to the use of swamp moss or *sphagnum*,

which it says has been used in Holland instead of earth or sand, for the purpose of striking cuttings, and up to this time we have heard of scarcely a single failure, and its success has been most complete. This *sphagnum* (or swamp moss) should be well dried and reduced to powder, by rubbing it between the hands. Fill the cutting pots or boxes with it, and after watering it well, insert the cuttings. It dries less quickly than earth or sand, and preserves an uniform humidity, and the root fibres are developed more rapidly. It is said that some plants, that in sand require several months to root, only require "three or four weeks in the moss."—*Maine Farmer*.

LANDSCAPE GARDENING.

There are few things that mark the progress of civilization and the arts more than the expression of a true taste in architecture and gardening. So long as men are indifferent about the appearance of the house they live in, and the grounds that surround it, they will rarely express a true taste in anything else. This is true of communities and nations, as well as individuals,—and as we do not remain stationary in anything, but either progress or recede, it is evident, we think, that if there is no advancement in the particulars we are considering, there will be little in anything else.

Improvements in our buildings and grounds, if conducted with economy, and in accordance with our business and ability, are not, by any means, a mere gratification of taste alone. So far as architecture is concerned, they give employment to several classes of industrious persons, while the high cultivation of plants are so many examples for all, of what the soil is capable of producing when proper means and skill are applied to it. When buildings are constructed upon true architectural principles, and with a highly cultivated taste, and the surrounding grounds are in keeping with them, the combination not only gratifies the eye, but adds greatly to the beauty and richness of the country.

We have been led to these remarks by finding upon our table a new edition of *Downing's Landscape Gardening and Rural Architecture*, it being the sixth edition, enlarged, revised and newly illustrated, with a supplement, containing some remarks about country places, and the best methods of making them; also, an account of the newer deciduous and evergreen plants, lately introduced into cultivation, both hardy and half-hardy. By HENRY WINTHROP SARGENT.

The work contains nearly 600 pages, is printed on thick, fine, white paper, and is illustrated by numerous elegant engravings on steel, wood and stone; some of them from the pencil of Mr. MOORE, one of the publishers.

No other work in this country, on these topics,

has anything like the merit which this possesses, if, indeed, there is one in any other country. Published by A. O. MOORE & Co., 140 Fulton Street, New York, and for sale by Crosby, Nichols & Co., 117 Washington Street, Boston.

For the New England Farmer.

HUNGARIAN GRASS.

MESSRS. EDITORS:—In your last issue I noticed you made two remarks, editorially, about Hungarian grass; that statements about its productiveness were somewhat conflicting, and that it was doubtful whether the seed will ripen in all parts of New England. Circumstances and events which led to the first are about the same as might be expected about any other new thing. In answer to your second remark, I will give you the result of an experiment I made the last season, without any comments, at this time, for the benefit of not a few most deeply concerned to know the truth in the matter of Hungarian grass.

Between the fifteenth and twentieth days of June, 1858, I cast up the soil in this cold, but pleasant, Green Mountain town, and sowed twenty-nine quarts of the seed. The latter part of September I threshed from seven and a half tons of hay gathered, two tons and eighty pounds of well-ripened seed, measuring eighty-five bushels, of which I send you a sample.

I noticed you recommended to farmers to try it sparingly. I recommend to every farmer to try it liberally. I shall sow no oats this year, but shall sow at least fifteen acres with said seed.

WM. RICHARDS.

Richmond, Mass., April, 1859.

For the New England Farmer.

THIN AND THICK SOWING.

MR. EDITOR:—In my communication of January 9, I gave a short account of my method of using green manure, and growing corn. After harvesting my corn, I plow in the fall from eight to 10 inches deep, and in the spring generally sow to oats and "seed down." In the spring of 1856 I sowed on five acres seven bushels of oats; threshed with a machine; result, 256 bushels. In 1857, sowed on 1½ acres two bushels oats; result, 108 stooks; threshed out part in the fall, yield nearly a bushel to the stook; the rest threshed out at different times, the exact yield I cannot tell, but judge not far from 100 bushels. In 1858, sowed on 1½ acres 2½ bushels; mowed for fodder ¼ acre, leaving 1½ acre; threshed with a machine; result, 105 bushels. I sow as near as I can, 1½ bushels oats, from 12 to 16 quarts herds grass, and six to eight pounds clover, per acre. The richer the ground, the less oats and more hay seed. Now for my reasons. By sowing oats thin, they do not lodge so bad; the heads are larger, and better filled, give heavier oats, do not shade the ground so much, and where they do lodge, do not give so thick a coating over the young grass, as to kill it near so much as if sowed thicker.

Oats are not generally considered so good grain to "seed down" with, as wheat or rye, but if any one will try oats at the rate of 1 to 1½

bushels per acre, according to the richness of the ground, they can judge for themselves. In the spring of 1856 I planted 1½ acres of corn; in the fall harrowed the ground and sowed ¼ acre to winter rye, and sowed Timothy seed in the fall, and clover in the spring, as soon as the snow was gone. In the spring of 1857, sowed the rest of the piece, 1¼ acres, as before described, and last season mowed for the first time, and could see no difference between that "stocked" with rye or that with oats. My manner of sowing is to go over the ground with a light harrow to smooth it down, then sow the oats, then use a cultivator harrow, sow the hay seed, and cross harrow with a light harrow of 30 teeth; then roll the ground, which leaves it in a fit condition for the scythe. The richer I make my ground, the more hay seed I want to sow, thereby avoiding a coarse quality of hay, which is generally the result of the first year's crop. I do not consider a great crop of oats of so much consequence as a good crop of grass from five to eight years following. Now, Mr. Editor, I do not wish to be understood that my method of procedure is better than other farmers', but my motto is, let every one read, (and write too, for others to read,) judge, practice, and decide for himself. W. C. WHITE.

Barre, Vt., April 5, 1859.

AMERICAN GUANO.

We recently alluded to this subject, and said that we should recur to it again. After the Peruvian guano was introduced, it could be purchased for several years for \$40 a ton; the price was gradually increased, until now the exorbitant charge of \$65 a ton is demanded—and this increase of price has been continued when shipping freights have been very low. It is a complete monopoly, and we hope the American people will not encourage it. In 1856, the sales of the Peruvian guano amounted to \$17,000,000, and the average, for some years previously, was about \$15,000,000.

Some two or three years ago, certain islands, named Baker's and Jarvis's islands, in the Pacific Ocean, some five thousand miles from any land, were discovered by two American citizens, named Michael Baker and Thomas D. Lucas. A company was formed under the title of the *American Guano Company*, and the interest of the discoverers purchased. The importance of a cheap supply of guano to our agricultural pursuits attracted the attention of our government, and the Department of State entered into negotiation with the Peruvian Government, proposing the payment of \$10 per ton for all guano imported thence into the United States. This negotiation failed, and the Republic of Peru, through their agents, has obtained the monopoly of guano in our markets, which has increased in price from \$40 per ton to its present price of \$65 per ton!

The following analysis of Baker's Island Gu-

ano, by L. D. Gale, M. D., Chemical Examiner of Patents in the United States Patent Office, inasmuch as it agrees with analyses made by other men eminent in the scientific world, will give a correct idea of its constituent parts:

Organic compounds yielding ammonia, &c.....	9.940
Combined Water.....	2.500
Carbonic acid from organic compounds of lime.....	6.000
Bone pho-phate of lime, and bone pho-phate magnesia (containing phosphoric acid, 33.67).....	83.266
Sulphate of soda.....	1.293
Common salt.....	1.615
Loss.....	.816
	100.000

In connection with this analysis, Dr. Gale remarks:

"Guanos are of two kinds; those in which the ammonia-yielding products predominate, as in the best Peruvian guanos; and those in which the phosphates of lime and magnesia predominate.

"The first kind is produced in regions where there are little or no rains, and the second in regions where the rains wash away a large part of the organic or soluble portions, and leave the insoluble parts. Such are the Mexican guanos of the W. I., and those on the Islands of the Pacific Ocean, above named.

"If we heat to redness an ammonia-yielding guano, we volatilize 65 to 70 per cent. of organic matter, capable of yielding ammonia and other volatile products which constitute the body of this class of guanos. What remains after extracting the ammoniacal and phosphatic compounds, is of comparatively little value, as it is chiefly alkaline salts.

"What effect has such an article on the soil on which it is spread? It stimulates to an unwonted degree; and causes it to put forth all its strength to force the growth of plants, as alcohol stimulates the animal to unusual exertions for the time, but which finally exhaust the system. So the stimulating guanos force the present crop at the expense of the future strength of the soil.

"Every farmer who has experience, knows that when he has once used guano for his crops, its strength is exhausted the first year; and if he would continue to grow crops, he must continue to repeat his guano.

"But what is the result with the phosphatic guano? The analysis shows that more than 80 per cent. of these guanos consists of the phosphate of lime and of magnesia, in an insoluble state, or in just such a condition that the roots of plants will take up, and appropriate so much of the salt as is requisite to perfect the same."

An analysis of this guano made by Drs. Scaffor and Craig, under the superintendence of Prof. HENRY, of the Smithsonian Institute at Washington, and which was made under directions from the Government, exhibits similar results to those given above by Dr. Gale. Accompanying their analysis is a detailed statement of the peculiar qualities of the article, from which we make the following extract:

"As to the worth of these substances, we can best represent it by comparison with bones, which

are nearer to them in composition than any other common material.

"Bones, however, are valuable as manure, by reason of their mineral matter, phosphate of lime, &c., and also by their animal matter. This latter, by slow decomposition, furnishes, year after year, something to the plant in the shape of ammonia.

"The phosphate of lime being an important constituent of all our cereal grains, is, by itself, a desirable addition to a soil. This can be easily understood when it is remembered that nearly the whole of the bones of all animals is originally derived from the bone earth in vegetable food.

"The specimens we have examined, contain a larger per centage of phosphate of lime than bones contain; they have also rather more phosphoric acid than bone earth, and are in a finely divided condition, so that the useful matter can be readily taken up when applied to crops."

The samples brought were under the charge of a Government officer, CHARLES H. DAVIS, Commander U. S. ship St. Mary's, and delivered into the hands of the Government chemists. Analyses have been made by several other chemists than those already referred to, and with similar results.

We wish to be perfectly understood in this matter by the reader. We do not recommend this guano, or any other specific fertilizer, to the exclusion of a single shovel full of home-made manure. All that can be made from the natural resources of the farm *must be made*. But this being sadly deficient every where, after our best efforts have been exerted, we recommend this guano *as a help*, to enable us to gather more prolific harvests of grain and roots, and restore our exhausted pastures and fields to better crops of grass and hay. With this view, we do not hesitate to recommend its use sparingly, by a large number of persons.

The general agent of the company is A. C. Lombard, Esq., Boston, Mass., who will supply pamphlets giving a more full account of it than we are able to. The sub-agents are Messrs. Nourse, Mason & Co., Quincy Hall, Boston.

DAIRIES AND BONE MANURE.

An English paper in commenting upon this subject, remarks that the Cheshire dairy farmer, by the free use of bone manure laid on his grass lands, makes his farm, which at one time, before the application of bone manure, fed only 20 head of cows, now feed 40! In Cheshire, two-thirds or more, generally three-fourths, of a dairy farm are kept in perfect pasture, the remainder in tillage. Its dairy farmers are commonly bound to lay the whole of their manure, not on the arable, but on the grass land, purchasing what may be necessary for the arable. The chief improvement, besides drainage, consists in the application of bone manure. In the milk of each cow, in its urine, in its manure, in the bones of each calf reared and sold off, a farm parts with as much

earthy phosphates of lime as is contained in half a hundred weight of bone dust. Hence the advantage found in returning this mineral manure by boning grass lands. The quantity of bones now commonly given in Cheshire to an imperial acre of grass land is about 12 or 15 cwt. This dressing on pasture land will last seven or eight years; and on mowed land about half that period. But the grass land once boned and kept under pasture is never so exhausted as to be as poor as it was before the application.—*Moore's Rural New-Yorker.*

For the New England Farmer.

PROFITS FROM POULTRY.

DISCUSSION AT THE CONCORD FARMER'S CLUB.

March 24, 1859.—JOHN BROWN, 2d, stated that on the 1st of January, 1858, he had 50 hens. In April he bought eight more. In June he sold 20 hens, that weighed from eight to 12 pounds per pair, for 14 cents per pound. He sold 478 dozen eggs, and raised from 60 to 70 chickens. He received for eggs and chickens, \$125. Cost of keeping, \$70. Made manure worth \$10. He covered the droppings once a fortnight with loam. January 1st, 1859, had 60 hens. Has sold since 150 dozen eggs. His hens are of mixed breeds. He feeds on oats, barley and wheat, corn and cob meal, or shorts, new cabbage, pumpkins and squashes, rotten apples, boiled potatoes. He does not keep corn before them. Thinks this will make them too fat, and they will not lay as well. Keeps scraps by them. Sometimes boils a young calf and gives them, pounds up the bones; keeps some kind of food by them all the time. Thinks it was more profitable last year to sell eggs than to raise chickens; some years it is most profitable to raise chickens.

J. P. Brown thinks it is best to raise both, as a hen that raises a brood of chickens, will lay about as many eggs as one that does not.

E. Wood, Jr., has 112 hens. When he began to keep them, he was desirous to know how much it cost per day to keep a hen, and he weighed and measured the food for a few weeks. He finds the cost about one-third of a cent. Hens require a mixture of grains; if they have but one kind, barley is the best. They must have a warm place, and sunshine. Does not let them run out in cold weather; he did not let them out till March; his hens have improved under his keeping, and laid well. He takes two pounds of scraps at night, and puts into a pail of hot water, and lets it stand till morning; then puts in cob meal and water, enough to fill the pail; this makes them a breakfast. He gives barley or some other grain in the forenoon, and corn at noon; he gives a good deal of meat, and pounds up the bones with a sledge hammer; they eat the bones greedily: he keeps oyster shells pounded where they can get at them; he has had as many as 60 eggs a day from 112 hens. This is more than the average.

The manure is valuable. He mixes with fine mud; thinks he shall have from \$30 to \$40 worth of manure, enough to go on 10 or 12 acres of corn, putting a portion in each hill. Much depends upon the condition of hens in the fall. Hens that he had of Mr. Farmer, had proved his

best layers, owing to their being well kept in the fall. If pullets are left to run at large in the fall, and not fed well, they will not lay as early, nor so much.

J. B. FARMER said: Last year he had 20 hens, and raised 150 chickens; did not know how many eggs; his hens cost him one-half a cent per day. This year he had 30 hens; in January he had 50 dozen eggs, minus three eggs; he got 30 cents a dozen. Bought 150 pounds of beef, and kept it by them while it lasted; he pounded up the bones; the hens eat pounded bones greedily. He gives them warm dough once a day in cold weather. If we keep hens for the eggs only, he thinks the Poland, or Black Spanish, or Bolton Greys, are better than the larger breeds. It is profitable to raise chickens; his hens range over a 10 acre pasture; he keeps scraps by them. Hens should be treated gently; hens that are perfectly tame, will lay twice as many eggs as wild ones; he thinks hen manure better than guano. Last year he had enough to manure three acres of corn in the hill.

D. TARBELL said, if we raise chickens for market, it is best to have them early, and it is important that they should be nicely dressed, if we would get a good price. Chickens that are carefully cleaned, and nicely put up, will often bring nearly twice as much as others that are equally good, but carelessly dressed.

Mr. Editor, here are some directions and suggestions, respecting the management of barnyard fowls, from practical men who know how to raise eggs and chickens profitably, and who are doing it this very day, and I doubt not that your numerous readers will value them more than all the fine stories or fine pictures that Burnham, or any other hen fancier, have ever published.

Yours truly,

R.

GLANDERS IN HORSES.

Glanders is the *worst* and most *loathsome* form of disease to which the horse is subject; and man himself does not enjoy immunity from it. In the mother country, in France, and in the German confederacies, glanders has appeared in isolated cases among men, and even whole families have been swept away, as by the blast of a tornado, dying the most horrid deaths. A man or horse once inoculated with the true virus of glanders, is doomed to destruction; there appears to be no help for him.

The exciting causes of *spontaneous* glanders, are excessive work, faulty nutrition and bad stable management, both as regards diet and ventilation.

SECOND MODE OF ORIGIN.—The next cause assigned for the presence of glanders, is *contagion*. I use the term in its ordinary acceptation, which signifies *contact* or *touch*: the glandered virus being applied or received on an abraded or highly vascular surface, is taken up by the absorbent vessels, enters the circulation, and after a while, appears as "*inoculated glanders*."

The third cause of glanders is *infection*. The term infection signifies, to corrupt or vitiate. The atmosphere which pervades a down-cellar, or unventilated stable locations, is infected or tainted with the odoriferous gases arising from filth and

animal excretions. Here the virus of glanders can be concocted and the disease reign triumphant. The vitiated atmosphere prevailing in such locations, finds an easy introduction into the horse's system, through pulmonary respiration. And no doubt many other diseases, hitherto considered as contagious, have had the same pulmonary origin. Therefore, the exciting cause of infectious glanders is the poison or miasm generated in a confined atmosphere, concocted out of exhalations from the breath, faeces, urine and perspiration of horses pent up in it. It will be perceived from what I have already said, that spontaneous glanders is the result of an infected atmosphere, so that in reality there may be but two exciting or direct causes for glanders, viz: *contagion* and *infection*.

TREATMENT OF GLANDERS.—The only remedies that are likely to prove beneficial in the treatment of this malady, are, cod liver oil, phosphate of lime, vegetable tonics, and blood root: these may be given in the ordinary doses, as recommended for other diseases; at the same time I should give thirty drops per day, of oil of sassafras, and occasionally inject the nasal cavities with diluted pyroligneous acid.—*Dodd's Veterinary Journal*.

For the New England Farmer.

TARRING CORN FOR SEED.

MR. BROWN:—I admire the outspoken, straight forward course of yourself and others that write for the *Farmer*. The opposite opinions of farmers brought together, are conducive of much good. The results of experiments, both successful and otherwise, are attended with profit, when spread before the public. The man who is successful, publishes it abroad, but failures seldom come to light. The county society does not publish the fact of a heavy debt occasioned by their race course, no more than they do the granting of premiums to unworthy applicants. When we read in their transactions the award of a premium for *one hundred and twenty-one bushels of corn to the acre*, eighty bushels is no doubt nearer the truth.

It pains me to see such havoc made by insects and birds on the corn crop. I have seen many a field of corn where the cut worm has destroyed from 25 to 50 per cent., which might have been prevented by an outlay of 25 cents. The only sure remedy against the cut worm is to secure the services of the crow in the fields.

Forty-three years actual experience has demonstrated to me the entire safety of such birds being permitted to range the fields at will.

Tar applied to seed corn before it is planted, certainly will prevent the crows destroying it. For more than forty years I have not been able to detect a single failure, wherever it was done correctly. Not one person in ten would probably be successful in their first endeavor in tarring corn; to be known, the operation must be seen. One man dare not use boiling water, so he fails; another destroys the vitality of the kernel by too great a degree of heat long continued. I have known parts of fields destroyed by poisonous manures, when this single fact was overlooked, and tar, or the birds, was erroneously supposed to be the cause.

Could some President of an Agricultural Society, or some pattern farmer, be induced to try the experiment of tarring seed corn, I doubt not that in less than ten years, scarecrows would be among the missing. Some farming editors recommend the planting of 8 or 10 kernels to the hill, as a safeguard against worms and insects. The expense to thin out is great, and a field thus dealt with never stands equally in all the hills. By tarring your corn, you need plant no more kernels than you wish to grow. When we destroy the crow, we lose one of our best friends; when will the farming community pause and consider on this matter? Let us have your opinions, based, as far as may be, on facts; especially let us have failures, so as to bring together both sides of the question. R. MANSFIELD.

West Needham, April, 1859.

REMARKS.—Friend Mansfield has not given us the mode of tarring, which might be adopted if persons understood the precise mode of preparation. Our neighbors practice in this way: they fill a pail half full of boiling water, add about half a pint of common tar—coal tar is just as good—stir it until the tar is melted and thoroughly mingled with the water, then add the corn, stirring it well for about ten minutes, or until it is completely covered with the tar. Take the corn out and roll it in plaster or fine ashes, and the process is complete.

ROBINS AND WORMS.

While so much is said and written in reference to the destructiveness of the robin, an Albany cultivator thus writes his opinion:—"The robins are so industrious to feed their young with the cut-worm, bugs and insects, so destructive to the garden, that I consider every robin's nest in or near my garden to be worth a dollar." Still another:—"A Vermont farmer says, "If we would consult our real interest, as well as the finer feelings of our nature, it would be by defending the innocent robin from the attacks of both boys and men." And in reference to the "larger species" of grubs or muck-worm, he continues, "Providence seems to have provided an antidote to this evil, in the common robin. This innocent and useful bird preys with peculiar avidity upon this species of worms. This fact may be ascertained by visiting a nest of young robins in the vicinity of a corn-field, when it will be perceived that they are fed lavishly upon this kind of worm."

TAR AS A DISINFECTANT.—The editor of the *Medina Gazette* tells of a skunk being captured in a house by a dog, with the usual result of disgust to the victors. The terrible scent was neutralized by burning tar upon live coals of fire by which the air was purified as if by magic. If this kind of fumigation is a sure specific, it deserves to be known and put upon record.

EXTRACTS AND REPLIES.

GROWING OF ONIONS.

My neighbors are anxious to know something more about Mr. Emerson's discovery, "whereby he secured a good crop of onions." They do not believe that a plant, once impregnated or attacked by the maggot, can be saved by the application of guano, in any form or any quantity. They believe, where there are plants enough on the ground, some of them may be perforated by the worms, while others are not—and that those plants which are not thus attacked, may be improved in their growth by the application of guano—this is their theory and interpretation of Mr. E.'s discovery. Some of these cultivators have been engaged in the business of growing onions for thirty years or more—and during all this period, have raised from one to four thousand bushels each, a year. If Mr. E., or any other gentleman of N. H., has had a more enlarged or critical experience in this class of culture, I should like to know it. The truth is, they know every rope in the ship about the onion. To grow and preserve them has become a second nature. I would as soon undertake to teach a Marblehead fisherman how to hook a cod, or a Kentucky hunter how to use a rifle, as to teach a Danvers gardener how to grow onions. SOUTH DANVERS.

April 9, 1859.

DRAINING A MEADOW.

I have a meadow in which the mud is about one and a half feet deep resting upon a thin stratum of clay, and under this is quicksand. Will an underground drain, laid with stone, be safe, or will it be likely to soon fill? The quantity of water discharged is considerable. How will it answer to plow in summer, put on a little sand or manure, and seed down? S.

S. H., March, 1859.

REMARKS.—An underground drain made of stone will be quite likely to get filled up and become useless in the course of a few years. But properly drained, with tile or pipe, it will be among the best lands.

Summer plowing and seeding is a capital operation—but even that ought to succeed thorough draining.

LAYING LAND TO GRASS—GRAPE VINE.

I have a piece of land rather low and somewhat clayey, which I wish to lay down to grass this year, and want to know the best time and way. Corn has been raised on the same piece for two years, a thing that I do not often do. Barley does not do very well here, and there are objections to oats when sown with grass seed. How would it do to put on guano and oats, this spring, and after the oats are off, put on manure and sow grass seed? If this course would do, how much guano should be used, and how and when should the manure be applied and the grass seed sown?

I have a native white grape vine which has borne for several years, and ripened its fruit finely; but last year, after the fruit was fully grown it began to wither, and very few if any of the grapes were fit for use. If you can tell the cause,

and how to prevent the same again, I should be thankful.

N. G.

Taunton, Mass., 1859.

REMARKS.—Sow the land with spring wheat and grass seed; or sow only *one bushel and a half* of oats to the acre, and your grass seed will probably take well and grow well. Can give no advice about the grape vine.

SOWING SEEDS FOR BUCKTHORN HEDGE.

Will you, or some of the readers of your valuable paper, inform me which is the best season of the year for sowing the seed for a buckthorn hedge? Also, the best manner of sowing?

Pittsfield, Mass., 1859. EMORY H. NASH.

REMARKS.—We have not had occasion to sow the seed of buckthorn, nor can we find any account of the process in the books. It is seldom done except by nurserymen, because a hedge is so much more readily obtained from the plants. We should sow the seeds in a fine, mellow, garden soil in May, as most other seeds are sown.

SETTING FRUIT TREES—CLOTH FOR HAY-CAPS.

I wish to be informed as to the best mode of preparing the ground for setting fruit trees. Also, is it best to set them in the spring or fall? Also, will cotton cloth used for hay caps, shed rain without any preparation of oil or paint of any kind?

A NEW SUBSCRIBER.

Hatfield, April 7, 1859.

REMARKS.—The soil, to be in the most favorable condition for fruit trees, ought to be under-drained; then plow, pulverize and manure as you would to obtain sixty bushels of corn per acre. Dig the holes five or six feet across, and twelve to eighteen inches deep; do this several days before you set the trees. Holes prepared in this liberal manner, will give you room enough to place the roots in their natural position, and will be actually cheaper in the end, than to dig them three feet in diameter. Every good tree, taken up and reset, carefully, will live and grow, whether set in fall or spring. We set them at either of these seasons, as is most convenient. Good twilled cotton cloth, costing about nine cents a yard, will shed the rain from a well made up haycock during a storm of three days and nights. They are better without paint or varnish, or any other preparation.

WARTS ON PLUM TREES.

In answer to an inquiry of "A. R. S." about plum trees, I would say that several years' experience has taught me, that a sure way of preventing warts or hard protuberances from growing on plum trees, is to place chicken coops under them as early in the spring as possible, or before the trees blossom. The chickens will look out for everything that causes warts.

I. F.

Pittsfield, Mass., April 6, 1859.

RAISING CALVES.

I never let the calves suck more than twice, without the cow's bag is swollen very much. They will learn to drink milk as soon as they get a little hungry. After they have learned to drink well, give them some meal or fine hay, and they will soon eat like cows. I keep fourteen head of cattle, and I raised them all (except one) in this way. One of my heifers, which calved a year ago, in October, when turned out to grass in June, gave fourteen quarts of milk a day quite a number of days. Another, which I sold two years since to a man in this town, has given over nineteen quarts per day. She is owned by a man in this town now, who would not take \$100 for her.

A YANKEE FARMER.

Westboro', April, 1859.

WELL AND AQUEDUCT WATER.

I have a well which, in a dry season, affords water much cooler and better for some purposes than that from the aqueduct. In a wet time it fills up so full that it is but little cooler than that of the aqueduct. The well is eight rods from the house, twenty feet deep, with descending ground to the house.

I wish to inquire if by inserting a pipe to the bottom of the well, I can with a pump take water into the buildings of uniform coldness, or will it meet with the same variations it does when taken with the "old-fashioned bucket?"

Waitsfield, Vt.

S. P. JOSLIN.

ROBINS.

An anonymous correspondent of the *Farmer*, in a short note referring to robins, says, "I have just met in Vol. X. of the *Farmer*, p. 306, a well written article on this subject, which I refer to with the greatest pleasure, as it controverts the notions of N. Page, Jr., put forth with adroitness in the lately-published transactions of the Essex Society."

If friend "Star" will explain clearly which statement of mine, or assertion, or "notion," if he pleases, is successfully controverted by anything in the article alluded to, I will readily, as in duty bound, retract.

N. PAGE, Jr.

Danversport, April, 1859.

CHANGING SEED POTATOES.

A neighbor, who has the very desirable habit of pocketing several hundred dollars annually from the proceeds of his potato crop, says he increases the yield from fifty to one hundred per cent. by procuring seed potatoes, which grew on an entirely different soil fifteen or twenty miles distant. Fifty per cent. on the potato crop of the whole State, I imagine, would be more in a single year than our proportion of the Massachusettses claim, about which so much ink and breath have been spent in the last forty years.

LANCASTER, Mass., 1859.

H. LINCOLN.

THE SEASON—CANKER WORM.

The month of March gave eight inches of rain, and the first half of April promises near as much in proportion. What it falls short in rain is made up of cold winds, indicating large banks of snow to the North. On all sides the winter is

spoken of as having been mild and open. Cultivators are anticipating a favorable spring. I perceive those who have apple orchards are preparing to guard by tar, against the ascent of the grub, that deposits the egg from which springs the canker worm—that bane of all good orchards. Were it not for this devourer, the acres appropriated to orchards would be the most valuable on the farm.

ESSEX.

April 12, 1859.

SOIL-PLANTING IN HOTBEDS.

In a recent number of the *Farmer* I noticed soil-planting in hot-beds recommended. My advice to those inclined to try the experiment, is to be moderate in their expectations of success. I made the experiment some two years since—and like most of my plants—got bit for my pains.

The grub which I transplanted into my bed with the soil nearly destroyed my planting. Those which escaped the grub, found it an impracticable affair to attempt to root through a compact soil, consequently they yielded up the design with all the gravity of a nonplussed tendrill. And my first planting of that year was duly chronicled a failure.

H. M. COUCH.

Georgetown, March, 1859.

For the New England Farmer.

HOW PLANTS GROW—LESSONS IN BOTANY.

MY DEAR SIR:—I have for many years, ever since I was old enough to know what the benefits might be, been in favor of the farmer's studying the natural sciences. As long ago as 1840, I wrote a series of articles on this subject, which were published in the old *New England Farmer*, edited by Henry Colman. Each year since then, I have been more and more impressed with the truth of what I said, and the number of those of the same opinion has nobly increased since that time, insomuch, that many efforts have been made, and some of them, I am happy to say, with signs of success, to establish institutions in which these branches shall be taught, with special reference to the needs of young farmers. Success, I say, to every effort in the cause. Let such schools be multiplied all over the land.

But it is easy to see, that however numerous these may become, their number will always be too small to meet the universal demands of the young farmers of America. We must have a starting point short of them, and that point must be the home of the young, and the "peoples' colleges," the district schools; for as numerous as higher institutions may become, the great mass of American youth are, probably, through all time, to receive their school education in these humbler institutions.

I am aware there have always been obstacles in the way of introducing these studies in our schools. Not in the children, be it understood; they are born naturalists, and only need to have this principle of nature drawn out, to become eminently so. But parents, blinded by other objects, have looked with unholy indifference on the useful and beautiful in the world around them, and have diverted the minds of their children to other, less attractive studies. Then, we

have had no text books adapted to the capacities of the young. They must be so clogged with scientific technicals that the clear sunshine of beauty they should bring, was provokingly be-fogged with perplexity and darkness. Then we have had but few teachers qualified to the task, or rather pleasure, of giving instruction in these branches. They have been educated to other and often less useful and less attractive sciences.

We rejoice in one series of scientific text books, adapted to the wants and capacities of the members of our common schools, and shall hail its introduction as the dawn of a new and brilliant era in their existence. Prof. Gray, in preparing his botanical works, has fully comprehended the wants of the young. His "How Plants Grow," commences the work of vegetable physiology and botany in the germ, and leads the pupil on, just as young plants grow; naturally and familiarly, in a style that any child can comprehend as easily as they can any ordinary reading lessons.

This work is followed by his "Lessons in Botany," written in the same familiar style, but leading the student up another grade in this beautiful and attractive science. And then comes his "Structural and Systematic Botany," whose course is still upward and onward, until led into the "Manual of Botany," decidedly the most full and understandable work on the science we have ever seen.

In addition to the familiar language in which the works are written, they are illustrated, thanks to their enterprising publishers, Messrs. Ivison & Phinney, New York, by cuts so life-like that any one at all familiar with flowers will recognize them without any other introduction. The series is one by which any ordinary mind may become its own teacher; a ladder that is of so easy ascent that the youngest may safely venture upon it.

The only remaining obstacle in the way of introducing the study of plants into all our schools, now, that we can conceive of, will arise in the plea that our teachers are not educated in the science; but this series happily removes this obstacle, for we wouldn't give a fig for a teacher who has not mind enough to become familiar with "How Plants Grow," and energy enough to cultivate it. One hour's reading and investigation each day, will keep a teacher enough in advance of her class, and enable her attractively to lead them along. The pleasure and profit all will derive from the effort who will make it, will more than compensate for the labor bestowed. She will find another gem in their educational garlands, and new and attractive objects of beauty in a world where ignorance and indifference see so much deformity.

The season for our common schools to open is near, bringing with it the early spring flowers; fit season to commence their study; and we hope the teachers of our good, old Commonwealth will see to it that a class of beginners is formed in every school. Further than this, let every school become a class in learning "How Plants Grow," just as many of them are now singing classes. To this end, let the teacher talk to them a few moments every day upon the subject, giving illustrations of the subject. For instance, let a common garden bean be the subject, and let them show them the bean dry and dead, then when the first

vegetation process develops itself, and so on until it reaches maturity. Or let them take a bud, and show them how the leaves that are to shade them this year, were folded up and hermetically sealed last fall, to preserve them through the long, cold winter, and how they break their encasement and expand in early spring. A few short talks and illustrations will get up an interest that will grow and increase like the growth and increase of the plants they delineate, until a beautiful tree of knowledge, bearing flowers, leaves and fruit, will appear to gladden its possessor. W. BACON.

Richmond, Mass., April 9, 1859.

REMARKS.—The publishers of these excellent works do not seem to appreciate what would be greatly for their interest, by neglecting to secure a notice of them through proper channels.

THE NEW BREAD AND MILK LAWS.

It is known to most of our readers that our Legislature has attempted to secure to the people of the Commonwealth pure milk, good measure, and bread of full weight. The acts relating to these subjects are of such general interest, that we copy them in full. The following is the act to punish fraud by the sale of adulterated milk, and to provide for sealing measures to be used in the sale of milk:

Section 1. The Mayor and Aldermen of the several cities in this Commonwealth shall, and the Selectmen of the several towns may, annually appoint one or more Inspectors of Milk, whose duty it shall be to prosecute all violations of the law against the adulteration of milk, and who shall have power to enter all places where milk is stored or kept for sale, and whenever he has reason to believe the same in any way adulterated, he shall take specimens of the same and cause them to be analyzed or otherwise satisfactorily tested, the result of which he shall preserve as evidence against the parties complained of.

Sec. 2. Said inspectors shall keep an office and books, for the purpose of recording the names and places of business of all persons engaged in the sale of milk within their respective limits; and any person who shall presume to engage in the business of selling milk without first causing his name and place of business to be recorded upon the books of the inspector of milk, and his name legibly placed upon all carriages used by him in the conveyance of milk, shall be subject to the same penalties as if convicted of the adulteration of milk, as provided in the two hundred and twenty-second chapter of the acts of the year eighteen hundred and fifty-six.

Sec. 3. Inspectors appointed pursuant to the provisions of section first of this act, shall, before entering upon the duties of their office, be sworn to the faithful enforcement of the provisions of this act, and shall also give public notice of their appointment, by publishing the same two weeks in some newspaper published in the city or town in which they hold their place of business, and if no newspaper is published in such town, by posting in public and conspicuous places in said town, two or more such notices; and they shall receive such compensation for their services, as the Mayor and Aldermen of the several cities, and the Selectmen of the several towns, shall determine.

Sec. 4. Milk shall be bought and sold by wine measure. All persons engaged in the sale of milk shall annually, in the month of May, cause to be sealed by the sealer of weights and measures in their respective cities and towns, all vessels used by them in the sale or buying at wholesale of milk, by wine measure, and all cans used in the sale of milk shall be sealed by said sealer of weights and measures at a price not exceeding two cents each at the amount which they severally hold by wine measure, and any person who shall fail to comply with the provisions of the law requiring all measures to be sealed, or shall buy or sell at wholesale, milk by any other measure than wine measure, or shall sell adulterated or unwholesome milk, shall be held guilty of a misdemeanor, and upon conviction thereof by a court of competent jurisdiction, shall forfeit to the use of the complainant a sum not exceeding twenty dollars.

Sec. 5. No person shall offer for sale in this Commonwealth, milk produced from cows fed upon the refuse of breweries or distilleries, or any other substance which may be deleterious to the quality of the milk, under a penalty of ten dollars for each offence.

Approved April 6, 1859.

The following is the act passed by the Legislature, regulating the manufacture and sale of bread:

Section 1. A loaf of bread shall be two pounds in weight; and bread may be baked and sold in loaves, half, three-quarter and quarter loaves, but not otherwise, except in bread composed in chief part of rye, or maize.

Sec. 2. Small rolls and fancy bread weighing less than one-quarter of a pound each, may be baked and sold without regard to weight.

Sec. 3. In every shop or place where bread is sold by retail, and in each front window thereof, there shall be conspicuously placed, a card, on which shall be legibly printed a list of the different kinds and qualities of loaves sold there, with the price of each per loaf, and half, three-quarter and quarter loaf.

Sec. 4. All bread, except small rolls and fancy bread of less than a quarter of a pound each, sold in any shop or place, shall be weighed in the presence of the buyer, and if found deficient in weight, bread shall be added to make up the weight required by law.

Sec. 5. Any person who shall violate any of the provisions of this act, shall forfeit for each offence, the sum of ten dollars, to be recovered in an action of tort to the use of the party suing therefor.

Approved April 5, 1859.

JACOB STRAWN, THE GIANT FARMER OF THE WEST.

Twenty-seven years ago, Mr. Strawn came to this State a poor man. His operations were small at first, but continued to increase each year, until he had reduced over 30,000 acres of land to a state of cultivation. He has one farm of 7,800 acres, and another of 10,000. He has usually employed from 200 to 300 men, and a large number of horses. Every year until quite recently, he has stalled from 5,000 to 6,000 head of cattle, and kept other live stock in proportionate numbers. In this twenty-seven years he has made a fortune of a million of dollars, and he is still hale and vigorous to enjoy it. He has one corn field in Morgan county, nearly six miles long, but has

latterly been curtailing his business and converting some of his real estate into cash. He is a monument of what patience, perseverance, industry and continuous exertion in one direction will do for a man who has determined upon the accomplishment of a certain end.—*Journal, Springfield, Ill.*

For the New England Farmer.

LABOR OF BEES IN HIVES.

In the *Farmer* of January 1st, "Progress" says, "I have a suggestion to make respecting beehives on Mr. Quinby's plan. I like the leading idea of his plan, but not the application of it. In his hives the bees are obliged to store all their surplus honey in boxes placed on the top of the hive, and they must climb up to get to the boxes. Instead of placing boxes on the top, why not have a small hive, or large box, to set by the side of the hive, and when it is full, open a communication between the two, and allow the bees to store their surplus honey in it just as Mr. Quinby has his stored in boxes on the top?"

"Progress" is not the first man that has suggested this idea. To those who can look only at the surface of things, it does really appear as if the bees had needless trouble to reach the boxes on the top. There are many things about bees that work much better in theory than in practice, and I suspect that we *know* but very little about their manner of operations, and are often in error in our endeavors to assist them. I would, however, suggest to "Progress," that it is possible, yes, more than possible, that the bees which gather the honey, are not the ones that store much in the boxes. This seems to be indicated by what we can see when watching them in a glass hive. For instance, one bee can frequently be seen giving another honey. Also, one that brings pollen, finds a cell suitable to receive it, and then thrusts in its legs, and discharges its load, consisting of the round pellets, and leaves without further care. Another bee, probably a nurse, soon comes along and packs it close in the bottom. A great many gatherers bring in both honey and pollen. The latter is seldom stored in the boxes on the top, but kept in the hive where the brood is raised. Consequently, hive honey is not as pure as that from box or cap. If a bee went to the boxes to discharge a part of its load, why not all?

A glass hive that was apparently full throughout with brood and honey, had boxes put on the top to receive the surplus. Before they had constructed much comb in them, the bees would deposit honey on the surface of a comb, containing a brood of drones, in the hive! The convex covering of these cells made cavities between, sufficient to keep it in place—the next morning, it would be all removed, probably to the boxes, as the bees were constructing combs there. It is quite common to see honey in the cells next the glass at evening, and next morning, find them empty.

For several years, I have had what might be termed a perfect observatory hive in operation. It was nearly five feet high, two and a half feet wide, and one and three-fourths inches thick; containing just one comb in thickness, and had boxes on the top of it. Whenever the yield of

honey was good, nearly every unsealed cell not occupied with brood or pollen, would contain honey at evening; but the honey would generally be removed during the night. The honey sealed up, was either in the top of this long hive, or in the boxes, as far as possible from the entrance.

From the foregoing, I shall *suppose* till we get further light, that the bees which go about after the honey, have but very little to do at home in packing and sealing up stores for winter; that when a loaded bee enters the hive, it either gives its honey to another, or discharges it into the first convenient cell at hand, and afterwards it is removed to the boxes or some other part of the hive away from the entrance. The result of some thirty years' experience fully sustains the above theory. I have had hives twenty-two inches in height, and others only ten; on account of this difference in shape, I could discover no difference in the result in the boxes. Hence our laudable attempts to assist our bees by placing boxes near the entrance, to save the labor of travel, is not attended with the expected success.

Respecting "the box at the side" suggested by "Progress," I would say that a little experience will indicate the best place to obtain surplus honey. For myself, I have always found that the bees must be crowded for room in every other place, before they will store much at the side. It would appear as if they thought it less safe from robbers than at the top. It is quite common to have boxes on the top filled and ready to be removed, in from fourteen to twenty days, and I never had any at the side, ready to take away, short of five or six weeks. In fact, I never had any so well filled here, as at the top. For the last few years, I do not take the trouble to give the bees a *side* box, as long as all of them can be profitably employed elsewhere.

St. Johnsville, N. Y.

M. QUINBY.

For the New England Farmer.

DAIRY SALT.

I do not recollect seeing published the following method of preparing dairy salt. Perhaps it is too well known to merit it. It was introduced to me as being practiced by an experienced Scotch dairyman.

Take the best crystal salt, wash it, dissolve, strain, settle and turn off; boil it down in some perfectly clean iron vessel, skim as boiling; when stirred off dry, it will produce fine salt, white as the drifting snow, which if stirred up in a glass vessel of water, will produce no sediment, and will be distinct from any mineral or other possible impurity.

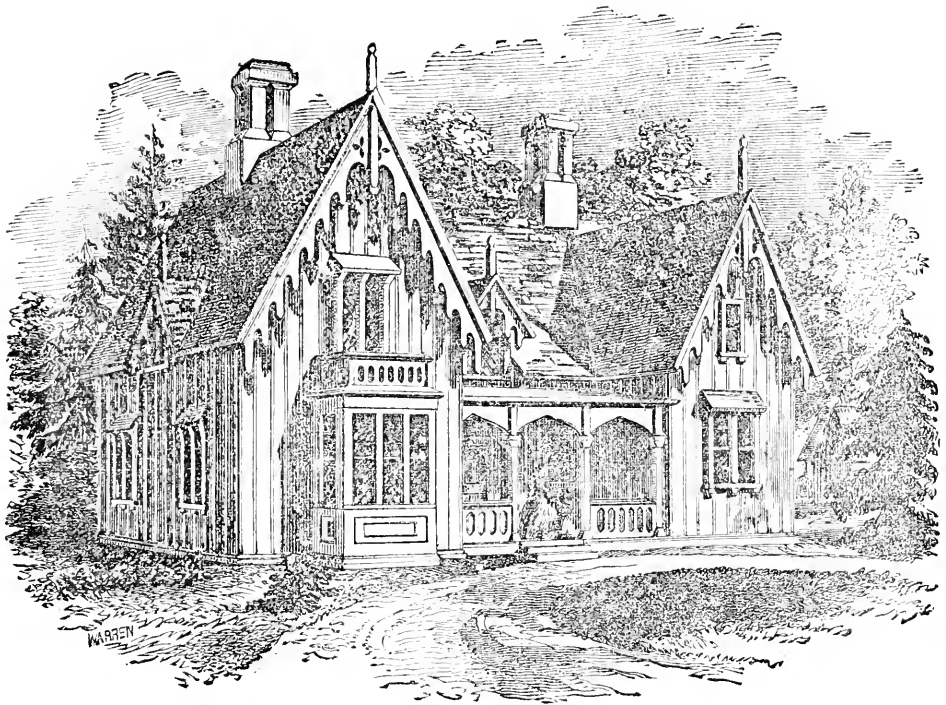
Salt is offered in the country markets for from one and one-fourth to one and one-half cents per pound, which looks like the model of perfectness. After the above method of manufacture it will cost nearly double that amount.

For two years past we have manufactured salt in this way for the produce of about three tons of butter each year.

Having this year increased our dairy, we have procured coarse salt for another trial of the same.

S. P. JOSLYN.

Waitsfield, Vt., March 17, 1859.



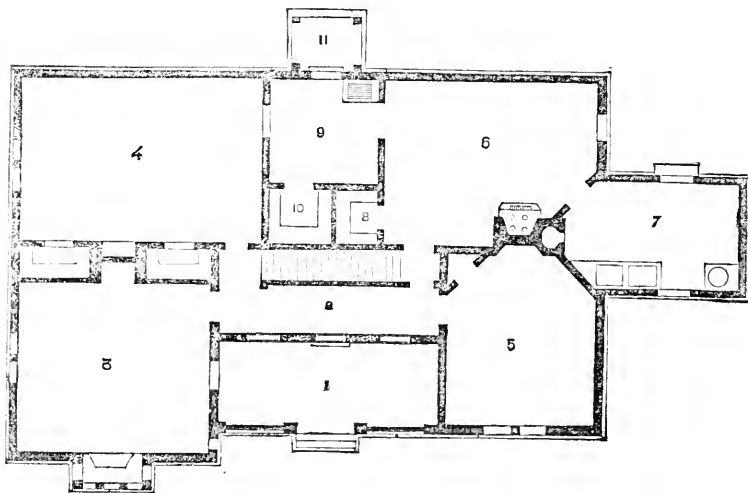
DESIGN FOR A COUNTRY RESIDENCE.

We are happy to present the reader to-day, with what appears to us a beautiful design for a country residence. It is from the pencil of Mr. G. E. HARNEY, a young artist of great promise, of Lynn, in this State. We have rarely seen sketches so truthful and life-like,—truthful, because they are life-like,—and so animated, if we may be allowed the license, as several we have been permitted to look at from his pencil. We have employed the best engraver to second his efforts, and believe the result will prove acceptable to every person of taste. We will indulge in a single remark, only, in connection with this subject, and that is this: You may expend a given sum of money in building your house, and produce an awkward, uncouth and inconvenient dwelling, or, *with the same cost*, have one that shall be attractive, tasteful, and every way convenient. If you are not acquainted with the subject—as it is hardly expected many will be—you have only to apply to some competent designer and architect for the proper suggestions. The latter course is always cheapest in the end.

For a situation away from the city, where the owner is not restricted to a four rod lot, but whose

estate is measured by the acre, we think the accompanying a very appropriate design. We offer a dwelling, the leading features of which are of the rural gothic style, characterized by the verge-boards, pointed arches of the veranda and porch, lattice-windows and the general prevalence of modified gothic features.

The following is the description of the plan: No. 1, veranda; No. 2, hall, containing stairs to the chambers, with a private, enclosed staircase under these, leading to the cellar. Opening from the hall, No. 3, is the parlor, 15 feet by 16, in the front of which is a bay-window, which may be furnished with a cushioned seat. No. 4, living-room, 14 feet by 21, containing a large closet on each side of the chimney-breast, and communicating by means of the pantry, No. 9, with the kitchen, No. 6. The pantry is to be furnished with shelves and sink, contains a store-room, No. 10, and opens upon a small stoop, No. 11, which shields the rear entrance to the house. The kitchen is 14 feet by 18. No. 7, is a one-story addition, 9 feet by 15, containing a wash-room, fitted with a boiler and stationary tubs. A door opens from this room to the yard. No. 5 may be used either as a bedroom or library; it is 13 feet by 15. The second story contains four good sized chambers, besides dressing-rooms, closets, a bathroom, &c. Height of first story, 10 feet; do. of second, 8½ feet.



GROUND PLAN OF THE DESIGN.

Construction.—This is a frame house. The outside covering to be vertical weather-boarding, of uniform width; the joints to be tongued and grooved and covered with battens. The verge-boards, window and door-trimmings, and other ornamental details, to be sawn from $3\frac{1}{2}$ inch plank. The interior is to be plain finished in the two principal stories, and the attic may be left unfinished, if desired. Cost from \$2800 to \$3000.

G. E. H.

*For the New England Farmer.***TARRING SEED CORN.**

MR. BROWN:—MR. R. MANSFIELD, in the *Farmer* for April 23d, says “that after an experience of forty-three years he is satisfied that crows and birds may be permitted to range the fields at will, and that tarring seed corn, if it is done correctly, will prevent the destruction of corn by crows so that no ‘scare-crows’ need be used in the fields at all.”

After twenty years’ experience, I can bear testimony also, that Mr. Mansfield, on this point, is substantially correct; and also, that the “tarring of the seed corn” is a pretty safe remedy against the ravages of the cut worm, grub and wire worm.

Probably, of all the farmers that have tried “tarring seed” in the past fifteen years, not one-third now continue the practice. One farmer tried the tar and he got on so much that the corn would not come up. Another farmer poured stiff tar among his seed corn, and tried to stir it up; some of it was tarred, but a good deal more was not, and the crows pulled it just as fast as they could get to it. A third farmer said that the tar stuck so to his hand that he could not plant it, &c. Mr. Mansfield has not given us his plan of preparing seed corn in this way for planting. But you have given yours, and your neighbor’s plan, which seems to me a very good way.

During the past twelve years I have given a plan of preparing seed corn for planting in sev-

eral agricultural journals. But it may be worth repeating. First put the seed corn to soak for twelve or twenty-four hours, in water, previous to planting. If you have some saltpetre handy, dissolve half a pound in warm water and turn to the corn in soak. Then take out a peck of this swelled corn, put it into an old half bushel measure or small tub; raise up the corn round the measure in form of a tunnel; then take a gill of tar, (pitch tar is the best, though coal tar will answer.) put it into a half-new tin pan, pour on water enough to cover the tar and then set the pan over a furnace. When it boils, stir the tar and water until it has become entirely dissolved in the water. Then pour it on hot to the corn, and stir it well until all the corn has become well smeared with tar. When you stop stirring, the corn will crawl together like a pail of small live crabs. Then take your plaster and scatter it on, stirring it till every kernel is coated with plaster, and the corn is ready for planting.

Of course, it is understood by farmers that the seed corn after this preparation must be kept moist in the field. If the seed is allowed to get dry and parched for any length of time in the sun, it will not germinate, and must not be planted. When seed corn is treated after this plan no farmer need fear but that his corn will come up in good time, if the seed is good.

Derby, Ct., 1859.

L. DURAND.

HYDROPHOBIA.—A man was cured of hydrophobia in Italy lately, by swallowing vinegar, in mistake for a medicinal potion. A physician at Padua heard of this, and tried the remedy on a patient; he gave him a pint of vinegar in the morning, another at noon, and a third at sunset, which cured him.

TO TAKE RUST OUT OF STEEL.—Cover the steel with sweet-oil, well rubbed on. In forty-eight hours, rub with finely powdered, unslaked lime, until the rust disappears.

For the New England Farmer.

REVIEW OF THE SEASON.

MR. EDITOR:—With a view of keeping the readers of the *Farmer* posted up on the changes and fluctuations of the season, I send the results of my record of the weather for the last six months, giving an account of the principal elements which have governed the seasons during that time. The amount of snow and rain has been small, yet the ground for the greater part of the time, from December to March, has been mostly coated with ice, so that we have had an ordinary amount of tolerable sleighing, while the amount of snow which continued on the ground has not exceeded three or four inches, more than a few days at a time, yet by thawing and freezing, it has formed ice of a more permanent character. We have had no severe snow storms, and but a few days of extreme cold weather.

October had a mean temperature of 47.54° , which was only $.68^{\circ}$ above the mean of the past six years, and was the warmest *October* since 1854. Rain fell on 15 days, and its whole amount was 3.58 inches, but no snow fell during the month. We had two thunder storms, one on the 23d, with heavy thunder in north-west, from three to six, P. M.; had a light shower at six o'clock. On the 30th at eight o'clock, P. M., thunder was heard in north-west, and in a few minutes rain began to fall, and soon increased to a heavy shower, when the thunder was not heard for some time, but at 40 minutes past eight o'clock, there was a sudden heavy peal of crackling thunder, which probably struck at no great distance. After this, rolling thunder continued in south-east, till about 20 minutes past nine. There was an aurora of considerable brightness between eight and nine o'clock on the evening of the 27th, consisting of bright arch, rays, streamers, and beautiful corruscations.

November had a temperature of 30.37° , which was 5.62° colder than the mean, and colder than any of the six preceding years. Rain and snow fell on 13 days. The total amount of rain and melted snow was 2.64 inches. Amount of snow $8\frac{1}{2}$ inches. Winter commenced with a snow storm on the 23d and 24th, when the depth of snow was $5\frac{1}{2}$ inches. The total amount of snow for the month was $8\frac{1}{2}$ inches. The mountains were covered with snow on the fourth, and on the seventh the first snow fell on the low lands. On the 22d, there was a cold fog, or in other words, a storm cloud rested on the earth, and as the cold increased in consequence of the north-west wind, frost gathered in beautiful crystals, on the north-west side of twigs of trees and other objects, showing the beautiful process of the formation of the snow-flake.

December had a temperature of 21.02° , which is 1.37° below the mean. There were two evenings and two mornings when the mercury stood below zero; the lowest was 11° below, on the morning of the 25th. Rain and snow fell on 13 days, and snow on five days. The whole amount of rain and melted snow was 2.38 inches, and the amount of snow $7\frac{1}{2}$. There was a large amount of frozen rain, and rain and snow together.

January, 1859, had a temperature of 21.03° , being 4.51° above the mean. Rain and snow fell on thirteen days, and snow on seven. The whole

amount of rain was 2.81 inches, and of snow $14\frac{1}{2}$. The most remarkable feature of the month was the three cold days, 9th, 10th and 11th, being the coldest days of the whole winter. The mercury on the 10th stood at -27° at 7, A. M., -20° at 2, P. M., and -24° at nine, P. M., making a mean of 23.66° below zero during the day, which is about 4° colder than the coldest day within six years. Aside from these three days and the following morning, the mercury did not sink below zero during the month.

February had a mean temperature of 23.64° , which was 4.63° above the average of the past six years, but was 3.42° colder than 1857. The mercury sunk only twice below zero during the month. Rain and snow fell on eight days, and snow on six. The whole amount of rain and melted snow was 1.39 inches, and of snow $14\frac{1}{2}$. There was an aurora of considerable brightness on the 22d, which began between six and seven, P. M., and became obscured by clouds a little before eight o'clock. It was a diffuse light without rays or streamers, with a bright red border in the north-west.

March has been the mildest month of the same name during the past six years. Its temperature was 34.31° , which was 7.79° warmer than the mean of the six. Rain fell on sixteen days, and snow on three. The amount of rain was 3.95 inches, and of snow $3\frac{1}{2}$. The ice disappeared in Otter Creek on the 15th, and the flood was highest on the 20th. The birds arrived a few days earlier than usual, and uttered their cheerful notes as the harbingers of spring. Although *March* leaves the earth bare of vegetation, yet the buds are swollen, and the signs of the time indicate an early spring.

The amount of water which has fallen during the past six months is 16.95 inches, and of snow 48.37 inches. The two wettest months were *October* and *March*, while the most snow fell in *January* and *February*.

Although the prosperity of the farmer does not depend upon the conditions of the past six months to a great extent, yet there are some things worth recording, while to the man of science, all seasons are alike interesting, for he wants to study the laws of elementary disturbance, and gain a knowledge of those eternal principles, which produce change in the earth and in the elements around it. D. BUCKLAND.

Brandon, Vt., April 4, 1859.

For the New England Farmer.

THE WAY TO DESTROY CANADA THISTLES.

In meadows, cut them about the 20th of August, or after they have gone to seed. At that time, the top has drawn from the roots so much for its support, that it leaves the root almost exhausted, and would die were it not for the shelter and protection which the top affords against the fall rains. At this stage of the thistle, you will find that the stalk near its roots, and a part of the roots are hollow, and I infer that the wet getting into it, is what kills it. It is all folly to suppose that plowing, hoeing or mowing, at any season of the year will destroy thistles unless full grown. I have found that cutting the tops of young thistles, with the scythe, or hoe, serves

only to produce more and larger roots with young thistles, which are the first year's growth from the seed. But two years mowing, when in seed, will make a final end of them. If in meadows, cut sweet elders when they are in bearing, and all that have berries on them will die. A. W. B.

West Berkshire, U., Feb. 12, 1859.

For the New England Farmer.

THE MAY OR DOR BUG.

(*PHYLLOPHAGA QUERCINA.*)

This well-known insect is generally disliked on account of its form and color, and because it is accustomed to trouble us in summer evenings by flying into our rooms, and buzzing around in its noisy flight, often tumbling down upon the occupants of said rooms, much to their disgust. But these are nothing to the real reasons we have for destroying these insects, for they are the source of much harm to the farmer; and in order that your readers may recognize their enemies, I send you the following description.

These insects pass through four states before arriving at maturity; namely, the egg, the larva or grub, the pupa or chrysalis, and the imago or beetle. In the egg and pupa state they are without motion, and consequently harmless, but in the larva and beetle state they do considerable harm.

The grubs (which are often confounded with the muck worms which live in manure,) are of a dirty white color; the head is brown and the hind part of their body is dark; they are about an inch long, and one-third or more of an inch thick, when fully grown. They live in the grub or larva state three or four years, and at the end of the third or fourth summer, according to Dr. Harris, they penetrate the earth to the distance of about two feet, where they change into pupa and remain over winter. In May these beetles burst their pupa skin and come forth in their perfect state; they are then about seven-eighths of an inch long, of a mahogany color, with their shells punctured as if slightly pricked with a pin, their antenna are divided at the end into three leaves, and like the legs and under side of the body, are lighter colored than the wing covers; between the hind and middle pairs of legs the body is covered with yellow hair.

As soon as they are hatched they begin to feed upon small roots beneath the soil, and thus they subsist for three or four years, doing an immense amount of damage when very numerous; for instance, sometimes they will undermine meadows so that the turf may be rolled up as if cut with a spade. In the beetle state they feed upon the foliage of trees, often doing considerable damage, but as they live only a short time in this state, they cannot commit such depredations as they do in the larva state.

From the foregoing, I think it will be seen that we ought to free ourselves as much as possible from these troublesome insects; the way in which we can accomplish this best, is by cherishing the birds which feed upon them; and I would say that it would be more profitable for the farmer to protect his corn than to kill the crow, because they destroy an immense number of these and other noxious insects; we can also accomplish a great deal by killing all we meet with in

plowing, when they are often turned up, both in the larva and perfect state, and also wherever we meet them.

The best way to kill them is to crush them under foot, or if there are many of them, by throwing them into boiling water, after which they may be given to the hens for food; where they abound they can be collected by shaking the trees on which they feed after spreading a sheet underneath to catch them; this method should be used in the daytime, while the beetles are asleep, for otherwise they will fly off to another tree; but they rarely abound in sufficient numbers for this method, so that the others will answer very well if practiced universally.

CARLETON A. SHURTLEFF.

Brookline, Mass., 1859.

REMARKS.—We have had young cherry, mountain ash, and even elm trees, completely stripped by these beetles. They are numerous early in June, and quite destructive. Our mode to destroy them has been to spread a sheet under the trees in the evening, after dark, and jar them on to it, and then gather them up quickly and put them into hot water.

THE SWEET POTATO CROP.

The writer of the following article, which we copy from the *American Farmer*, published at Baltimore, states that 300 bushels per acre may be obtained when the crop is well managed. In our dry, hot summers, we can raise them in New England without difficulty.

Five bushels of small potatoes are required to ensure abundant plantings for an acre. These are bedded as early in the season as the weather will permit, in the following manner. Raise the beds—which should be not over six feet in width—some inches—by throwing surface earth upon it, and mix in good compost of stable manure. Lay down the potatoes upon this bed, side by side, and close enough to touch, and cover them with three or four inches of compost, and several inches of earth upon that. In due time there will be abundant plantings. This method is considered much better than the old plan of planting pieces of the potato.

When the plants are fit to be drawn out, the ground having been well prepared, is laid off in furrows three and a half feet apart. Well made compost of stable manure, yard scrapings, &c., is thrown into the drill, and furrows thrown over it from each side, making a ridge, the top of which is then levelled off with the hoe. The holes in which the plants are to be inserted are made fifteen inches apart; for this purpose a pointed stick is used, near the end of which through an augur hole a piece fifteen inches long is inserted at right angles, which answers the purpose both of regulating the depth of the hole to be made, and of marking by the impression of the cross-piece on the ground the distance of the next hole. A little practice renders a hand expert in thus marking the ground. The plants are dropped according to the marks, and another hand follows to plant them. The young plants are kept

clear of grass by the hoe, and between the rows, as soon as the grass starts, the bar side of the plow is run as near as possible, throwing the earth away from the ridge; in the next working it is thrown back, leaving the ridge about what it was in the beginning. During this working, the vines are laid along the ridges by hand, to avoid their being covered, and returned after the work is done. It is important that grass be kept from about the plants by careful working during the early season of their growth.

When the crop is not consumed upon the ground, it is harvested by chopping the vine off at the surface with the hoe, and running the bar of the plow as near as it may be done without cutting or bruising them, on each side of the potatoes, when they may be easily drawn out.

They are preserved in cellars, or out of doors in kilns. The method of fixing them is to raise the ground a few inches, where they are to be placed, and cover with pine shatters to the depth of six inches or more. The potatoes are laid upon these, and piled in the usual way, as many as fifty or sixty bushels. These are then covered with a thick covering of pine shatters, boards laid upon them, and earth to the depth of six inches, to be increased when cold weather comes on.

EXTRACTS AND REPLIES.

HYDRAULIC RAM.

MR. EDITOR:—I am pleased to see the hydraulic ram so conspicuously presented in your paper of the 16th inst. It strikes me as one of the most useful and convenient appendages, upon a stock farm, that can possibly be introduced—wherever one can be made to operate. I know a farm near me, (known as the Pickman farm,) on which one was placed, a few years since, with a fall of thirteen feet only, and water has been conveyed by it for the supply of a stock of more than 60 head of cattle, for a distance of 2500 feet. The original cost of the ram and pipe did not exceed \$200—and the annual charge of repairs has not exceeded \$10. If any one can find a better mode of watering cattle, I should like to know it. When it is considered that the water is constantly conveyed to any part of the buildings or yard, where wanted, without any crowding of the animals or loss of manure, I think those who are accustomed to tend upon cattle will perceive the advantages of this mode of watering. *

HOW TO HULL CORN.

Put one quart of corn into cold water, and add two large tea-spoonfuls of saleratus; put it on the fire, and boil it until the hull will rub off easily; rinse it well in cold water, and put it on the fire again, and boil it until it is soft enough for use.

R. W. G.

West Mansfield, 4 Mo. 13.

KICKING COWS.

I have noticed something about kicking cows in your paper. Hang a common draft chain over the back of the cow, just forward of the hips, when you go to milk, and I think you will have no more trouble.

ISAAC P. GREENLEAF.

Groton, N. H., 1859.

OLD APPLE TREES—GRASS SEED—CRANBERRIES—ASHES.

1. Can large old trees be made to produce more fruit by grafting?
2. Is there any permanent cure for bone spavin?
3. How much grass seed does it require to sow an acre of land?
4. Does not sowing oats or wheat with grass seed exhaust the land and consequently diminish the quantity of hay?
5. When is the best time to set cranberry vines?
6. Will it pay to buy dry ashes at 20 cents a bushel for agricultural purposes?

New Bedford, 4 Mo. 4.

SUBSCRIBER.

REMARKS.—1. Sound old apple trees producing natural fruit may be grafted profitably.

2. Consult Dr. G. H. Dadd, Boston.

3. If the land is rich, less; if the land is poor, more. One bushel of red-top and eight quarts of herds-grass, with six pounds of clover sowed on the snow in the last of March or in April, is what we use. Some of our neighbors use more, and some less.

4. Wheat and oats, of course, exhaust the soil. To succeed well, sow six or eight pecks of oats per acre instead of twelve, as is usually the case; they will then tend to shade and protect the young grass instead of crowding it out. It is also safe to sow a bushel of wheat per acre when seeding down land, and if the crop proves a heavy one, top dress the land as soon as the wheat crop is taken off, and the grass will be likely to succeed well.

5. A good time to set cranberry plants is in April or early May—whether it is the best time or not, we do not know.

6. Twenty cents a bushel for pure ashes is a good investment for your money.

CATTLE EATING BOARDS AND BONES.

Can you inform me what makes my cattle eat old boards and bones? I cannot have a board fence around my yard, but what some of the cattle will be gnawing it; they seem to have a sort of hankering after something of that sort all the time. Is there not some disease about them that causes it, or are there some properties wanting in their food—which is principally hay cut on old land? Would it be beneficial to give them bone meal—and if so, how much at a time?

A VERMONT SUBSCRIBER.

REMARKS.—A little bag of bone meal that will cost about seventy-five cents, fed to your cattle just as much as they will eat, will probably cure their propensity for chewing old bones or eating your board fences. Nourse & Co., 34 Merchants Row, Boston, keep it for sale.

A. A. AUSTIN, Enfield, N. H., is referred to a capital little work, EASTWOOD on the Culture of the Cranberry, for the information he desires.

LICE ON TREES—LAWTON BLACKBERRY—CRANBERRIES ON HIGHLAND.

I have a young orchard, and through neglect it has bred lice so freely, that some of the trees are covered with them. They cover not only the larger limbs, but the smallest twigs. What is the best method of getting rid of them without injury to the trees?

Are you acquainted with the Lawton Blackberry? Is it a good bearer and easily cultivated, and where can it be obtained, and at what price?

Have you ever seen the cranberry cultivated on high dry soil, and if so, with what success?
Greenland, N. H., 1859. E. JOHNSON.

REMARKS.—Take soft soap and soft water of the consistency of thick cream, and scrub the tree with an old brush to get off the scaly aphids—but be careful not to rub carelessly or too hard. Then cultivate well, and keep the trees moderately growing.

The Lawton Blackberry is undoubtedly a fine fruit where the season is long enough to perfect it. It does not ripen well in this region.

Better not cultivate cranberries on high land—it is not their natural place. We have done it, and succeeded, but not at a profit.

POULTRY.

To Mr. B. G. O., of N. H.—Why do you wish to get the pure Black Spanish fowls or Bolton Greys? They are not as good as some others—at any rate no better. The best hens living are a mixed breed, say a small part China—Dorkings, Polands, Bolton Greys, and the old native breed, all mixed together; then keep a small rooster, if any. I have tried doing without a rooster, and think it rather the best way, if your object is eggs. But on no account keep a large rooster. If you wish to raise chickens for the table or market, get the half-blood yellow-legged China, and the yellow-legged Dorking; have the color mostly white. If you want to have your hens do well and lay well keep a small rooster, or none at all. Keep them in a warm room in the winter, well lighted and ventilated; feed them all they will eat on Indian meal made into pudding, buckwheat, corn and boiled potatoes; some meat and some sulphur. Sulphur I feed to nearly all creatures. If you don't wish to find now and then a large, nice hen dead, don't have your roost more than four feet high, and then have two shelves for them to go up and down on. In this way if they have a plenty of burned bones, pounded crockery, lime, &c., they will pay.

Plainfield, Mass., 1859. GEO. VINING.

INDIA RUBBER RINGS.

I saw a notice some time ago, in your valuable paper, that India rubber rings had been invented, and proved successful to prevent cows leaking their milk. Will you please write me where they may be obtained, and at what cost?

Enfield, April, 1859. ROSWELL UNDERWOOD.

REMARKS.—We are not able to inform you where the rings may be procured.

HOW TO KILL LICE ON YOUNG STOCK.

In answer to the inquiry of your "Milford Subscriber." I would say that pulverized sulphur sprinkled among the hair, on those parts of the animal most liable to be infested with lice, will effect a cure. Also, mix sulphur with salt for your stock to eat. The above method I tried last winter, and it proved to be an excellent, cheap and simple remedy.
L. G. BROWN.

Lyndeborough, N. H., 1859.

N. B. Salt and sulphur mixed together and occasionally given to cattle to eat will prevent them from becoming lousy when they are free from lice.

LIME ON WHEAT LAND.

When is the best time to sow lime on wheat, and what is the best mode of slaking it?

Huntington, Vt., April 18, 1859. H. M. J.

REMARKS.—Slake the lime with water as is done for making mortar. Sow it after the wheat is sown, and harrow in both at the same time.

AN IMPROVEMENT IN RAISING STOCK.

Mr. ELON ROBINSON, of Calais, Vt., has a half blood red Durham bull calf, weighed 1520 lbs. the day he was two years old; girls 6 feet 10 inches; kept on sour skim milk and whey the first summer, and common ordinary keeping since; kept in warm stable in winter, and well ventilated in summer.
DURHAM.

Calais, March 27, 1859.

LONG RED POTATOES.

When I was young, say forty-five or fifty years ago, my father had a kind of potato we called the red potato. They were a longish potato, of a dark red color. It took all the season for them to get ripe. They would nearly all hold on to the tops when pulled. They were a first best potato for spring and summer use. Will some one of the readers of the *Farmer* tell me where I can get the seed?

RECIPE FOR MAKING DOUGHNUTS.

One cup of sugar, one cup of sweet milk, one egg, one tea-spoonful cream of tartar; add half a tea-spoonful of saleratus and two table-spoonfuls of shortening; salt pork fat is the best; stir in flour, and mould it as soft as it will roll on a board; cut it in small cakes and fry them.

R. W. G.

A FINE COW.

ELIJAH HERRICK, Esq., of West Milton, Vt., has a cow of native breed who yields him *two pounds and seven ounces* of butter from one day's milk—fed on good hay and three quarts of cob-meal a day. She is eight years old, has had six calves, and has only been dry four months for six years.
A FARMER.

BARN.

It is impossible for us to make any useful suggestions to "J. P., North Sutton, N. H.," in relation to his barn, without being on the spot.

For the New England Farmer.

APPLES---WHEAT---PEARS.

MR. EDITOR:—Doubtless you have heard of a small town out here among the hills and mountains, called Lyndeborough. On the eastern boundary of the town we have a romantic spot called Purgatory. Hundreds of people visit the place yearly, and they make the hills and woods resound with shouts both loud and clear. A short distance from this place, can be seen a little old house, a good barn, and as thrifty an orchard as can be found in these parts, according to the care and attention which it has received. This latter place is the rural home of your humble servant. If ever you come into these parts, call, and you shall be welcomed and shown the wonders and curiosities of Purgatory. At some future time, I will, with your permission, furnish you with a written history of this Purgatory of the woods. We have as good farms and farmers as are to be found in any section of the State. The soil is hard and rocky, but when subdued by the laborer's arm, it affords a large profit to the husbandman.

Two facts: Mr. Holt shows by figures, that his profit per acre on wheat is \$35.33. He also raised, last season, 30 pears, on a small tree which was seven years from the seed. The 30 pears weighed 25 lbs. The soil and climate are peculiarly adapted to raising corn, wheat and other English grain, vegetables and fruit, especially the apple. Of the apple, over \$1000 worth last fall were sent to market from this town. Farmers are waking up and taking hold of the business of fruit culture in earnest. They are renovating their old orchards and setting out a large number of small trees. Many have set out, during the past ten years from 10 to 300 young apple trees. A few cry out, "you will glut the market—apples will not be worth raising—no sale." Such do not stop to consider how small a portion of the world they themselves inhabit, and that they live on a soil that is well adapted to growing fruit which is remarkable for its long keeping qualities, beauty of form and high flavor. A few farmers here are cont'ned to follow in the footsteps of their grandfathers, and year after year, gather natural fruit from their trees and convert it into cider—not realizing, that if their trees were grafted and well taken care of, they would yield them ten-fold more profit than now.

Lyndeborough, N. H., 1859. L. G. BROWN.

For the New England Farmer.

THE SEASON IN IOWA.

This has been the wettest winter and spring ever known in Iowa. A gentleman lately told me that he had seen twenty-two Marches in Iowa, and that there had been more rain during the last, than in all the others together, except March, 1858, which was also wet. It continues to rain and snow in April, thus far, as much as in March. The ground is perfectly saturated. From six inches to three feet of water in almost everybody's cellar. Scarce a blade of grass, or other green thing, ventures to show itself. Last night it cleared off with a very strong and cold wind, and we awoke with frost on our windows.

The farmers are, of course, sorely tried. There has been no suitable time to sow their wheat, or prepare the ground, which is generally done in February and March. But there is a glorious promise on record, and time enough yet for its fulfillment.

The accounts of returning prosperity at the East do not help us any, at present; except to encourage the hope that it may reach us, sometime. We do not look for entire relief in one year, with never so good crops. Property is very greatly depreciated; and those who are in debt, are in a sad case.

Many are joining the insane caravan for Pike's Peak. Teams go by here by the dozen, some days. Good will come, no doubt, of this movement, in the future; but at what cost? Suffering and disappointment to nine-tenths of those who go *expecting* to get rich and happy!

Your readers will think that I love to write in a lugubrious strain. *I don't*; but I am bound to tell the *truth*. Perhaps the *whole truth* would require me to add, which I do very cheerfully and thankfully, that this is a rich and glorious country, after all. We have remarkable health; and if we only had a few more of your conveniences, and a few more right, honest, industrious and Christian people, we should be about as well off as this mundane sphere will admit. M. K. C.

Tipton, Iowa, April 14, 1859.

For the New England Farmer.

DOYENNE PEAR.

In a criticism on Col. Wilder's list of pears, the writer, I apprehend, is mistaken in considering the Doyenne Gris and the Boussock to be identical with the St. Michael; the Boussock is an entirely distinct variety; and as for the Doyenne Gris, all I can say is, that this fruit remained fair with me for many years, while the St. Michael, particularly upon the pear root, cracked and blasted. At this time my neighbor Manning commended the Doyenne Gris as the best substitute for the St. Michael. In a recent article which I forwarded for the *Farmer*, I remarked that Rogers is the only writer who has given us scarcely anything as to the importance of soil for the various kinds of pears. I would say, farther, that from the "New England Book of Fruits," which I published some years since in connection with Mr. Manning, down to the recent work by Field, there has been but little on this desideratum of soil, for with the exception of the Bartlett, there are few varieties, if any, that fruit equally well in all good soils. It is remarkable how the Bartlett will assimilate itself to almost all soils and localities; more so than almost any other fruit, not excepting the apple. I hear of its fruiting well throughout the country. J. M. I.

Salem, Mass., April, 1859.

HOGS IN OHIO.—We learn from an exchange that the number of hogs in Ohio, six months old and over, on the first day of April, 1858, were 2,554,914. In 1857, there were 2,333,778, thus showing an increase of 223,136 in the year. This prosperity should make that State bristle up.

For the New England Farmer.

DOUBTFUL ITEMS IN CULTURE.

In one of our fruit books we find the following: "Seedlings may be brought into early bearing by grafting into bearing trees, and some varieties, that are twelve to fifteen years in bearing naturally, can be made to bear in a few years by this process."

I tried this "process," a few years since, by placing some 10 or 12 scions from as many three-year-old seedling stocks upon a dwarf pear tree. I watched these, from year to year, as they grew, for six years; the scions grew well, but showed no appearance of flowering, and hence I felt rather doubtful that this would necessarily hasten its bearing. On the spring opening, seven years from the operation, I was sadly disappointed in finding the tree dead, root, and branch.

The same writer says:—"Foreign, and other tender kinds, may be made more hardy, or *acclimated*, by grafting into hardy, native stocks." This acclimation, as it has been called, induced the above writer to recommend raising peach trees, "from the stone *here*, as being more hardy, than if raised in New Jersey, or any warm climate." I never observed the least difference between those raised in Jersey and from seed here. I once fruited about three hundred peach trees from seed, and about the same time received one hundred and fifty budded trees from Hancock, N. J., and never, in after years, could see any possible difference in the hardness of the former over the latter. In a conversation with the late Robert Manning on this subject, I found him decidedly of my opinion in this matter, remarking that his finest bearing peach trees were originally from the South.

Another extract:—"A fruit may be raised on a soil *not* congenial to it, by grafting into a stock adapted to such soil." This I consider at least doubtful; I have, however, never known this to have been tried. If any of your readers are able to enlighten me in this matter, I should like to hear from them.

Still another:—"By cutting off all the blossoms in the bearing year of the apple, it will change the year of its bearing." I find that most of our Baldwin apple trees bear in the *even* year, so called, and in order to *change* this to the *odd* year, one of our most experienced cultivators tried this method most effectually in the garden of his employer, without success. I have never, as yet, heard of this being done successfully.

Salem, Mass., 1859.

J. M. I.

For the New England Farmer.

NEW WAY OF SALTING CATTLE.

FRIEND BROWN:—Last fall I adopted a new method for salting my cattle, and am so well pleased with it that I am induced to make it known, so that others may adopt it if they like. I bought a lump of the mineral salt, weighing 82 lbs., and put it in a dry place in my cow-yard, where the cattle can go and lick at their leisure. My stock consists of one pair of oxen, six cows, and two calves. They work upon it almost every day, and in seven months have used about one-third part of it. I think this plan has the advantage over the old one, in at least three ways, viz.:

1st. It is always by them.

2d. It is not so liable to be wasted.

3d. It is not so much care and trouble to give it to them.

The salt may be obtained of B. Thatcher & Co., No. 184 State Street, formerly 15 Long Wharf, Boston, at one cent per lb. B. F. CUTTER.

Pelham, N. H., 1859.

For the New England Farmer.

HOW I BUY, KEEP AND SELL OXEN.

MR. EDITOR:—I see by your paper that you publish the weight of some of our largest hogs, and likewise our big cattle; but you do not tell how it is done, whether on corn or pumpkins. I thought some of your readers might like to know the difference in price between working oxen and when they are fit to go to Brighton.

I will tell you the course pursued by me the past thirty years. I raise all my cows and buy all my oxen. I want them six years old and to weigh thirty hundred when bought. I weigh them when I buy, and before selling, to know something what they are worth. I will give the price paid and received, and the number of years kept.

Cost.	Time kept.	Sold at
\$72.00.....	3 years.....	\$115.00
70.00.....	1 ".....	95.00
105.00.....	5 ".....	98.00
85.00.....	3 ".....	112.00
80.00.....	3 ".....	110.00
90.00.....	1 ".....	105.00
95.00.....	2 ".....	110.00
75.00.....	1 ".....	110.00
50.00.....	2 ".....	170.00
No. 10. \$150.00.....		176.00
\$140.00.....	3 years.....	160.00
160.00.....	1 ".....	175.00
150.00.....	2 ".....	200.00
170.00.....	2 ".....	170.00
<hr/>		
\$1492.00		\$1906.00
		1492.00
		<hr/>
		\$414.00

During that time the oxen have been the only team for farm work. I keep no horse. The following is the manner I feed: The latter part of summer they have green corn fodder. During the winter a bushel of turnips once or twice a week, according to the quantity raised. From the 1st of March, meal ground from corn and cobs, two bushels of cobs and one bushel of corn on the cobs, well seasoned with oats. Of this mixture they have a peck each day.

No. 10 I kept only twelve weeks and the pair gained 50 pounds per week on two bushels of turnips and one-half bushel of meal a day. They were not worked. I do not feed any meal without mixing with cut hay, roots and chaff, and *should think it up-hill work to feed without roots, any way.* My cows are fed with mangel wurtzels throughout the winter and spring, to which is added a little meal.

I send you some samples of Merino wool. My sheep, twenty years ago, did not shear four lbs. a head, with good care and no roots. My last sale of twelve hundred pounds—and there were no wether's fleeces—averaged 5.60 pounds.

GEORGE DEWEY.

Hanover, N. H., April 15th, 1859.

REMARKS.—Thank you, Sir. This is the kind of information we want; it is tangible; if you

can make this gain, others can, now that you have told them how you do it. A pound and a half, and a little more gain, in the fleece throughout a flock of sheep, is no mean item. The wool you sent us is very beautiful.

GRAPE PREMIUM OF \$100!

We have often given the subject of *grape culture* considerable prominence in our columns, for several reasons; because we believe our people may use more fruit, as diet, and less meat,—because good varieties of well-ripened grapes are nutritious and healthful,—because from them may be obtained the finest wines for sick or infirm persons,—and because they are indigenous to our soils, natural to the climate, and may be produced cheaply in large quantities. We might add farther—and it is no inconsiderable consideration—that the homestead will be much more valuable in the market, if it becomes necessary to place it there, and its occupants will be wiser, happier and better persons, where fruitful grape vines are judiciously disposed over it, climbing a tree here, or hanging on a trellis there, or covering a portion of the dwelling itself, and giving the whole an air of neatness and repose which shall soothe and refresh the aged, and present agreeable attractions to the young.

We are glad, therefore, to present anything that will encourage the cultivation of a plant so ornamental, and whose fruit is of so much importance.

These remarks are suggested by the receipt of a letter from Mr. CHARLES H. DANA, of West Lebanon, N. H., who informs us that he places at the disposal of the New Hampshire State Agricultural Society one hundred dollars to be awarded to the person who will present the best kind of grape for garden or vineyard culture in this climate. That the committee may be able to judge correctly of the merits of each kind presented, they should be planted in the same locality, and receive the same cultivation. Mr. Dana proposes to conduct such an experiment himself by planting and cultivating all the kinds offered for this premium. New or rare kinds of grapes, sent to Mr. Dana free of expense to him, will be entered in competition for the premium. Roots are preferred, but cuttings will answer.

Cuttings of two inches in length may be sent by mail. The ends should be sealed and the cuttings wrapped in damp paper. The lists will be open for competitors during the months of April and May, 1859. The premium will be awarded in the autumn of the second year after planting. In case the same kinds of grape should be offered by different competitors, or in case different kinds should prove of equal excellence, the committee

will be at liberty to divide the premium, or otherwise award it in their discretion.

There is another reason why we should urge upon our New Hampshire friends, and especially, those in the valley of the Connecticut, to give especial attention to the cultivation of the grape, and that is, the failure of the peach and plum, and the great uncertainty of the pear and some of the finer kinds of the apple.

We are certain that Mr. DANA'S offer of a liberal premium is timely and judicious, and are assured that his character is a sufficient guaranty that the experiment will be conducted with fidelity and honor.

TRIMMING GRAPE VINES IN SPRING.

We are frequently asked at what time in spring we trim our vines, and have now before us two letters from subscribers on this subject. Grape vines should not be trimmed in spring. The proper time is November, and in our locality about the 25th. By trimming at that season we get rid of a large amount of surface for continued evaporation and capillary attraction, all of which is increased by winds passing over the surfaces of a larger amount of the vine; the ends where the cutting occurs are sure not to bleed when the growth commences; they may then be firmly tied without the chance of breaking or injuring swollen buds. The cuttings made from the trimmings at this season are of a better quality for spring use, and the portion not used for cuttings may be cut up in an ordinary straw cutter and buried in the ground around the vines, there to soften during winter and insure their early decay in spring, furnishing such pabulum as will make fruit. We know by absolute experiment that the same amount of inorganic material, or indeed of inorganic or organic material as is contained in the cuttings of grape vines as ascertained by analysis, taken from other and lower sources in nature, will not produce the same amount of fruit as when derived from the decayed cuttings themselves in the soil. Here each constituent has assumed a form, and as a consequence, a condition which is precisely such as is wanted for fruit-making. We mean by this that the same amount of potash and the same amount of phosphates contained in a hundred pounds of these grape cuttings, will not produce one-tenth of the effect when applied to the vine as a manure, as will the cuttings themselves. For although these more crude applications of phosphates and potash may increase the growth of wood, they do not materially increase the yield of fruit; and it is for this reason that bones, hide, blood of animals, and other manures containing inorganic constituents from animal or other progressed sources, are more valuable than those of direct mineral origin. When grape vines are trimmed in the spring, alongside of others trimmed in the fall, the difference in the quality and quantity of the fruit is quite perceptible. Occasionally, indeed frequently, bleeding will occur with spring pruning or trimming, which tends to weaken the vine, and waste the pabulum taken from the soil by the roots.

It should be remembered that this is not a mere waste of water, but of all those constituents which are elaborated by chemical changes going on in the soil during the winter, and placed in proximate conditions for wood and fruit-making by the vital action of the roots in spring. With fall trimming the stand of the vine remains in degree more moist than the lower portions of an untrimmed vine. They are not called on to yield up their aqueous contents, and their capillary tubes are kept pliant and ready for early spring action. We do not approve of spring trimming of grape vines.—*Working Farmer.*

For the New England Farmer.

ON THE CULTIVATION AND USE OF BEETS.

MR. EDITOR:—It may not be generally known to the cultivators of the soil, in this part of the country, the various uses to which this root can be applied. With regard to its nutritious qualities, as food for cattle and swine, &c., all are pretty much agreed; and even in its superlative excellence as a milk and butter producing vegetable. But comparatively few may be aware of its intrinsic importance, in the manufacture of sugar, brandy, vinegar, &c., &c., and last but not least, that of paper. In a British journal, I read lately that for the last mentioned purpose it is now extensively cultivated, both in France and England, as a field crop, for its paper-producing properties, &c., &c., and consequently, its production in these countries, and other parts of Europe, has become of no small national importance. The London *Times* newspaper is now printed exclusively on paper made from beets; and as it requires seven tons daily for that gigantic journal, the saving in that material, when compared with paper made in the usual way, is said to be nearly \$200,000 per annum, to the stockholders; and the quality is much superior to paper made from any other known substance; being more tough and elastic, resembling vellum, or parchment, and consequently more durable, and impervious to damp, &c., &c. In France and England, where beet sugar and brandy are extensively made, the pulp, or fibre is extracted from the syrup by means of a peculiar kind of sieve and press, made on purpose, and is generally sold to paper-makers, after undergoing a process of washing and drying, to prepare it for transportation, and is represented by recent travellers in these countries to be a lucrative and money-making business, to those engaged in it.

Now, as many sections of New England present better facilities for producing the different varieties of beets, than most parts of France, and decidedly superior to any part of Britain, both as regards soil, and climate, I am surprised that Yankee enterprise has been so long asleep, on such an interesting subject as the cultivation and manufacture of beets.

It is a well-established and incontrovertible fact, that large sums of money are paid yearly by this country to France for brandy; and that at least four-fifths, of that imported, by our most respectable wholesale liquor dealers, is distilled from the beet, instead of the grape, as by them represented; and some of our most distinguished

connoisseurs, in such articles, have often been baffled, to detect the difference of the one from the other. That they are about alike for producing intoxication and stupefaction of the brain, is pretty much all the use of either of them; but if people will have such stuff, it may be as well to provide it for them at home, as to trouble them with sending their money to foreign countries after it; especially when such countries take little or none of our produce in return; but only our own hard specie.

A superior article of brandy, to that to be found in our first-class hotels and drinking saloons, under the name, I think, of *Cognac*, could be made in this country at from one to two dollars per gallon, and be a very profitable business to the distiller; as beets raised in these northern States produce a third more juice in proportion to bulk, than that raised in any part of Britain or France. And with a proper machine for planting the seed, at regular distances, in the row, so as to obviate the present slow, and expensive process of dropping it by hand, farmers and gardeners would find it a remunerating crop at 25 cents per bushel; provided they could always find a ready market for it; which is cheaper by nearly one-third than what the French and British manufacturers generally have to pay for it. And taking into account that eight bushels of good beets generally produce one hundred-weight of sugar; and that the pulp, or residue for the making of paper will almost cover the cost of the raw material, I do not see any very formidable obstacle in the way of making the manufacture of beets into these articles, in this country, a very profitable investment for capital, provided any enterprising individual of adequate means, or joint stock company, would take hold of it in real earnest.

Should the editor of the *Farmer* consider this subject, worthy of a corner in the columns of that interesting journal, the writer will be willing, at any time, to communicate what additional information he can, and answer any questions through the same medium, or otherwise, regarding this interesting new branch of industry, that he, the editor, or any of his numerous contributors, may think proper to ask; as the writer has had considerable experience in the cultivation of beets, and is cognizant, in some degree, with the process of transforming it into the different articles above stated; having witnessed the several operations on a large scale, in various parts of Europe.

THOMAS CRUCKSHANK.

Beverly Farms, March 21, 1859.

DEATH OF MR. HENRY PARTRIDGE.—The intelligence of the sudden death of this gentleman came to us with a startling reality. It occurred on the 19th inst., in the 68th year of his age, while he stood at the post of duty, engaged in his usual avocations. Mr. P. had a wide spread reputation as the manufacturer of the unequalled manure forks, now in general use all over New England; the excellence of his work fitting well his excellence of character. He was an upright, worthy man—a man whose usefulness to the world will not cease with his departure; his

good example will long be fresh in the memory of those who knew him, and continue a blessing to the world.

For the New England Farmer.

CORN VERSUS ROOTS.

I am really fearful lest you should be wearied with communications upon the subject of "*Root Crops*," notwithstanding I feel under obligations to reply to a few additional queries relating to this matter, proposed to me in the last *Furmer* by Mr. BRIGHAM, of Westboro'.

In referring to ruta bagas, he inquires as to their value when compared to corn, and instances his raising a crop of bagas at the rate of 1000 bushels per acre, and thinks he realized less profit therefrom, than he did from a crop of corn 75 bushels to the acre.

In reply I would say that so far as my experience goes, an acre of land that will give 75 bushels shelled corn, ought, all things being equal, to give 1200 bushels bagas, i. e., this would not be a more extravagant yield. The crop of bagas would weigh, at 60 pounds to the bushel, 20 tons—the crop of corn, at 60 lbs. to the bushel, would be 2½ tons, a very large difference here—about 13 times the amount in weight. And as to feeding properties, will any one doubt but what one bushel of bagas, weighing 60 pounds, will go as far in producing milk or making beef, as 2½ quarts, or 5 pounds, of corn?

Indeed, every one who has had any experience in feeding the two, cannot but see at once that facts and figures are vastly in favor of the roots.

The truth is, that when judiciously cultivated, we obtain such enormous crops of the esculents that they cannot but be profitable, even (I was about to say,) if they are not worth much. A man can hardly raise 20 or 30 tons of bagas or carrots from an acre, and feed them to his stock properly, without their telling to advantage, both in his facilities for keeping stock, (and we know it is an established axiom, "the more stock the better farmer,") and also adding greatly to the compost heap; which last should always be taken into account when rating the usefulness of any crop.

Mr. Brigham, at the close of his article, refers to the labor of feeding roots. Sure I am that this cannot be great, with the use of a good root cutter that will readily slice a bushel a minute—an implement indispensable to every one using roots in any shape. WM. J. PETTEE.

Salisbury, Ct., 1859.

For the New England Farmer.

BARN CELLARS FOR MANURES.

There is, in my opinion, no place better to manufacture our compost manure, than in a barn cellar. I think I have the means of judging, as I have had some fifteen years' experience in making and using manure without, and about fifteen years with, the benefit of a barn cellar, for the purpose of composting.

In the first place, the liquid, as well as the solid droppings from the cattle, can all be saved by having it composted with meadow mud and loam, of which there must be a good supply in the cellar, so that it can be ready at all times to

mix with the droppings. Much of the work may be done in rainy or stormy days; this I consider to be quite a saving to the farmer.

In a barn cellar, the compost heap can be kept in a right temperature. If it is not sufficiently moist, water, suds or slops from the house may be turned upon it to keep it sufficiently wet, and no more.

Manure managed as above, can receive no damage from drying, or fire-fanging, as some say it will in a barn cellar. Again, it is not wasted by the winds and drenching rains, as it would be if out in the open weather.

Another advantage is, it can be carted out upon grass lands in the fall or winter season, and on soft meadows, while they are frozen, and where manure cannot be conveniently carted on at any other time.

I think the best place to keep manure, is in the barn cellar, until it is wanted for immediate use, although it is almost a universal practice in this region to draw out their manure in the fall, and lay it in piles for spring use. I think in so doing, the manure must lose much of its strength.

Cordaville, March, 1859. JAMES HAWES.

For the New England Farmer.

NEW ARRANGEMENTS FOR A BARN.

MR. EDITOR:—The barn I propose to build, will be from eighty to one hundred feet square, with a cellar under the whole; the cellar to be ten feet high or more; if possible, the lights and entrance on the south side. I propose to have a good and separate pen for each horse, cow and work-ox, the pen to be twelve by twelve feet, well fenced, the feed to be dropped from the barn above, through apertures made for the purpose. As soon as the weather will permit, I propose to haul in as much dry soil and swamp muck as I possibly can, so as to have it ready to commence my winter's work. As soon as I turn my stock into their pens, or rather a little before, I will put in to each pen as much swamp muck and soil as will cover the entire surface one foot deep, all over, or one hundred and forty-four square feet; and as soon as the trees drop their leaves, gather them with brakes, for litter to cover the soil lightly, two or three times per week; and once a week, when the stock has trodden and trampled the whole mass well, take a shovel and turn the whole upside down; repeat this operation for four weeks; then remove the manure thus made to a suitable part of the cellar. Again fill your pens as before, and repeat the operation. The stock must be simply turned into their separate apartments, without any tying of any kind. I turn them in loose, but take care to secure the doors of the pens so as to avoid any mischief resulting from their getting together. I also propose to cut and steam all the hay and other feed, or a great part of it. I mean to follow out the same plan in summer, by turning the stock in at night, instead of yarding them, as we have done before, so that I may make one-half as much manure in summer as in winter. By this system I expect to save all the liquid and solid manure that the stock will make. I shall also have all the salts, &c., pertaining to the same, absorbed by the soil. JOHN H. CONSTANTINE.

Campton Village, N. H., 1859.

For the New England Farmer.

DRAINAGE—POWER OF SOILS TO RETAIN MANURE.

BY JUDGE FRENCH.

Effect of Manure not Permanent—What becomes of it—Four ways by which it goes off—Draining helps to keep it—Lord Bacon's mode of obtaining Fresh Water from the Sea—How Soils Retain Manure—Clay Absorbs Ammonia—Also Lime and Potash—Burnt Clay Absorbs less—Absorption of Organic Matters—Liquid Manure Filtered by Clay—Sewer Water and Flax-Water Purified by Filtering—Solutions of Logwood and other Dyes deprived of Color by Clay—Skunks—Sweetened by being Buried—How much an Acre will Retain—Practical Conclusions.

Every farmer knows that the effect of manure upon land is not permanent. A new application of some kind of fertilizer is necessary, at each rotation. It is matter of common observation, too, that some lands hold manure much longer than others, and especially, that sandy land requires more frequent manuring than a heavier soil of clay. There seem to be but four methods in which manures can be taken from the soil. The first is by escaping into the air, by evaporation, as it is usually termed; the second is by being washed from the surface by heavy rains, or by the melting of snow in spring; the third is by washing down or sinking through the soil, and the fourth by being taken up by the growing crop, and becoming part of the harvest.

Draining prevents surface washing by allowing the water to pass into the soil, instead of running away upon the surface. It tends, too, to prevent the escape of manure in the form of gases, or by evaporation, because it makes room for it to sink down into the soil. The object next to be attained, is to retain the fertilizing elements in the soil, within reach of the roots of the growing crops, long enough for the plants to appropriate them.

The objection that draining leaches out of the soil the elements of fertility, has been practically answered, by the opinions of learned practical men, and by observations upon the quality of drainage water, showing that in general, deep drains discharge pure water, while shallow drains discharge water charged with fertilizing substances.

As certain soils are known to part with manure much more speedily than others, it may be well to inquire more critically into the reason of this fact, as bearing upon the question at what depth it is safe to draw off the water from cultivated land, so as not to take away with it the food which should nourish the crop.

One obvious mode by which soils are capable of stopping the descent of manure through them, is by straining out, as it were, the grosser particles of matter. This is merely mechanical, and depends upon the coarseness or fineness of the articles of soil. Common salt, it is supposed, does not escape by evaporation, and is not much, at all, taken into soils by absorption, yet it is,

to some extent, retained in the soil by attraction. The particles dissolved in water are carried downward, and finding particles of soil not saturated with water, are attached to them, and remain till washed away or taken up by plants.

Lord Bacon, in his "Sylva Sylvarum," speaks of a method of obtaining fresh water, which was practiced on the coast of Barbary:—"Digge a hole on the sea-shore, somewhat above high water mark, and as deep as low water mark, which when the tide cometh, will be filled with water fresh and potable." He also remembers "to have read that trial hath been made of salt water passed through earth, through ten vessels, one within another, and yet it hath not lost its saltness, so as to become potable, but when drayned through twenty vessels, hath become fresh."

Dr. Stephen Hales, in a paper read before the Royal Society, in 1739, on "some attempts to make sea-water wholesome," mentions that "sea-water being filtered through stone cisterns, the first pint that runs through will be like pure water, having no taste of the salt, but the next pint will be salt as usual."

Mr. Bernays, in the *Agricultural Gazette*, in October, 1849, describes some experiments of his filtration. He found that a solution of common salt was diminished in strength by filtration through a soil, and that the diminution was in proportion to the depth of the filtering column.

Professor Way, in a valuable article "On the Power of Soils to Absorb Manure," to be found in the eleventh volume of the journal of the Royal Agricultural Society, gives a series of careful experiments on this subject, some of the results of which will be stated.

His opinion is, that the power of soils to absorb or retain manures is due partly to capillarity or attraction, and partly to chemical action, but he thinks there is a power beyond these, and indefinable, at present, which some soils, and especially clays, possess to retain the mineral bases and animal and vegetable ingredients of manure.

The power of clay, whether pure or mixed, to absorb ammonia, is well known.

Prof. Way also proves that clays have power, to considerable extent, to absorb caustic lime and its carbonate, and also potash and magnesia. Contrary to the received opinion, he found that the absorptive power of clay is diminished by burning, although it is well known that some clay soils are much improved by burning the surface, and that burnt clay is on some soils a valuable manure. Mr. Pusey says "The action of burnt soil rests, I believe, on some distinct principle, not hitherto understood."

Indeed, the attempt to solve the mysteries of vegetation by the tests of chemical science, will

always be fruitless. There is a power in the vital principle, whether in animal or plant, which controls chemical action, and defies the laws which govern dead matter. How and why some substances promote vegetable or animal growth, while others destroy life, science can probably never ascertain. It is profitable, however, to note carefully, the practical results of experiments, although we are obliged to confess that they are inexplicable.

Some facts stated in the article referred to, as to the power of soils to absorb organic matter, and to purify the most offensive substances, are both interesting and useful. Mr. Huxtable had stated that he had made an experiment in the filtration of the liquid manure in his tanks, through a bed of an ordinary loamy soil, and that after its passage through the filter-bed, the urine was found to be deprived of color and smell—in fact, that it went in manure and came out water. Prof. Way gives a series of experiments which corroborate the fact stated, as to the action of soil in removing color and smell from putrid substances. He says:

“They have been repeated with many different soils, and, under every possible combination of circumstances, but still with the same effect.

“Similar results were obtained by acting upon putrid human urine, upon the stinking water in which flax had been steeped, and upon the water of a London sewer. That the power of the soil, in all these cases, is due to the *clay* contained in it, there is not the slightest doubt; many similar experiments were made with sand, but although the color, so far as it was due to suspended matter, was in some degree reduced, the offensive character of the solutions was but slightly modified. Solutions of different coloring matters, such as those of logwood, sandal-wood, cochineal, litmus &c., when filtered through, or shaken up with a portion of clay, are entirely deprived of color.”

The learned professor also states that he has been told that the American Indians are in the habit of taking skunks and burying them in the earth, by which means they are speedily deprived of their offensive odor, and rendered fit for food. Most New England people probably know that the garments of boys who have come in contact with that same spotted animal, are sometimes deodorized by burying them for a time in the earth. It is said, too, that nothing will so soon remove the smell of onions from a knife, as leaving it in the ground. The extent of this power of absorption is an all-important inquiry. How much manure will a given quantity of soil absorb and retain for use? We have seen that this depends very much upon the proportion of clay which it contains.

Professor Way found by experiment with sewer-water and clay, that four pounds of the clay used was sufficient to filter five pounds of the sewer-water, so as to deprive it of color and

smell, and nearly all its fertilizing properties. The soil of an acre ten inches deep is estimated to weigh 1000 tons, so that it would seem that 1000 tons or 224,000 gallons of such sewer-water might be poured upon an acre of such clay, and most of its fertilizing properties be retained in the ten inches of surface soil.

Most soils, however, are by no means so pure clay as that used in this experiment. Again, the soil of a field is not equally permeable as that used in a small experiment, and all clay soils contain splits or fissures which let down water perpendicularly to considerable extent.

The practical conclusions from the facts and principles stated would seem to be,

That sandy lands, in which roots strike deeper than in clays, are in more danger of loss by the sinking of manures, and require deeper draining to retain them:

That such lands are improved by claying:

That, as the power of a soil to absorb manure depends on its bulk, or in other words is limited, the deeper the drains within the reach of the roots of the crop, the better the security against loss, because a greater mass of soil is fitted for absorption, and for the penetration of roots.

For the New England Farmer.

TURNIP CROPS--WINTER WHEAT.

MR. EDITOR:—In looking over my January number of the *N. E. Farmer*, (monthly,) I have been somewhat interested in the discussion of the root crop there presented. Most of the writers are of the same opinion as myself, that the raising of turnips is profitable, as well as being a crop that is just suited to the wants of the farmer. I never have raised turnips very extensively, but always have fed out more or less to my cattle during the winter and spring, and consider them a very healthy food. Some object to giving them to milk cows because they give the milk and butter a turnip taste, but I never have experienced any trouble of this kind when given in moderate quantities.

In order to keep a stock of cattle in a healthy and thriving condition they must be supplied with a variety of food. Most of the farms of New England possess soils that are adapted to growing the different kinds of grasses, grains and roots, and these seem to be what every farmer needs. Perhaps on some of our New England farms, a certain kind of product can be raised more advantageously than another; as, for instance, on a very moist or wet farm, Indian corn cannot be grown with the same profit as grass; therefore it would be judicious for the owner of such a farm to direct his attention to raising grass more than to anything else; but farms containing equal soils all over them, whether of a wet or dry nature, are rare.

My advice to farmers owning lands that will produce the various farm products profitably, is to raise a medium quantity of each, rather than to grow all roots and no corn, or all corn and no grass.

I will not deny the assertion of one of your correspondents that the corn crop is *the* crop of New England, but let other crops receive their due attention. Turnips are not raised so extensively in this vicinity as they ought to be, from the fact that half the people do not know their value, and the reason why they are so ignorant of their value is because they never had any of them to actually test their worth. I never have known any one that raised roots for stock, to abandon it after a fair trial, but on the contrary, to raise more.

What kind of winter wheat would you recommend to be sown in this vicinity, and about what time of year should the seed be put into the ground? Would not a light dressing of composted manure, plowed in just before sowing, be a benefit to the wheats as well as to the after crops of grass? G. W. D.

Derry, N. H., February, 1859.

REMARKS.—The Winter Blue Stem is an excellent variety.

Get in the crop as early in September as possible, so that it shall get well rooted, and not so liable to be winter killed.

ROOT CROPS FOR STOCK FEEDING.

We beg again to remind our readers, particularly those who are engaged in dairy and stock farming, to appropriate a full amount of land to root-growing. Carrots, beets, turnips, parsnips, may all be raised with profit, wherever stock is to be fed. For horses, carrots are invaluable. For milch cows, they not only furnish a milk of superior flavor, butter of fine color and odor, but when used as a portion of their food, they guarantee a healthful condition. The power of the pectic acid of the carrot to gelatinize all vegetable matter held in solution in the stomach, puts its contents in such a condition that the peristaltic motion of the intestines can manage it. Flatulence is prevented, and thorough digestion secured. The dung of the horse, fed partly on carrots, never contains the undecomposed shell of the oat, nor large amounts of starch unappropriated: and it is for this reason that a bushel of oats and a bushel of carrots will do more for the horse than two bushels of oats; and not because the carrot contains as much flesh-making material as the oat, but because it causes all the flesh-making material of the oat to be appropriated instead of being voided with the excreta. For cows and oxen, other roots may occasionally be substituted with profit, as variety to all animals is pleasing in their food; and no one root should be continuously used. Since the introduction of pulping machines, pulped roots mixed with cut hay, cut straw, and other cheap material, add much to the economy of the farm as well as to the health of the cattle.—*Working Farmer.*

LICE ON CALVES.—I have discovered a method of ridding calves of lice. *Give them flax seed.* I am wintering eight calves; they became very lousy, and I fed them half a pint at a time for two days, and the oil from it drove the lice all off.—*Genesee Farmer.*

For the New England Farmer.

PLOWING---MANURING---PLANTING.

MR. EDITOR:—Plowing and planting time being near at hand, I shall venture a few suggestions to your farming readers. Plowing and preparing the ground for seed, is of vastly more consequence than is generally supposed, or conceded by the farmer. To plow when the soil is wet, leaves it to dry in the sun, hard and cakey. The young roots of the vegetables struggle, and are headed off at all points by this baked, brickey soil that yields so ungraciously to their seeking desires.

There is great need of more attention to the preparation of the soil. The farmer that plows his field but six to seven inches deep, is very careful to spade his garden twelve to fifteen inches, that it may be light as an "ash heap," and that he may boast of a "good garden," if nothing else. This same friability and deepening the soil, measurably applies to every crop. Corn, grains, potatoes, need this deep, mellow soil. Even a tree, with its more stubborn roots, requires it. Hence the necessity of deep plowing and pulverization. If my soil was but six inches deep, I should plow nine inches, unless I have a quicksand bottom—vegetable roots will soon find the soil, reap the benefit, and you will have an augmented crop.

For a corn crop, first plow deep, then spread manure, and cross plow it in to the depth of five or six inches. I should do this, even had I but a small quantity, rather than manure in the hill. I give a reason for so doing. In the first place, the roots of corn do not stop in the hill, like those of a plant in a flower pot; they soon diverge from it, seeking nourishment in their journey in all directions, a long way from home. Now, the reasonable conclusion is, manure distributed through the soil, is what they are after, and what they will find.

How common it is to see the young corn yellow and decipid, from the fact that it is dropped on green, strong manure, (always laid to the weather,) and cannot attain a vigorous, healthy color till its roots get away from this hot-bed hill. But the farmer says, I am short of manure, I must put four acres into corn; all I can count on, is thirty cart loads; I must dung out in the hill. Now, he plows, plants and cultivates four acres, and may get eighty or ninety bushels of corn. I say, put the thirty loads of manure upon one acre, plow in at the cross plowing, and hazard the statement, the one will give the product of four acres, to say nothing of labor and cost, being about three to one. In this connection, let me ask, would not corn do better, if the kernels were dropped several inches apart, to avoid the crowded state of the hill while growing? Try every other hill.

In regard to potatoes, there is no dunging in the hill on this island; they spread horse manure (if they can get it,) and plow in deep. In pulling potatoes, it will be noticed their tough, fibrous roots run far outside the hill. A mellow soil, well impregnated with manure, must also attract these roots, which are the great feeders in giving growth and perfecting the vegetable. The vine receives its nutriment from the air, and its short, brush-like roots at its base, connecting

itself with the potato, with a tough umbilical cord, showing its relations to each.

We also know that grain roots require a deep soil for a successful crop, particularly on clayey subsoils; many of your agricultural works tell you, they dive deep.

Boast not of acres, let the crops do the bragging. The true motto should be, good cultivation pays.

H. POOR.

Brooklyn, L. I., 1859.

A NEW WORK ON DRAINING.

FARM DRAINAGE. BY HENRY F. FRENCH. The Principles, Processes, and Effects of Draining Land with Stones, Wood, Plows, and Open Ditches, and, especially, with Tiles: including Tables of Rain-Fall, Evaporation, Filtration, Capacity of Pipes; cost and number to the acre, of Tiles, &c., &c., and more than One Hundred Illustrations. New York: A. O. Moore & Co., Agricultural Book Publishers, 140 Fulton Street. Sold by A. Williams & Co., 109 Washington Street, Boston.

We have been anxiously waiting for this volume for some months, and greet its appearance with much pleasure. It is a book for the times. The subject of Draining has been for several years past engaging the attention of the farmers in the Northern and Middle States, and every reliable source of information has been eagerly consulted. Almost the only systematic and scientific information has been derived from English works. But there have been great doubts whether English methods were adapted to our climate and soils, and especially, whether the same results would be realized here that have been reached in that country, and indeed, the opinion has been by no means universally accepted that there is the same necessity for drainage, under our scorching sun and clear sky, as in foggy England, where the "Demon of vapors descends in a perpetual drizzle," and keeps the atmosphere in so moist a state, that evaporation goes on at a much slower rate there than here.

Judge FRENCH has given us an interesting comparison of the meteorology of old England and New England, and the result of the comparison is that draining is even more necessary in this country than in England. In this country the ground is frozen solid to the depth of two or three feet, and in the spring, is completely saturated with cold water, which renders the soil unfit to be worked, until the season is so far advanced, that there is scarcely time for the growth and ripening of the crops. But thorough draining, it is contended, will take off the water as soon as the ground is thawed, and the soil can be worked and the seed got in three or four weeks earlier, so that the crops may have so much longer time to grow and ripen. The statements and reasoning of Judge FRENCH are clear and satisfactory, and will afford to many farmers that information which they so much need.

Another important feature of the book is, that it does not encourage indiscriminate draining, as the sovereign remedy for all failures in agricul-

ture. Until land is more valuable than it is in most parts of New England, a proper selection must be made, and draining resorted to only where it will pay. An interesting history of draining is given, and the various methods discussed. The proper depth of draining occupies a very important place in the discussion. The manufacture of tiles, and the proper sizes to be used, and the various implements needed in the operation, are described and well illustrated by cuts, making the whole subject plain to any ordinary capacity. Various tables have been prepared by the author and his assistants, containing much valuable information. We commend the book to all interested in draining, and to all the farmers in the country.

The author commenced the draining of his own land some years ago, and not finding the instruction he needed to guide him, had to work his way, as best he could, and after some mistakes and failures, by careful thinking and observation, he arrived at satisfactory results, and became fully convinced of the importance of draining to the successful practice of farming on many of our most productive lands. During his own operations he acquired much valuable information relating to the subject, and with true public spirit he determined to impart this information to his brother farmers. He has spared no pains or expense to make his work reliable and useful, having gained not only all the information he could from books, observation, and actual experience in this country, but visited and conversed with the most practical men in England, and carefully studied the various modes of draining in that country. It is written in his usual easy and pleasant style, and is the most valuable book upon the subject that has ever been written on either side of the water.

The farmers of this country are certainly under great obligations to him for this extra professional labor, undertaken and carried to a successful issue, under a press of business that would have deterred any man from engaging in it who had not a sincere love of farming, and an earnest desire to promote it.

HOME-MADE FURNITURE.

The simplest and cheapest kind of furniture, by which an air of taste may be given to a cottage, consists of a plain box or bench, made of boards, by the hands of the master of the dwelling, stuffed with hay, corn-husks, moss or hair, held in place by a covering of coarse canvas, and covered with chintz by the mistress of the cottage. Seats of all kinds are made at a very trifling cost in this way; so that, with a little ingenuity, a room may, by the aid of a few boards nailed together, a little stuffing and canvas, and a few yards of shilling chintz, be made to pro-

duce nearly the same effect as one where the furniture is worth ten times as much. The next step is to add square pillows or cushions to all the benches, seats or couches, in order that any person sitting upon them may have a support for his back without touching the wall. Another of the cheapest and simplest seats for a cottage, is the barrel-chair. These chairs are easily made by sawing off a portion of the barrel, nailing on a few boards to form the seat, and leaving a part of the staves a little higher than the others, to form the back or arms. To make the high-backed chair, the staves must be pieced out a little, the outside or rim of the back being confined in its place by a piece of hoop, neatly applied. The seat and back are stuffed with any cheap material, covered with chintz.—*Downing.*

MARKET-DAY AT SOUTH DANVERS.

[REPORTED FOR THE FARMER BY J. M. IVES.]

Tuesday last was market-day at South Danvers, under the auspices of the Essex Agricultural Society. These market-days have been in successful progress in Great Britain for many years, affording an opportunity for exchanges, sales of neat stock, and other agricultural products. It was held on Washington and Foster Streets, within sight of the birthplace of George Peabody, of England, who has been such a patron of that town. Early in the forenoon, vehicles of various kinds, droves of sheep and cattle, fowls, &c., were wending their way in "cattle-show fashion." Among the collection of cattle were 4 new milch cows with their calves, from R. Hanley, of Lynn; W. P. C. Patterson, 3 native cows; Albert Lodge, of Beverly, 2 Jersey cows and heifer; Charles Roberts, heifer 3 years old, heifer, Ayrshire, mixed and native cows; working cattle, from John Brown; 40 sheep and 55 lambs, from E. Page, of South Danvers; J. W. Wilkins, cows and heifers; P. D. Patch, of Hamilton, one yoke of fine, fat Durham oxen; P. L. Osborn, bull 21 months old, weight, 1320 pounds; Chester and Suffolk boar, from W. H. Foster, Beverly; M. Brown, Ipswich, cow and ox; Amos King, cows; George B. Dodge, of Hamilton, one yoke of cattle; S. Dane, of Hamilton, new milch cows and beef cattle; E. S. Poor, Danvers, two colts, valued at \$300 each; Hugh Galbreith, 5 cows; John Needham and John Brown, Jr., cows; town of Danvers, one yoke of fine, fat oxen; R. S. Fay, of Lynn, cows; Lewis Fay and Thomas Brown, cows; J. S. Needham and N. Page, Jr., of Danvers, Lake of Topsfield, and Flint, of North Reading, fruit and ornamental trees.

There were various agricultural implements offered for sale. Ketchum's mowing-machine, for one horse, attracted much attention; Whitman's patent plowman, for guiding the plow, was in operation, on Gen. Sutton's farm, but did not work as well as was anticipated; a fine apple-parer was offered at \$5, which performed well. The stock at market were as follows: 85 milch cows and calves, 37 steers and heifers, 9 bulls, 5 pairs of working oxen, 13 fat ditto, 18 calves, 36 horses, 4 colts, 1 stallion, 112 pigs, 96 sheep and lambs, besides 6 or 8 boxes of fowls, potatoes, wagons, &c., on sale.

SALES.—There were a considerable number of private sales of cattle, &c., in the morning, previous to the auction. Among them were the following: 4 three year old heifers of Joseph Batchelder, of Wenham, \$26 each; native cow and calf of E. W. King, \$45; one yoke of fat cattle, belonging to the town of South Danvers, weighing 3400 pounds, at \$9 per 100; one yoke of working oxen, from George B. Dodge, of Hamilton, 5 year old, \$108; one pair of Durham, *full blooded*, from Paul D. Patch, of Hamilton, and fed by him 4 years, \$10 per 100; these oxen were 5 years old, girth 8 feet, estimated net weight after dressed, 3000 pounds; 2 native cows, 8 year old, with calves, from J. W. Wilkins, for \$40 and \$31; a native cow, 6 years, from Col. Batchelder, of Middleton, \$45.

AT THE AUCTION SALE AT TWELVE O'CLOCK.—The Huntington cow, of R. S. Fay, native breed, \$43; Rodman cow, \$44; Boston do., one-half Ayrshire \$48; native heifer and calf, from Mr. Gilbert, of Beverly, sold for \$28; do. from Mr. Kittredge, \$39; do. from Mr. Dane, of Hamilton, for \$34 and \$35; female goat, \$8; some 6 or 8 horses sold at prices varying from \$35 to \$160, each.

The market was much more successful than I could have anticipated, from the misgivings which had previously been expressed; in fact, I think it may be justly considered a successful experiment, and I am "right glad" that "old Essex" has led off in such an enterprise.

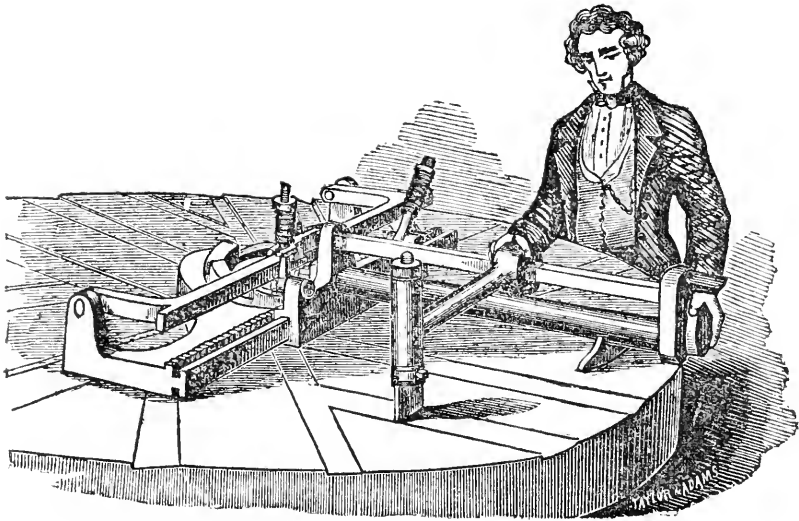
A meeting of the Trustees of the Society was held in the Warren Bank building at 10 o'clock, at which opinions, &c., were offered. Mr. Fay, of Lynn, in the absence of the President, presided; it was

Voted, That North Andover be recommended to the farmers of the county as a market for the sale of stock and agricultural products to be held on the third Tuesday of May, and that the farmers be invited to attend the same.

It was also voted, that Gen. H. K. Oliver, of Lawrence, Jos. Kittredge, of North Andover, J. H. Morse, of Lawrence, J. Osgood Loring and Otis Bailey, of North Andover, be a committee to superintend the market to be held at that time and place. Messrs. B. Perley Poore and Dean Robinson, of West Newbury, Enoch S. Williams, of Newburyport, and Paul Titcomb, of Newbury, were appointed a committee to report on the expediency of holding a subsequent market-day at, or near Newburyport; and to fix the time for the same. It was also voted that the committee on the market at South Danvers report to the Trustees a full account of the same. The Trustees then adjourned to meet at North Andover on the third Tuesday in May, at 10 o'clock.

One of the greatest annoyances at these gatherings is the numerous "catchpenny contrivances, and noisy, discordant sounds from drums and fiddles, in such near proximity to the market, and I would suggest to our Trustees that they endeavor at the next market to secure a field or enclosure, where these nuisances may be further removed, that they may not interrupt or interfere with the Auctioneer or those of the society in the performance of their duty.

May 4, 1859.



DRAPER'S MACHINE FOR DRESSING MILL-STONES.

The above cut represents *Draper's Improved Patent Machine for Dressing Mill-Stones*. The subscribers present it to the public with perfect confidence, as one of the most labor-saving machines in use, while from the uniformity of stroke and perfect adaptation of the chisel to the stone, one-half, at least, of the expense of sharpening tools is saved, and the character of the dress much improved.

The machine being attached to the spindle of the mill, is put in motion by the revolution of the same, being capable of striking eight hundred times in a minute, with a convenient arrangement for graduating the stroke to any required weight, and adjustable to any draft, doing the work with a precision not easily acquired by hand-dressing, and being wholly under the control of the operator. It is readily adapted to any kind of dress for either burr or granite; for the latter, the time usually required for dressing is from ten to fifteen minutes, and for burr, from fifteen to thirty, cracking the face in perfect lines, parallel with the furrows, without breaking the surface between the lines, thus producing a much more perfect dress in one-eighth part of the time required for dressing with the hammer. Thus the stone is preserved for longer use, and makes more, and a better quality of meal, in the same time, than by the usual method of dressing. To the most ordinary observer, the advantages must be obvious. Application may be made to the subscribers, at South Dedham, Mass.

T. W. & R. M. DRAPER.

THE HORTICULTURIST.—The number of this popular journal for May is a capital one. The "leader" by the editor, upon "Life in the Country Railroad Cars," seems as natural as the way to breakfast. We have been in those cars, some-

times, and have had ocular and olfactory experiences there! As Sancho Panza said of the "man who invented sleep," so say we,—"blessings on the man who will devise and put in execution some mode of correcting the evils of our gregarious mode of railroad travelling."

This number of the *Horticulturist* is eminently practical. See the article on "The Useful and the Beautiful, in Gardening;" one on "Bad Grafting—How Wood is formed"—with illustrations; and one on "Budding and Grafting." The frontispiece presents a fine, colored engraving of the "Hartford Prolific Grape." Published by C. M. Saxton, New York.

For the *New England Farmer*.

TURNIPS.

As the turnip ordeal was passing, I was feeding out my crop of some eight hundred bushels. To gratify your correspondent at Lowell, Vt., I wish to say I rolled them from the root cellar to the barn floor in a wheelbarrow, there split them up with a long handled square pointed shovel, an implement of the cow-house, and shovelled them into the mangers. When they were given to the dairy cows, it was directly after the morning's milking. Whether they "thinned or thickened, increased or diminished, the quantity of milk," my observations do not allow me to say. The improved condition of the animals, indicate that their products during the whole of the coming season will be materially increased both in quantity and quality.

The time saved from the fifteen minutes per bushel, which it took the hired man of your Massachusetts correspondent to feed them out, to-

gether with witnessing the gratitude of the animals receiving them, amply paid for doing it myself. I did not raise them as did your correspondent, who found them an unprofitable crop side by side of a corn-field, that produced seventy-five bushels of corn per acre, but on a plot of ground so cold and ill adapted to corn, it would not have produced ten bushels. I hope the present season, those who hold the turnip culture in the least esteem, will not fail to raise enough to give their animals as feed, as often as they provide their families with fresh fish, or perhaps some other less frequent change in the variety of food.

Waitsfield, Vt.

S. P. JOSLIN.

SORREL.

This grass should be cut early. If permitted to stand till the seed has become fully matured, the crop not only proves worthless in itself, but an injury to the soil. By cutting when it is green and succulent, or before the seed has shattered out, we obtain an article possessing considerable value, and which is eagerly devoured by sheep and horses, besides accomplishing much towards eradicating it from the soil from which, ordinarily, it is expelled not without considerable difficulty when once it has obtained root.

In curing sorrel, care should be had to expose it as little as possible to the sun. We have found it an excellent plan to mow in the morning, and cock in small bunches as soon as the dew is off. This plan prevents the seed, by far the most valuable part of the crop, from being wasted, as well as much useless trouble in spreading and cocking up. There are few seeds, perhaps, more tenacious of life than the sorrel. The pericarp or seed vessel, in which the vital germ is enclosed, is singularly firm and indurated, and when, by any chance, it becomes imbedded in the soil to a depth which excludes it from warmth, it remains dormant, and will retain its vitality, unimpaired, for years. If a field which has produced sorrel in large quantities, be turned out to pasture, it will, on being again plowed and subjected to tillage, even after the lapse of many years, become filled with sorrel plants, although not a vestige of that plant has been seen during the interregnum, or while in pasture. And this is sometimes the case with other plants. We once plowed a pasture which had been grazed for twenty-five successive years, and upon which scarcely a mullein had been seen during all that time. Upon disturbing the soil it brought the long imbedded seed to the solar influences and the air, and the surface was covered before July with so luxuriant a crop of mulleins as to make it necessary to pull up and carry off cartloads of the plants. By sowing lime, in liberal quantities, and taking especial care to eradicate and destroy all the plants that appear, the pest may be entirely overcome. The lime neutralizes the

peculiar acid which gives life and sustenance to the weed, and by converting it into a healthy and salutary pabulum for more profitable species of vegetable life, deprives it of its appropriate nutriment, and thus starves it out. Clayey soils rarely become infested to any considerable extent with this production. When it does make its appearance upon them, it is generally attributable, as a result, to the seed having been disseminated with the grass seed employed in stocking down, and rarely lasts more than one year, when it is crowded out by the cultivated grasses, generally without maturing its first crop of seed. It requires a high, dry and hot soil, and does not flourish vigorously except in the very face of the sun. Sandy lands, of all descriptions, produce sorrel more or less abundantly. And it is this description of soils which are always the most remarkably benefited by ashes and lime. They are non-calcareous, and to be improved, and rendered permanently productive, must be supplied artificially with that of which they are deficient.

TOMATOES.

Physicians are unanimous in their recommendation of this vegetable. Its nutritive character has procured it many friends, and perhaps there is at present no vegetable in this country, which is more extensively cultivated, or which commands, in our principal markets a more ready sale, or a more remunerating price. It delights in a free, warm and rather vigorous soil, and should be assisted in its development by liberal and continued applications of old and invigorating manure. It is remarkably prolific, one plant often producing a bushel of fruit. The maturation of tomatoes does not take place at once, but the fruit ripens in succession, so that the branches are burdened with ripe and green fruit at one and the same time. The methods of cooking and appropriating tomatoes have been varied to an almost infinite extent. In all its forms, however, it has innumerable admirers, and is probably, at this day, the most popular of all our garden edibles. For family use, a few hills, planted as soon as the soil can be suitably prepared, in the spring, will be sufficient. Guano and gypsum have a very favorable effect on the tomato.

COMMISSIONERS ON FLOWAGE.—The Board of Commissioners appointed at the recent session of the Legislature, will meet at 12 o'clock, noon, on Monday next, to enter upon their view of the land flowed. After this examination, which will probably occupy two or three days, they will give a hearing to the petitioners at the Town Hall, in Concord.

EXTRACTS AND REPLIES.

TWO SICK COLTS.

In looking over my last *Farmer*, I noticed a piece written by "W. D. Searl," concerning a sick colt, and as I have had two sick, in precisely the same way, one last year, and one this, I think I can give him a little light on the matter. The one that was sick last year, got over it after laying on the barn floor about two months, but has not done very well since; the one this year was sick about three weeks and died; she had the appearance of being hurt across the small of the back, would walk on the end of the hoofs of the hind feet, with them drawn forward; they finally got so stiff, that she lost the use of them entirely. In the fore part of her sickness, she would lie and groan terribly; when she died, I thought, I would learn, if possible, what ailed her, so I sent, and got my brother, and we opened her, and in the maw, we found the trouble. It was the bots—there was a spot the bigness of a man's hands entirely covered by them, and caused such a fever, that the lungs were swelled to more than twice the usual size. That is what causes the difficulty in breathing. It was generally thought she was poisoned. Now I think if friend Searl will doctor his colt for the bots, he will cure him.

O. T. WILLARD.

Bolton, Vt., 1859.

POPPIES VERSUS BUGS.

Last season I had some beautiful vines of different kinds growing in my garden, which promised a bountiful supply. One morning, I found them covered with bugs, and, being about to leave home for several days, hesitated a moment as to what I should do for the tender plants. My eyes immediately rested upon some poppies, and the thought occurred, that the leaves might be a remedy against the ravages of the bugs. I instantly gathered some, and laid the leaves upon the hills, around the plants, and under the leaves. After an absence of several days, I returned, and immediately repaired to the garden, to learn the fate of my vines. They were looking finely, and not a bug to be seen of any kind. Whether the poppies had any thing to do in driving away the devouring insects, some may question. Suffice it to say, they decamped instanter, and my opinion is, they are not partial to the opium quality of poppies. If this will serve the interests of the gardeners, you are at liberty to publish it.

N. R. WRIGHT.

Paper Mill Village, N. H., April 21, 1859.

TO CURE KICKING COWS.

Place the animal by the side of a stall, or plank partition, and confine her head in stanchions, or by a chain, so that she can neither move sideways or forward and back. Pass a rope, having a slip-noose on the end, around both hind legs, just above the gambrel. Draw this pretty tight, and the cow will soon find that the more she kicks, the more she hurts herself, and will generally be cured of the propensity in a short time. The pain of this operation, if the animal struggle violently, is quite severe, and will render the cords of the legs stiff for a time, but the cure will be permanent. Care must be taken not to let the

rope get below the gambrel joint, as the cow will then throw herself down.

J. Y. N.

Norton, May, 1859.

QUINCE BUSHES.

Please inform me how I can make my quince bushes bear? They blossom well, but yield no fruit.

AARON BRIGHAM.

Holliston, April, 1859.

REMARKS.—There is no prescription specially applicable to your question. Perhaps the soil is too rich, and they make too much wood; perhaps it is not rich enough. If they appear very luxurious, head them in, and remove some of the soil about one of them, and supply it with sand or clay.

HOW TO PREVENT CROWS FROM PULLING CORN.

Take two ounces of nitre to a peck of corn, dissolve the nitre in half the quantity of boiling water wanted to cover the corn, then add as much beef brine, and soak the corn from twelve to twenty-four hours, then roll in plaster, or dry ashes. I have followed this method for more than five years, and have suffered no loss from crows.

R. A. DAMON.

Ripton, April, 1859.

HUNGARIAN GRASS.

In your last issue, I noticed an account of Wm. Richards raising Hungarian grass, but he gave no account of the quantity of land he sowed. Will Mr. R. give us all the information he can about sowing and harvesting it; and what stock he thinks best to feed it to, and whether he will feed the seed clear or mixed with other grain, and what he thinks it worth compared with corn or oats, and oblige

A YOUNG FARMER.

Brandon, Vt., April 23, 1859.

H. E. FITCH, *Clarence, Nova Scotia*.—We are not able to give you the information you desire, without occupying an amount of time which we cannot at present command.

For the New England Farmer.

SUPERPHOSPHATE OF LIME FOR SQUASHES.

As the time is near at hand for planting, I deem it advisable to tell my experience in relation to my use of the superphosphate of lime in preserving the vines of the autumn marrow squash. I have used the superphosphate lime for two years with perfect success, and obtained large crops of that delicious vegetable without losing a vine. Before I put on the superphosphate I could not raise a single squash, on account of the worm in the vine near the root. It usually commenced its ravages about the time that it fruited. The vines would look well, yet in two days they would all wilt away, but by the use of the superphosphate of lime I am able to save every vine, and get full crops of squashes. I commence putting it on them as soon as the seed comes up, to keep off the small black beetle, which is does to per-

fection, and then to keep off the striped bug, also to keep off the stinking pumpkin bug, which it is sure to do. I put on a small quantity after every rain and every hoeing and when they begin to put forth runners, I put about a table-spoon ul around the root, and in all cases, where it has been used properly, it has insured a good crop.

Be sure and get that which is good; there has been a great quantity of poor stuff in the market which has disappointed the expectation of the consumer. I have used it on tomatoes with great success. It should not be put on melons nor cucumbers, it is too caustic for them, and kills the tender plants.

Farmer James, by the use of the superphosphate of lime, raised acres of fine marrow squashes where he had totally failed for years, before he knew of this infallible remedy. Farmers try it.

S. A. SHURTLEFF.

Spring Grove, April 13, 1859.

LIVE FOR SOMETHING.

Live for something, be not idle,
 Look about thee for employ;
 Sit not down to useless dreaming—
 Labor is the sweetest joy.
 Folded hands are ever weary,
 Selfish hearts are never gay;
 Life for thee hath many duties—
 Active be, then, while you may.
 Scatter blessings in their pathway!
 Gentle words and cheering smiles
 Better are than gold and silver,
 With their grief dispelling wiles.
 As the pleasant sunshine falleth,
 As the dew descends on earth,
 So let thy sympathy and kindness,
 Gladden well the darkened hearth.
 Hearts there are oppressed and weary;
 Drop the tear of sympathy—
 Whisper words of hope and comfort—
 Give, and thy reward shall be
 Joy unto the soul returning
 From this perfect fountain head,
 Freely, as thou freely givest;
 Shall the grateful light be shed.

For the New England Farmer.

HOW TO TREAT A YOUNG ORCHARD.

MR. EDITOR:—I have read your remarks in the last *Farmer*, (weekly,) with much interest, on the manner of treating a young orchard. If manured sufficiently to produce two crops of clover and a crop of rowen to turn in after the second year's cutting is removed, a fine growth of the trees may be expected.

But let us suppose the soil is very gravelly and poor; the orchard large, and only manure enough for a very moderate dressing can possibly be scraped together, might not the trees be kept in a growing condition by applying to each tree, of eight or ten years' growth, say one-eighth of an ox-cart load of a good compost manure? Let this manure be spread at some distance from the body of the tree; little or none of it coming within 3 or 4 feet of it, but the main part of it above and a little beyond the extremities of the roots.

Let the ground between the trees be plowed, cultivated with cultivator, and harrowed to keep down the weeds. No crops taken off until more manure can be spared.

Might not such treatment as this be more economical than purchasing manure enough to fill a very poor soil with clover roots? In very poor soils, by digging holes 7 feet in diameter and 2 feet deep, and filling with loam and meadow mud, trees may be kept in good condition two or three years, with no other application than a little coarse, straw, yard manure, put around the body at setting, (if set in the spring,) and dug in next season. If then, after that, a moderate quantity of manure is spread near the trees, each year, together with a liberal supply of swamp muck, plowing and harrowing *without* cropping, and an occasional liberal supply of manure *with* cropping; I say, if by these means, trees can be kept growing, might not much land, especially in the vicinity of villages, now comparatively useless, be profitably turned to orcharding, thus increasing its value, improving its appearance, inviting new settlers, and paving the way for a plentiful supply of fruit?

One question more: Would occasionally turning in a green crop of oats or buckwheat be economical where a yearly supply of manure is with difficulty obtained? E.

Framingham, March 15, 1859.

REMARKS.—The suggestions of our correspondent are valuable, and do not seem to require any special comments or replies from us. If he plows in a crop of oats or buckwheat, he will derive much more benefit from it by mowing the crop and allowing it to partly dry before plowing it under.

For the New England Farmer.

EXPERIMENT WITH POTATOES.

MR. BROWN:—Nothing at the Lunenburg Cattle Show, last year, interested me so much as the exhibition of fine specimens of potatoes. And nothing in this department seemed so valuable as an account of an experiment in raising them, given by DANIEL PUTNAM, Esq., a member of the Lunenburg Farmers' Club. The following is the result of the experiment:

Lot 1.—8 large potatoes, weighing 2 lbs. 12 ozs. Whole potatoes in the hill; produce of 8 hills, 36½ lbs.
 Lot 2.—8 large potatoes weighing 2 lbs. 12 ozs. Cut 4 pieces each, 4 pieces to a hill; produce, 42 lbs.
 Lot 3.—4 large potatoes, weighing 1 lb. 6 ozs. Cut 4 pieces each, 2 pieces to a hill; produce, 32 lbs.
 Lot 4.—2 large potatoes weighing 11 ozs. Cut 4 pieces each, 1 piece to a hill; produce, 25 lbs.
 Lot 5.—8 small potatoes weighing 13 ozs. Whole potatoes in the hill; produce, 25 lbs.
 Lot 6.—8 small potatoes weighing 13 ozs. Cut 2 pieces, 2 pieces in a hill; produce 33 lbs.
 Lots 7 and 8.—Planted with the eyes cut out, proved failures. Kind of potatoes used, Jenny Linds.

This experiment needs to be analyzed, in order to communicate fully its valuable lessons.

In lot No. 1, 44 ozs. produce 384 ozs., equal to 13 bushels for one; rather a small yield. An acre, planted in rows 3 feet, and hill 2½ feet apart, would produce 470 bushels, requiring 36 bushels of seed.

In lot 2, 44 ozs. produce 672 ozs., equal to 15

bushels for one. An acre planted at the same distances as the last, would produce 540 bushels, requiring 36 bushels of seed.

In lot 3, 22 ozs. produce 512 ozs., equal to 23 bushels for one. An acre planted $3 \times 2\frac{1}{2}$ feet would produce 412 bushels, requiring 18 bushels of seed.

In lot 4, 11 ozs. produce 400 ozs., equal to 36 bushels for one. An acre, planted $3 \times 2\frac{1}{2}$ feet, would produce 322 bushels, requiring 9 bushels of seed.

In lot 5, 13 ozs. produce 400 ozs., equal to 30 bushels for one. An acre planted $3 \times 2\frac{1}{2}$ would produce 322 bushels, requiring 13 bushels of seed.

In lot 6, 13 ozs. produce 528 ozs., equal to 40 bushels for one. An acre planted $3 \times 2\frac{1}{2}$ would produce 425 bushels, requiring 10 bushels.

It will be seen, therefore, that potatoes planted as in lots 1st and 2d, the entire produce is greatest, but the amount of seed demanded is enormous. In lots 4th and 6th, the produce is quite large, and the amount of seed is the smallest.

Shall we, then, use the large potatoes or the small? I answer, if a man has little land and a plenty of large potatoes for seed, let him plant them, either whole or cut in four pieces, and four pieces put in the hill. If, however, he has much land and but few seed potatoes, let him use the small ones, cut in two pieces, and two pieces put in the hill. w. c.

Clinton, Ms., 1859.

REMARKS.—The attention of Mr. Baylies, of Taunton, is respectfully called to this article.

For the New England Farmer.

MIGRATION OF SWALLOWS.

Quite a number of articles have appeared in the *Farmer* within the last few years, relative to the habits of swallows, and the time of their migration, but I do not recollect that any account from this region has appeared. I will therefore relate the result of my own observations, made last fall.

About the 21st of the 7th month, 1858, these lively summer birds began to congregate in considerable numbers upon the telegraph wires, and the roofs of barns. These meetings were held daily, and their numbers continued to increase. Soon it became apparent that some important event was about to take place. Sometimes large companies would commence an incessant chattering, very much resembling a set of politicians when discussing some momentous question, in the result of which all are expecting to be benefited. Presently all would rise, and after performing certain gyratory evolutions, would return to their places.

The multitude then assembled were nearly all common barn swallows, and about the 30th of the month they left for parts unknown.

The 13th of the 8th month I saw large numbers of the *white-bellied* swallows assembled on the "wires," but on the 14th very few were seen. All did not leave, however, for some of this variety, and a few of the former, were seen as late as the 6th of 9th month, though they were evi-

dently young ones. A few chimney swallows were observed the 16th of 8th month.

The 2nd of 9th month I saw from fifty to sixty *white-bellied* swallows in a distance of about two and a half miles, 23 in one flock, and upwards of 30 in another; a few barn swallows were with them. A considerable portion of the whole were scarcely full-fledged. In another place I saw a large number, probably more than a hundred, on a dead tree by the side of a mill-pond. They performed various evolutions, such as they usually do when collected in other places. I have no idea that they were preparing to take a dive into the mud. They are too lively and too beautiful to hibernate in such quarters. It is much more reasonable to suppose they were preparing for a long journey, and that they soon took their flight to more genial climes. The 6th I saw thirteen swallows of the same variety as the last, and I do not recollect that I saw any after that day.

Bloomfield, C. W., 1859.

L. VARNEY.

For the New England Farmer.

POTATO ROT.

MR. EDITOR:—Among all I have read on this subject, I do not recollect any description of the attending circumstances, or, as a physician would say, any statement of the "symptoms." And, it appears to me that it is misapprehending or overlooking these, which has led to such a variety of opinions relative to the cause; I mean, when the rot prevails so as to constitute an epidemic. I have observed, somewhat particularly, these attending circumstances, and I have noticed that they were essentially alike, every year the rot has prevailed. The disease commences its ravages the last half of August, usually; sometimes, between the first and tenth of September. The potato vines are green and luxuriant, and the tubers unripe. The thermometer ranges from seventy-six to eighty degrees in the shade; the wind southerly, usually south-west, and blows very briskly; there is more or less rain—not often a great quantity; frequently only a heavy mist, sometimes attended with fog. Such, according to my observation, have uniformly been the symptoms attending the potato disease. If we have a cold rain, or hot, dry weather, or if the potato vines are dead and the tubers ripe, I have never known the rot to prevail. In the same field I have had early potatoes by the side of late ones; the former were uninjured, the latter rotted badly. Last year, I planted a part of my early potatoes quite late, the last of May; the last of August, when the rot commenced, the vines were growing, were very green, the tubers were unripe, and they were diseased worse than any other kind I raised; while those that were planted early, were unaffected; and, indeed, I had never had this kind, (early blues,) rot before.

The mischief to the potato, under the above circumstances, is done very suddenly. I have noticed the tops to begin to wilt and turn black in a few hours, and the tubers to be affected, after the first indications appeared. The conclusion to which I came, the second year the rot prevailed, was, that it was produced by atmospheric influence, combined with the circumstances mentioned above; the juice of the top is poi-

soned, or converted into a gangrene, which kills the top, and descends to the tuber, producing disease and decay.

If the above is correct, then it overthrows the bug theory, which has been so confidently advanced. But the advocates of that theory will ask me, probably, why we never witnessed such effect from the atmosphere prior to 1843? I can answer them only in the Yankee fashion, by asking them why we never had such bugs before that year? Was that bug created then? Or was it brought into existence by a cross between two previously existing genus? Or if the bug existed previously to 1843, were its habits so changed that it ceased to feed on what it could not poison, and commenced living on the potato? But it seems this is only a microscopic bug, i. e., imperceptible to the naked eye. Every effect must have an adequate cause. Can so small a bug produce such effects as to cause thousands of bushels of potatoes to rot? I have no doubt the microscope reveals animalculæ living on potatoes; it does prey upon the thigh of a gnat, and floating in the purest water. But I would as soon believe that the ox, which died after drinking, was killed by the animalculæ, which the microscope revealed in the water from which he drank, as to believe the potato rot is produced by the animalculæ which the microscope exhibits living upon them. The cause is not adequate to the effect. Atmospheric changes, we know, are frequent, and at times very great; sometimes producing diseases entirely new in their type, which carry off thousands of the human family; and why not new diseases in the vegetable kingdom?

The only remedy I have discovered, is to plant an early kind, plant early, and on early ground, so they may mature early. If the vines are dead and the potatoes ripe by the 20th of August, you will not lose many by the rot.

S. H. P.

Leominster, 1859.

For the New England Farmer.

NATIVE BREED OF CATTLE.

REMARKS BY COL. PICKERING.

It should be constantly borne in mind, that the Society has been formed for the purpose of effecting improvements in every branch of husbandry. Chance in breeding, or a lucky purchase, may give a farmer a superior cow, but unless her offspring be raised, we shall make no advance; and fifty years hence, the quality of our neat cattle will not be improved. It is true, that fine cows and fine bulls do not always produce an offspring equal to themselves; but the high probability is in their favor. Hence the high prices given for the improved imported breeds, like generally producing like. Many are willing to raise a cow calf from a superior cow; while they are regardless of a bull calf. To an improving farmer, the latter is more valuable than the former. The offspring of the female is very limited; whereas the male may be the sire of hundreds. The heifers from fine cows so often prove worthless, because the cows are put to worthless bulls. How different is the conduct of the breeders of horses! No one expects a fine colt unless from a good mare, when sired by a horse of distin-

guished excellence. The same law of nature exists among neat cattle, as among horses; and whosoever disregards it, may look for disappointment. Farmers will therefore be expected to raise the off-pring of cows, both male and female, to which first premiums have been awarded, and in this way alone may they hope to improve their stock. He that relies upon chance, to the neglect of experience, will chance to be disappointed.

"Them are my sentiments."

"MULTUM IN PARVO."

For the New England Farmer.

SLATE VS. STOCK JOBBERS.

MR. EDITOR:—I have noticed several articles in the *New England Farmer* about slate roofing. Not being a manufacturer of slate, it may be possible for me to give some information, without expecting to have my *pockets stuffed with the proceeds* of certain certificates of stock. Disinterested persons might *possibly* suspect "Rusticus" to be an owner of Glen Lake stock, from the zeal he manifests in building up that enterprise, and ignoring all others. If he wishes to advertise his quarry, let it be done *openly*. The public want facts and experience, instead of theory and stock jobbing. This same public have paid thousands of dollars to speculators for stock in slate and mining corporations, having immense nominal capitals, high sounding titles, and owning a *very few acres of pasture land with a rock upon it*. If this money was judiciously expended upon real quarries or mines, instead of being absorbed by the managers, stockholders would have less reason to complain. Let capitalists examine for themselves, before making investments in any such corporations. I do not wish to apply these remarks to Glen Lake, as I am entirely unacquainted with their financial operations; wishing them success in any honorable measures for building up this important branch of business. The course taken by "Rusticus" would create a distrust of all kinds of slate. Having examined most of the Vermont slate quarries, and *practically tested* several of them upon *my own buildings*, I consider them generally valuable. The absorption of funds necessary for opening quarries, erecting buildings and machinery, being so large, the means of the owners, in many instances being very limited, and the desire for quick returns so strong, that often surface or unsound stock has been manufactured and sold. Disintegration is therefore certain. Why do some slates change color or fade, while others are fast colored? Iron and sulphur enter into the composition of the former. Copper is the metallic base of the latter. The one rusts, the other brightens. The copper slate will withstand a greater degree of heat than the iron slate, without cracking. Slate varies in hardness in the different quarries. In all instances within my knowledge the softer stock (as in other stone quarries) hardens by exposure. The softer slate are usually the finer grained. The harder the slate, the thinner it will split, provided it is free. I prefer slate of a medium thickness and size. Slaters and owners often advise the use of thin slate, as it saves them expense in transportation.

I have roofs covered with slate from Col. Allen's quarry of *mottled slate*, (probably the one mentioned by "Rusticus,") from the Western Vermont Slate Company's quarry of *fast and one colored slate*, (annihilated by "Rusticus,") and from the quarries of the Eagle Slate Company, to whose skirts "Rusticus" endeavors to fasten Glen Lake. These three quarries represent the different varieties mentioned, and are those *most extensively worked* for roofing slate. All have a wide reputation, and have been unable to supply the demand upon them. Their owners have devoted their energies to the building up of the trade, and sustaining instead of destroying each other. The mottled slate has been laid upon my roof *six years*. It exhibits no sign of disintegration or change of color. I have examined roofs covered with this slate in 1848 and '49, which are now in good condition. The slate from the quarry of the Western Vermont Slate Company has been laid nearly six years. It presents the same beautiful purple color as at first, and exhibits no sign of disintegration. Roofs covered with this slate in 1850 and '51 are now in good condition. The slate from the Eagle quarry has been laid four years, and gives good satisfaction. Although it has changed color badly, there are no signs of disintegration. Some veins of slate in this quarry do not change color as much as others, it splits freer than the others mentioned. There can be no doubt about the durability of all these varieties. The quality of slate manufactured from these and other younger quarries is gradually improving, both in material and workmanship. For cottages and roofs which are conspicuous, a fast colored slate would no doubt improve their appearance materially, but in many instances the owners have no preference as to color. No Vermont slate will absorb sufficient water to injure it. I have experimented, and found that slates from the same quarry vary in the quantity absorbed. In conclusion, let me advise your numerous readers to use slate upon their roofs. It is economical, safe and durable. Give a sufficient underlap, and nail firmly. They require but trifling repairs and have often proved a safeguard against conflagration. PRO BONO PUBLICO.

For the New England Farmer.

THE ADVANTAGE OF FORMING HABITS OF INDUSTRY EARLY IN LIFE.

MR. EDITOR:—As far as my observation extends, children are naturally disinclined to persevere in steady labor; their restless and active propensities are manifested in every variety of antics, in preference to doing the dreaded—what is called—work; they will make efforts at what they consider to be play, which in an adult would be considered most severe labor; they will lug a heavy sled up a steep hill in anticipation of the pleasure of riding down, frequently to the risk of their lives. These feelings seem to be natural to all active children. When these active, propelling powers are directed in the right channel, as the child advances in years, the habits of useful industry are formed, or become what is called second nature.

When parents neglect the opportunity of directing these natural propensities to activity in their children, at an early age, and let them grow

up without any definite plan of business for life, they will compare with training four-year-old steers to the yoke, and instead of making of them good, industrious citizens, "ten to one" if they do not imbibe the habits of idleness and rowdyism, and at best make an addition to that class of characters, in all conscience already numerous enough, who have no definite object in view, but are ready to improve every opportunity to speculate upon the industry of others, make grabbing trades, and if satisfactory success does not attend such *respectable* efforts at business, they have an eye more directly to a fortune at the gambling table, or "investigating" the pockets of ladies and gentlemen; peradventure a fortune may be there.

"How can the Ethiopian change his skin, or the leopard his spots;" or how can the child, grown up in idleness, become accustomed to habits of useful industry? It is a hard case, nothing is more difficult than correcting bad habits and forming good ones. The colored preacher said his converts "would vart back again," and so it is apt to be with those grown up in the natural way.

It was with the greatest difficulty that the aborigines of this country could be induced to perform any kind of manual labor; the horrors of starvation, or the pleasure of indulging a craving appetite with food, were not motives sufficiently powerful to induce them to forsake their old habits of indolence, and casting off thought for the future.

I have no doubt but there have been instances of reformation among adults who have never been taught the habits of industry, but such instances are as uncommon as conversions at the eleventh hour. I have known many instances of these hopeful characters who knew more than father and mother combined, that grew up without a trade, and ultimately proved an affliction to their parents and all concerned. A neighbor of mine possessed one of these promising loafing sons, and a friend of the father inquired why he did not set his son to work; the father replied, "O, let him alone, he will do well enough when he grows older." The fact was, he had already got to be too old for his father; he got married, ill treated his wife and left her, enlisted into the army, (the best place for him,) and finally died a vagabond in the poor-house.

We often see the effects of early habits of industry in examples of aged people who have been so long accustomed to a diligent business life, that working seems almost as necessary to their existence as their daily bread, and when the time arrives that deprives them of the enjoyment of their favorite employment they feel a melancholy vacancy in their minds which approaches nearly to unhappiness. There are numerous instances of men of wealth who, having become weary of business, and retired from it under the impression of living easier lives, after gratifying themselves with a full supply of imaginary happiness in the anticipated leisure, have returned again to their toils as less burdensome than the pleasure of doing nothing. I have heard young people say they wondered why old people need work; that they had property enough to carry them through, and that they might sit down and enjoy themselves.

Now, young man, I wish you would tell me what enjoyment there is in doing nothing? I have every reason to believe that heaven is not the place for idlers, that happiness there consists in the employment of doing good, one toward another, and progressing in knowledge and perfection forever. What is a soul without a motive, any more than an idiot or brute, or what happiness and enjoyment can there be without action; the enlightened soul was made for enjoyment in working good, not for doing evil, nor continuing in a torpid state of idleness like the bear in the winter. A love of industry at any kind of business must be created by early instruction and practice, while the child readily receives impressions which will be lasting, and habit will soon overcome the propensity to idleness, and if he is organized with the elementary ingredients of a man, he will love work better than play. Every farmer that produces grain and vegetables, and every mechanic who makes a shoe or any useful implement, is doing good, loving his neighbor, and obeying and serving God, I suspect, more acceptably than many do in offering him their artificial prayers.

SILAS BROWN.

North Wilmington.

For the New England Farmer.

PRODUCT OF TEN COWS.

GENTLEMEN:—I send you a table of figures showing the product of a small dairy of ten cows, for one year ending with May, 1858. The cows are of common stock, costing from \$25 to \$30 each; fed liberally with straw and wheat bran and corn meal in winter, and with bran and good pasturage in summer. Feed has been given them dry and cold; and the stable open enough to be well aired and cool. Cows only housed in winter. The sales are, of cream at \$1 per gallon, to confectioners; and skimmed milk, at 12 cents per gallon, to boarding houses.

SALES FOR WEEK.

June 5, 1857,	24.34	Dec. 5,	23.71—676.45
12,	25.67	12,	23.22
19,	20.92	19,	24.49
26,	20.51	26,	22.25
30,	13.26—104.60	Jan. 2, 1858,	22.98—123.26
July 7,	27.23	9,	22.06
14,	27.60	16,	23.78
29,	31.22	23,	21.80
Aug 1,	31.93—121.01	30,	19.20—86.84
8,	31.15	Feb. 6,	17.48
15,	30.45	13,	17.34
22,	29.81	20,	19.72
29,	28.61—111.06	27,	19.84—74.85
Sep. 5,	27.93	Mar. 6,	15.60
12,	33.78	13,	17.72
19,	41.10	20,	17.56
26,	27.34	27,	18.20—69.08
Oct. 3,	21.38—155.23	Apr. 3,	18.44
10,	25.89	10,	23.51
17,	27.16	17,	17.45
24,	18.70	24,	18.41
31,	25.42—97.17	May 1,	22.34—100.45
Nov. 7,	24.01	8,	27.42
14,	21.63	15,	34.74
21,	19.48	22,	28.54
29,	22.78—87.38	29,	33.59—124.29
	\$676.45		\$1,258.25

Cincinnati, Ohio.

WM. J. FERN.

It has been estimated by Dr. Lee, of Georgia, that the annual income of the soil of not less than one hundred millions of acres of land in the United States is diminishing at the rate of ten cents an acre.

LADIES' DEPARTMENT.

DOMESTIC RECEIPTS.

LOAF OF TEA CAKE.—One cup of sour milk, one cup sugar, one tea-spoonful rose-water, a little nutmeg, one table-spoonful of butter, one tea-spoonful of soda, one and a half cups flour.

DEBORAH'S BATTER PUDDING.—Sixteen table-spoonful of flour, one quart of milk, six eggs, salt, beat the eggs to froth on a plate, and after it is mixed beat it fifteen minutes. Either boil or bake.

NEWTON SHORT GINGERBREAD.—Eight cups flour, three cups sugar, one of ginger, one of butter, six eggs, one tea-spoonful of soda.

STEAM PUDDING.—Three cups of flour; one cup of suet; one cup of molasses; two cups of milk; one tea-spoonful bicarbonate of soda. Chop the suet very fine, put it in the flour with the other ingredients, and steam it two hours. To be eaten with lemon dip.

LEMON DIP.—Thin two table-spoonful of flour with water; stir it into a pint of boiling water; let it boil once; take it up and stir in four table-spoonful of sugar, a little butter and the juice of one lemon.

PLUM PUDDING.—One stale brick loaf—take off the brown crust, cut it in thin slices, and spread them with butter; pour over it one quart of boiled milk, and let it stand until morning; grate in one nutmeg, one tea-spoonful of salt, eight eggs well beaten, a pint bowl of stoned raisins; flour the raisins and bake two hours. To be baked immediately after putting in the raisins and eggs.

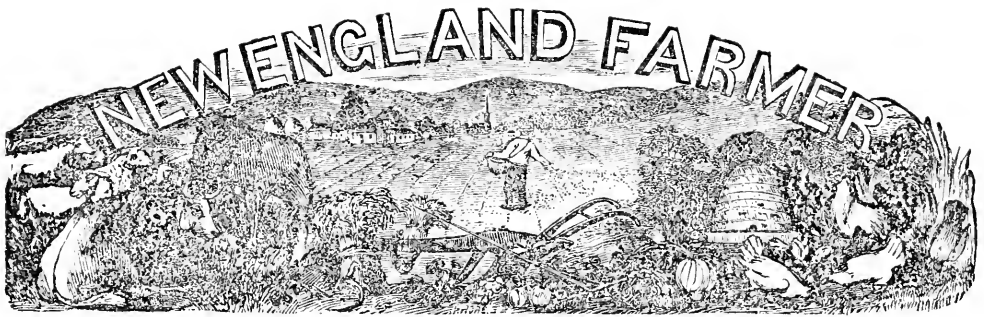
SWISS CAKE.—One and a half cupsful of sugar, four table-spoonful of butter, one cupful of milk, three cupsful of flour, two eggs, one tea-spoonful of soda and one and a half tea-spoonful of cream of tartar. Flavor to your liking.

NICE AND NAMELESS CAKE.—Two cupsful of sugar, a small lump of butter, half a pint of milk, four eggs, one cocoa nut, grated, a tea-spoonful of soda and two tea-spoonful of cream of tartar.

COCOA NUT CAKES.—Two grated nuts an equal weight of powdered white sugar, the whites of three eggs, well beaten; make them the size of a half-dollar, and bake on buttered tins.

BREAD CAKE.—Five teacups well raised bread dough, three heaping cups of sugar, two even cups of butter, five eggs, a glass of brandy, and a nutmeg; fruit as you like.

YEAST FOR BREAD OR CAKES.—In a quart of boiling water stir sufficient wheat flour to make quite a thick batter; while hot, stir in it four ounces of white sugar and a teaspoonful of salt. When cold, put in sufficient yeast (say near a teaspoonful) to cause the mass to ferment. Lay it by in a covered jar for use. Half a teacupful is enough to make two large loaves. To renew the yeast when used up, reserve a teacupful. It is simple and efficient for raising buckwheat cakes and bread—very white and very light, if the flour is good.



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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NO. 7.

JOEL NOURSE, PROPRIETOR.
OFFICE...34 MERCHANTS ROW.

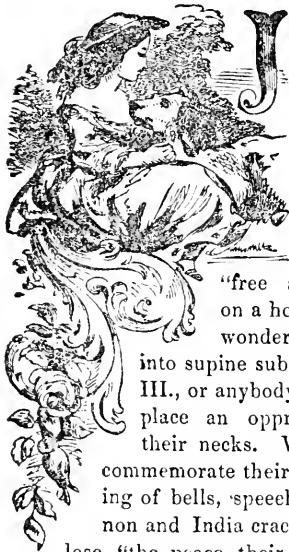
SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

JULY.

"O that this too, too solid flesh would melt,
Thaw, and resolve itself into a dew."

Hamlet, Act 1, Scene 2.



JULY — arid, tropical month. What an exalted idea it gives one of the energy and patriotism of our forefathers, to think they could muster resolution to declare themselves

"free and independent," on a hot day in July. We wonder they did not wilt

into supine submission to George III., or anybody else who chose to place an oppressive foot upon their necks. When we forget to commemorate their heroism with ringing of bells, speeches, fireworks, cannon and India crackers, we deserve to lose

"the peace their valor won;" yea, more,—to go without "tea" the rest of our

natural lives!

Sydney Smith is said to have wished he could "take off his flesh and sit in his bones awhile," by way of keeping cool! Though mankind are not generally so anxious to get rid of their "fleshly weeds," they certainly are very much addicted to finding fault with the weather.

For instance,—last winter we had some days of "remarkable weather." This spring east winds prevailed to an uncommon extent, although we were told that once in three hundred years May was a *rainless* month, and that this was the identical three hundredth—therefore fears were entertained that life would be entirely parched out of the vegetable world.

Others took a different view of the case, and were apprehensive that the premature heat would

be succeeded by an "unkindly frost" or perhaps a snow-storm, which should nip in the bud the forth-putting leaves and flowers. Now July has arrived, and although naturally enough "hot weather may be expected about this time," how many times will it be remarked that this is the very hottest summer that has been known for years—it may be, even within the memory of the "oldest inhabitant."

Perhaps those who suffer the greatest inconvenience, are the ones who do nothing but try to keep comfortable. The lady who sits at her window in a white wrapper, watching the reapers at work under a broiling sun, bestows a great deal of commiseration upon them, because she does not know that the faintest breeze brings cooling to their brows—and that by being busy, we forget to say "how hot it is."

We may call this the high noon of summer. The great clock which tells the Months of the Year, has struck twelve, but we must give ourselves only a short nooning, for time flies and labor presses. Our hay, our oats, rye and barley will soon be ready for the sickle or the scythe. They have been silently growing taller and taller every moment since last APRIL, impelled by some power which we cannot comprehend. It seems but a little while since the seeds were buried deep down in the earth, and nothing but repeated observation could have convinced us that there should be a resurrection of these few poor grains that we planted. We could have shown no reason why these dead and buried seeds should spring up to a fresher and fuller life. But here they are, and summer after summer we have seen the miracle repeated, until we pass it by without wonder, calling it the "*order of Nature.*"

"They took a plow and plowed him down,
Put clods upon his head,
And they ha' sworn a solemn oath,
John Barley-corn was dead.

"But the cheerful spring came kindly on,
And showers began to fall—

John Barley-corn got up again,
And sore surprised them all."

A curious custom prevailed, and for aught we know, does still, in Scotland, of doing their harvesting in couples—every Jack having his Jill. It must have been in reference to this usage that "Gin a body meet a body" was written—for only imagine it applied to two of *our* harvesters in red flannel shirts "a comin' through the rye." Burns tells us that his yoke-fellow at the gathering in of the harvest, was his first love. He describes her as a "bonnie, sweet sonsie lassie." For the benefit of those who doubt the poet's ability to select his "first love" from the numerous train to whom he paid his addresses, we will say that he was at this time only fifteen years of age, and the lassie a year younger. We can easily suppose that this was before he had become acquainted with the Nannies and Marys and Peggies who figured in his poems. It must strike every one that Burns was remarkably fortunate in his female friends, if we may trust to his own description of their charms; but we fear that a less romantic explanation of the circumstance is the true one, and that the graces which he threw around them existed only in his imagination.

The fantasy of the poet was a Midas' wand that tinged the earthliest thing with gold. We learn that his brother, a more common-place personage, "looked upon some of the ladies of these early verses as so many moving broom-sticks, on which fancy hung her garlands! Not a very flattering description, but such is the power of genius that it may throw a halo around the most common objects, not only for itself, but for the whole world. Who does not think with tender interest of "Highland Mary"—an interest so great that even a spear of her hair which found its way to the Burns' festival in Boston, was regarded with enthusiasm,—yet who, for her own sake, would have given a thought to the dairy-maid of the Castle of Montgomery?

Having reached our editorial limits, we make our exit, wishing all a good "mess" of green peas for the Fourth, and to our young friends in particular, we would say, that although it may not accord with our Yankee notions of gallantry to see our girls bearing sheaves at the Harvest—may each find some "bonnie sweet sonsie lass," to help him bear the burdens of life.

THE TYSON PEAR.—This pear, it is well known, is long in coming into bearing when grown on pear stocks, and this quality is regarded as a serious drawback on its value. But the objection vanishes when it is cultivated as a dwarf. The most beautiful object we ever saw in the form of a bearing tree, was a four year Tyson a few years since, on the grounds of Ellwanger & Barry, of

Rochester, of symmetrical form, and loaded with ruddy-cheeked pears. The present unfavorable year, a small tree five feet high, set three years, in the garden of David Thomas, of Union Springs, is bending under its crop of Tyson. This variety grows well on the quince, and promises to be one of the most profitable dwarfs.—*Country Gentleman.*

TURNIPS AMONG CORN.

MR. EDITOR:—I wish to call the attention of my brother farmers to the fact that turnips can be grown among corn with very little trouble or expense. I have raised them for several years in the following manner: After the cultivator went through the corn the last time for the season, I followed that with the turnip seed, sowing broadcast; a boy follows dragging a hand-rake, and it is done. Last year I used a drill with better success than broadcast. Two boys can keep up with the cultivator—one to pull, the other at the handles. Put one row of turnips between each row of corn. I, of course, am alluding to ground that will bring a good crop of corn; in poor ground it is useless to put turnip seed or anything else among corn. I have tried several different kinds of turnips, and find the Yellow Aberdeen and White Norfolk to produce the best. The latter I think is most productive. The seed can be procured at almost any of the seed stores in Philadelphia, at one dollar a pound, and a pound I think sufficient for a five-acre field. It will most likely produce two or three hundred bushels. Now I consider the cost and trouble nothing in comparison to that amount of turnips fed during winter and spring. I do not consider the corn injured in the least by the turnips, as they grow principally after the corn is cut off.—*Germantown Telegraph.*

MONEY IN ENGLISH ELECTIONS.—In spite of the outcry of the London *Times* about Mr. Buchanan's Duquesne letter, it seems that we must go to the mother country, after all, if we want to learn how to spend money in elections. The London correspondent of the New York *Tribune* writes in his last letter:

"As to the internal affairs, the conservatives have gained about twenty seats, and are still in a minority of about sixty votes in full Parliament. Still, they have consolidated their party by stupendous bribery. Lord Derby subscribed £20,000 for the election, the Duke of Northumberland £25,000, each of the three new peers £10,000, and some £30,000 more were furnished by the other members of the Carlton Club."

GRASS UNDER TREES.—By sowing nitrate of soda in small quantities in showery weather, under trees, a most beautiful verdure will be obtained. I have used it under beech trees in my ground, and the grass always looks green.—Having succeeded so well on a small scale, I have now sown nitrate of soda among the long grass in the plantations, which cattle could never eat. I now find that the herbage is preferred to the other parts of the field.—*Prairie Farmer.*

SHEEP SHEARING.

WHEN SHOULD IT BE DONE?

The common answer to this question is: When the oil has been secreted after washing, so that the wool has its greasy look and feel, and the "yolk" has begun to form near the root of the fibre. This is well—one other matter needs to be looked after, also. It is the growth of the new wool. Every year a new growth of wool commences from the skin of the sheep. This should be watched by the shepherd, and the shearing should be done just as the second growth begins to start. The shearer should cut as nearly as possible along the dividing line between the old and the new. If the second year's growth is allowed to grow somewhat, before shearing, you take part of two years' wool in the same fleece. This impairs the fibre, for at the point of union between the growths of the two years, the wool is weak. This lowers the price. Besides, if the shearing is long delayed, the fleece for the next winter will be thinner, and the sheep more liable to sicken and die. On the other hand, if you shear *before* the second year's growth has started at all, some of this year's growth will be left at the outer extremity of the next year's fleece. This remnant of this year's fleece, will diminish the value of the next year's fleece, for the reason mentioned above. We say, then, shear your sheep, if possible, when the new fleece just begins to start.

PREPARATIONS FOR SHEARING.

Sweep off the barn floor, scatter a little straw over it, and nail over that a bit of coarse canvas, or old oil cloth. This will make a soft bed for the sheep to rest on during shearing, and it can be kept perfectly smooth and clean.

If you use low benches to shear on, they should be prepared in a similar way. The place where the sheep lie during the process should, at least, be very clean and smooth, to avoid filth in the wool, or tearing it with a rough surface. Drive into the out-side barn-yard, sheep enough to last the shearers half a day. Then drive a portion of these into a smaller enclosure, (a stable or part of the "bay") near the barn floor. Strew the floor of this enclosure with clean straw, that the sheep may not become dirty, if they lie down.

CAUTIONS ABOUT PREPARING.

1. Wait till the dew is off, before shutting up the sheep, under cover.

2. Do not, if you can avoid it, confine a greater number of sheep at *once*, than the shearers can shear in half a day. It does the sheep no good to be long shut up, and the shearing can be done more easily and neatly, if the body of the sheep is full of food.

3. The above cautions are for dry weather. But if the weather should be wet, you must either wait a few days, till it becomes clear, or keep the sheep under cover and feed them as best you can. For it should be always kept in mind, that shearing should not be done when the wool is wet. Sometimes in "catching" weather, sheep thus confined, can be let out to feed in a pasture near by, and driven under shelter again, if a shower should be coming up.

4. These facts, as well as the fatiguing nature of the work, will suggest the importance of employing as great a number of good hands as you

can, and doing up the work as soon as possible. We would want "good hands," for a poor shear-er wastes more than his wages, in haggling the wool, and injuring the sheep.

MODE OF SHEARING.

Every shearer has his own way. We would not dictate to any. But the following is a good mode:—Place the sheep on his rump, with his back towards you, and his left side resting against your left leg and thigh. In this position, the sheep may have "his jacket opened;" that is, the shearer will commence at the brisket, and shear down the belly on the right side; then shear the outside of both thighs; then up, on the left side of the belly to the brisket; and then both sides of the neck, with the head. This is "opening the jacket." The sheep is then laid upon his side, and the shearer commences at the rump, and shears thence towards the head. Then the sheep is turned over, and the other side is sheared in like manner. Great care should be taken in turning the sheep, to prevent his struggling and kicking the fleece to pieces. Prudence and gentleness are qualities that will pay here, as well as everywhere else. A few suggestions must close what we say now. Remove all straws, burs and other filth from the fleece, before beginning to shear. Also wipe the feet of the sheep, if they have dung on them. Keep the platform clear, by frequent sweepings. Use no violence, and remember with pity the fears of a dumb animal. Shear close and even, and be very careful not to cut the wool twice, which is often done by unskillful or careless shearers. Do not cut the skin of the sheep, or prick it with the point of the shears. When the operation is done, see that all tags and stray locks are cut off, from legs, tail, belly, and every other part. Leaving such tags is very slovenly, and gives protection to the ticks.—*Ohio Farmer.*

WILL YOU LEND ME YOUR — ?

Yes, neighbor, if you will bring it home again *to-day*. There is no greater trial of one's patience than this everlasting unfaithful borrowing. No benevolent man—such as we are—will refuse to lend a friend a book or a hat, a razor or a hand-saw, a plow or a pick-axe, if he can have a reasonable assurance that it will be returned, when the immediate purpose for which it was borrowed has been accomplished. But to reduce yourself to beggary, by lending all you have, with no prospect of seeing again in proper time or suitable condition, the articles lent, is a tax upon our good nature, which is perhaps more than ought to be borne.

We have sometimes doubted the inspiration of the proverb, "The borrower is servant to the lender." At any rate, men have so far deteriorated in their sense of propriety, that they—some people—borrow with the most perfect assurance, as if the lender were a servant to them. Of this, however, we should not complain. Let us lend cheerfully all that is asked, as humble servants of the borrower, but let us muster courage to say to our inveterate and self-confident borrowing friends, please return that axe, umbrella, book, hoe, rake or jackknife, to-day or to-morrow, or as soon as you can make it convenient.—*Portland Transcript.*

For the New England Farmer.

ORNITHOLOGY.

BY S. P. FOWLER.

The family of wrens in the United States and Territories is composed of twelve species, and includes the genus *regulus*, (crested wrens) and the *Troglodytes* or proper wrens. The only species I have observed in Danvers are the house wren, winter wren, marsh wren, golden-crested wren and ruby-crowned wren. The common house wren, (*Sylvia Domestica*, of Wilson,) which I intend more particularly to notice, is the most numerous species found in Massachusetts. It has become completely domesticated, is never seen in our woods and forests, and seldom noticed far from the habitations of men. With the protection it everywhere receives, it is singular it is not found more abundantly, as it rears two broods of young in a season, and lays from six to nine eggs. Its habits are very peculiar and eccentric, possessing individuality in a high degree. It is never moved by a particle of gregarious emotions so common in birds; on the contrary, two pair of wrens can never endure each other's presence in a garden, a quarrel always taking place, and one of them is forced to quit the premises. Although quite a small specimen of ornithology, it is smart and courageous, petulant and imperious. It seldom fails to assault the peaceable blue-bird, when preparing to breed in the neighborhood, by visiting its nest in the owner's absence, and committing outrages, of which one would suppose such little birds would not be found guilty, but leave such exploits to be performed by the cautious, piratical crow, or the handsome fillibustering blue jay. These visits of the wren to the domicile of the blue-bird are for the purpose of demolishing its nest, or sucking its eggs, and if surprised in these felonious intentions by the return of the mild, but justly indignant bird which wears the blue coat, it evades its deserved punishment about to be inflicted, by fluttering to the ground on its short curved wings, when it conceals itself in the shrubbery or passing along under cover, a few rods, it rises again to the top of a tree, and utters its hurried, trilling notes in defiance.

While thus invading the premises of others, the wren is very careful of its own; not a bird can come near them for honest and peaceful purposes, without a hostile threat, or severe scolding, such an one as no other songster, but the one in a drab colored dress, knows how to inflict. Notwithstanding all this, the little churl possesses good qualities, alike noticeable in birds as well as men. Its domestic habits are admirable, taking the best care of its numerous offspring, being careful to warn them of the dangers, which beset their youthful flights, and of the cruel habits of the feline race, as every stealthy marauding cat, (our birds' greatest enemies and tormentors,) would be compelled to admit, could these felines, (which should be shot, every one of them, when found in a garden,) be made to testify. The wren is also an industrious bird, its industry being peculiar, and not noticed in other birds. It builds a large nest, if we regard its surroundings, composing a foundation of short crooked sticks, that one would suppose would be very difficult to be managed by so small a bird. His labors, (I here

speak more particularly of the male,) are not confined to constructing in connection with his mate, a cradle for his young, but embrace other than this, a constant instinctive desire to labor, when nothing useful is produced, in building nests not wanted, and but half formed. The wren is busy in this unproductive work, simply because he must be employed, cannot afford to be idle.

We see this industrious trait of character in men and think it commendable. I have never seen anything like it in birds, with the exception of the one under consideration, and it has also been noticed in the house wren of Europe. This labor is usually performed by the wren, when not particularly engaged with its own affairs, by odd jobs, as we say, chiefly when the female is engaged in incubation, when time passes slowly with him, helping to fill up a long day in June; with other engagements, such as scolding at the cat, as soon as he gets his eye upon her, prying into every nook and corner of the garden, by creeping about more like a mouse than a bird, and striving to obtain a general meddlesome knowledge of the affairs of all birds in his neighborhood. This labor, as we have before intimated, consists in forming as many half-finished nest as he can find boxes in which to build.

A friend of mine, desirous of getting as many of these birds to breed in his garden as possible, placed some two or three boxes in his grounds for their accommodation. In conversation he observed to me one day, that his boxes were all filled with wrens, and was much pleased with the supposed fact. Knowing the singular propensity of this bird to engage in useless labor, I remarked, upon examination he would probably find but one pair of wrens in his garden. Ah! but, says he, I saw the birds go in and out of the boxes, and build their nests. I replied, we will examine them, and see if we can find eggs or young. Upon examination we found in all the boxes, but the one that was the true domicile of the wrens, nothing but a mass of short, crooked sticks! I never had but one pair of wrens in my grounds at the same time, although I have heard persons say *they had* two pair in the spring, but one of them was caught by a cat. I suppose, in this particular case, grimalkin's character had suffered unjustly, which so seldom happens in the imputed cases of bird-catching, I am particularly desirous here to notice. In my grounds the wren raises two broods in a year, and its sprightly and tremulous note is heard as late as the 20th of September. But little is known of its migratory habits; where it goes in autumn, and from whence it comes in spring, no ornithologist knows. It manages with its short wings to migrate beyond the limits of the union; most probably to Mexico. It comes to us in the night, and its pleasing, lively note, is first heard upon a pleasant morning in the early part of May.

Knowing, friend Brown, your love for birds, I send you with this communication an olive-jar expressly prepared for kitty wren. In these jars I have found them more inclined to breed than in anything else, having had one of them in my garden for many years. The way and manner of placing it upon a pole, I have, I think, informed you.

Danversport, April 13th, 1859.

AGRICULTURAL REPORTS.

It has been our purpose to present a series of notices of the *Reports of the State and County Agricultural Societies of the past year*. We published a notice of the Transactions of the Massachusetts Society, soon after its publication, and have slightly noticed one or two others.

We propose now to take them up in order, and make such remarks as their contents may suggest. In general, they indicate that the Agriculture of the Commonwealth is in a progressive state, and that all classes of the community are interested in its promotion. There is no want of zeal or effort in the cause. There is a great amount of force and energy brought to bear upon the subject. But one thing is very obvious, on looking over the Reports, and that is, a want of unity, method and system. If there could be a meeting of the officers of the several societies, and a plan of operations carefully digested and arranged, we cannot but believe that much good would come from it, and some of the measures resulting from the want of experience and from the impulsive character of Young America, would be suppressed, and no small amount of force, that now does more harm than good, be directed into useful channels. Perhaps the Board of Agriculture might do something to promote this object, and to divert the zeal and efforts of agricultural men to these subjects that deserve immediate attention.

The Massachusetts Society has set a good example in this respect. That Society has annually directed its attention to some specific object, which the exigencies of the times seemed to demand. This year, they have called attention to the establishment of local fairs for the exhibition of stock, produce and implements, and in consequence of their recommendation—seconded by the action of the State Board of Agriculture—a Market Day, or Fair, was holden at South Danvers, the 3d inst., and others will be held in various parts of the State. We are inclined to think that such fairs, properly arranged and managed, wherever the population is sufficiently dense, will be productive of much good. They will bring the farmers together, and enable them, by sale or purchase, or by barter, to supply their several wants, without intervention of “middlemen,” who usually carry off the profits of such traffic, and furnish them an opportunity to dispose of the products of their farms directly to the consumers and dealers. There are several places in the state where such fairs may be held to advantage. We shall watch their course with interest, and be prepared to publish notices of such of them as we may witness, or that may be offered to us from time to time by others.

Farming is a progressive business, and new

methods, new implements and new subjects of attention present themselves from year to year, and should receive due regard from the managers of our agricultural societies.

The tendency at the present time is to give the control of our county societies to men who are not farmers—men who wish to keep themselves before the people, and to make agriculture a hobby which they may ride for some effect not set forth in the “Farmer’s Guide Book!” Such men may infuse a certain degree of energy into their movements, but their object, it may reasonably be supposed, is often an ulterior one. They aim to produce a sensation, and to carry things through with *eclat*, and are quite likely to be content when their personal objects are attained.

We think more careful thought is needed in appropriating the bounty of the State, so that the most *permanent* good shall be accomplished by it. The object of this bounty is not to put money in the pockets of the competitors, for premiums, but to promote agricultural experiments, and real improvements; to diffuse scientific and practical knowledge, and to increase the product of the soil. When the object is merely to obtain the prizes, and no pains are taken to furnish statements of the methods pursued in producing the articles or animals for which they are awarded, which may be useful to others, or which may afford reliable information, it is time they were withheld, or appropriated to some other means of effecting the same objects.

The premiums paid by the Massachusetts Society for Essays upon agricultural subjects, will do more for the cause than twice the amount paid for articles that were produced by accident, or were cultivated expressly for the premium, at an expense of land, manure and labor that no practical man can afford. What is wanted at the present day, is, that farmers should make well arranged, careful experiments, and give the results, *whether successful or not*, in a clear, reliable form, so that they may convey information of a practical character. One such experiment is worth more than a hundred big squashes, or beets, and we hope a set of well digested experiments will be prepared, and liberal premiums offered for them, to be paid, whether they result profitably or otherwise, provided they are conducted in conformity to the prescribed conditions.

If one-half the money from the State treasury were appropriated in this way, we have no doubt that it would do more to promote agriculture than is accomplished by it at the present time.

Essays upon stock-breeding and stock-feeding, upon draining and reclaiming pasture lands, upon grain crops, and root crops, upon meteorology, geology, and various topics connected with the subject of agriculture, should receive so lib-

eral a portion of the State bounty, that the talents of agricultural writers shall be called into requisition, and the intellectual activity of the farmers be quickened. This will do more to make farming an intellectual pursuit, and to make farmers respect their vocation, than any thing else, and is the thing that is especially wanting at the present day. Mere excitement, got up by the exhibition of fast horses and balloons, will do nothing to promote the cause of agriculture, but will rather divert attention from that sober and careful thought and observation, that are necessary to success, and serve to convert our agricultural exhibitions into mere puppet shows and vanity fairs. If such things must be done, let them have a day exclusively appropriated to them, and let them have no connection with the Farmers' Holidays.

One thing we would earnestly press upon each county society in the State; that is, that they appropriate a reasonable amount of their funds to carry through a series of meetings next winter, open to all persons, where discussions and lectures shall be continued through the afternoon and evening. Let them be conducted systematically, the subjects to be discussed selected with care, and proper notice of each meeting be given at least ten days in advance. We do not believe it possible for any one of the County Societies to expend one hundred dollars to so much advantage in any other way.

For the New England Farmer.

BEE CRITICISM EXPLAINED.

MR. EDITOR:—There was an article published in your paper some two weeks since, under the head of Bee Criticism, where Mr. Quinby has accused me of having a plate in my Circular like one of Mr. Langstroth's. I beg to inform him that he is in error. In respect to the proportions of the bees, I suppose Mr. Q. is aware that the bodies of the bees are not always of the same uniform size; but their heads always are. I suppose he is also aware that a family of bees is not complete without the presence of the drone, as there are three kinds of bees that constitute a colony. As he remarks that he has never witnessed bees as represented in that cut, perhaps he does not use an observatory glass hive, where in those wonderful sights are often seen by the watchful eye of the bee-master.

Burlington, Vt.

K. P. KIDDER.

NORTHERN AND SOUTHERN FISH.—Dr. Gesner, of Brooklyn, in his recent address before the American Geographical Society, says:—

"The fish of the North differed very much in appearance from those of the South, as all the southern and tropical fish were highly colored, like the colors of the flying dolphin. They seemed to be analogous to the birds of the South, whilst all our northern fish are of a dark color, and yet their flesh is more solid and healthy."

SOILING OF CATTLE.

In another column we have spoken of a work upon this subject, which will be of more interest in connection with the following extract from the work itself. We regret that we have not the means of laying the contents of the whole book—sixty-four pages—before the reader. Mr. Quincy says:—

My practice, and the result of the past year, were the following:—

My stock, consisting at an average of twenty cows, were kept in their stalls through the whole year. The practice was to feed them about six times in the day, and to permit them to range in a yard, about eighty feet square, two hours in the forenoon, and two in the afternoon. They were kept well littered and well curried. While they were out of the stable, the attendant took that opportunity to clean the stalls, and to supply fresh litter. During winter, they were fed, as is usual, with salt and fresh hay and vegetables. From June to November, inclusive, may be considered, strictly speaking, the soiling season; by which is understood that in which they are fed with green food in the house. As this is the critical period, I shall be minute in the accounts of my preparations and proceedings.

In the autumn preceding, I had caused rye to be sown upon an inverted sward, very thick, on about three acres. Early in April, I prepared and sowed, in manner as shall be stated afterwards, about three acres and one-quarter of land with Indian corn in drills. I also sowed about three acres of oats and buckwheat, broadcast, at the rate of three bushels to the acre, about the latter end of the month. The whole quantity of land I thus prepared to be used in soiling, in aid of my grass, did but little exceed nine acres. Of these, that which I sowed with rye turned out so poorly, that I never soiled from it more than five days; so that, in fact, the land thus prepared did, in efficiency, but little exceed six acres.

About the 1st of June, cattle, in general, were, this season, turned out to pasture. On the 30th of May, my farmer began to cut the sides of the road leading to my house from the highway and orchard. He continued to soil from this, and from grass growing in my orchard, until the 7th. On this day he abandoned cutting the grass for soiling, and began to cut from the winter rye. This was found too tough, and it was quit; and my farmer returned to soiling upon grass. Having cut over all the refuse of my grass by the 24th of June, he then went into the poorest of my mowing land, and afterwards into my clover. From this he continued to soil until the 6th of July. By this time he had gone over not much short of three acres of mowing land. On the 6th of July, he began to soil from my oats. He continued to soil from these until the 21st of July. On the 21st of July, he began to soil on Indian corn; on which he continued until the 26th, when he began to cut about two acres of late and light barley. On this he continued until the 30th of July; when he recommenced soiling on corn-fodder, and continued upon it until the 31st day of August. On this day began to cut over the roadsides, which had been first cut early in June. This was continued only to the 2d of September;

when he began to cut the second crop of Indian corn growing upon the three and one-fourth acres of Indian corn, which had now shot up in great luxuriance from the roots of that which had been cut over between the 21st and 26th of July. On this soiling continued until the 8th of September.

On the 9th and 10th, he soiled upon about a fourth of an acre of millet and buckwheat; on the 11th, soiled on a second crop of clover; from the 12th to the 15th, inclusive, on corn-stalks of about an acre of sweet corn; and, on the 15th, on a patch of millet and oats. This was continued to the 20th; when he began on two acres of Indian corn, sown in drills, on the 1st of August, on land from which a crop of pease had been previously taken. Soiling was continued on this corn until the 3d of October. From this time until the 15th of October, the soiling was wholly from second crop grass taken from various parts of my mowing land.

From the 15th of October to about the 20th of November, they were kept wholly upon carrot and turnip tops, arising from the topping of about twelve acres of both; being allowed always one foddering of salt hay. This finished the summer feeding. From this time they are kept wholly upon salt and English hay. The result, then, of this experiment, so far as relates to land, is the following:—

The twenty head consumed the produce of	2½ acres, roadsides and orchard.
3 "	mowing land.
3½ "	Indian corn, cut as fodder.
2 "	late and light barley.
3 "	oats.
2 "	late sown Indian corn after a pea-crop.
½ "	Buckwheat.
1 "	millet, buckwheat, and oats.

17 acres.

This is the whole land which was cut over for soiling, with the exception of the after-feed on the mowing land, and the tops of carrots and turnips. In comparing this result with the former practice of my farm, I apprehend the following statement to be just:—

I offset the keeping from the 11th of September to the 20th of November against the old manner of letting the cattle run at large during the autumn months on the mowing land, to its great injury, by poaching and close feeding. If this should not be deemed sufficient, I then make no estimate of the difference between keeping fifteen head of cattle, my present stock. After these allowances and offsets (which no man can doubt are sufficiently liberal) then I state that my experiment has resulted, in relation to land, in this, that I have kept the *same amount of stock, by soiling on seventeen acres of land, which had always previously required fifty acres.* The result is, in my opinion, even in this respect, greater than what is here stated. This, however, is sufficient to exhibit the greatness of the economy of this mode, so far as relates to land.

For the New England Farmer.

MANAGEMENT OF THE HORSE.

Never attempt to clean or otherwise disturb your horse while eating his meals, unless you want him to bite and kick. But when you clean, take him out of the stall, and make a business

of it. Tie your horse in the centre of the stall, unless you want him to do, as most horses do, drive more on one rein than on the other. Horses that are liable to cast themselves in their stalls, should be tied with neck-halters, giving them much more freedom of the head than the nose-halter. Gentleness, firmness and moderation will subdue the most obdurate. M. D.

Georgetown, Mass.

NEW BOOKS.

LANGSTROTH ON THE HONEY BEE. A Practical Treatise on the Hive and Honey Bee, by L. L. LANGSTROTH: with an introduction by Rev. ROBERT BAIRD, D. D. Third Edition, Revised, and illustrated with seventy-seven Engravings. New York: A. O. MOORE & Co., Agricultural Book Publishers, 140 Fulton Street.

We have spoken of this work in terms of commendation before. The present edition has been re-written, and the latest discoveries of the author added, and neatly illustrated with engravings in the highest style of the art; they are so accurate to nature, and so skilfully executed as to bear the sharpest scrutiny of the most accomplished artists; so that while the principles and teachings of the work come from a source of undoubted ability, they are clothed at once in form both enduring and attractive. We think it the best work extant on the subjects of which it treats, and commend it, without reserve, to those who wish to engage in the pleasing employment of tending these little

"Creatures that, by a rule in Nature, teach
The art of order to a peopled kingdom."

For sale by A. Williams & Co., 100 Washington Street, Boston.

THE LIFE OF NORTH AMERICAN INSECTS. By B. JAEGER, late Professor of Zoology and Botany in the College of New Jersey. Assisted by H. C. PRESTON, M. D. With numerous Illustrations from Specimens in the Cabinet of the Author.

This is one of a class of books that we take up with pleasure—one of the helps to good farming, because it will attract and interest, and lead the mind to a more intimate knowledge of what there is on the farm. When this is the state of the mind, it can never lack objects of study and investigation in the animals we raise, in the plants we cultivate, or in the soil itself. The truth is, we know very little of what there is about us. We see things daily that are common blessings, each one absolutely indispensable to the general good, pass by them indifferently, and sigh for some far off object, which, when acquired, would not be worth possessing. No other place on earth presents so many points of instruction, so many solid, and enduring attractions, as the farm. In itself it is a little world, with scope and verge enough for stronger minds than most of us possess. The want of interest in it springs from a want of a true knowledge of the advantages which it offers.

The book before us will shed light upon one of its departments. The book is written in pop-

ular form, sufficiently scientific for the general reader, and we hope will find its way to thousands of the homesteads of our people. New York: Harper & Brothers, Publishers. For sale by A. Williams & Co., 100 Washington Street, Boston.

ESSAYS ON THE SOILING OF CATTLE, Illustrated from Experience, and an Address, containing suggestions which may be Useful to Farmers. By JUSTIAH QUINCY. Boston: Printed by John Wilson & Son, 22 School Street.

No man, probably, on this continent, has had so much experience on the subject of *soiling cattle*, that is, keeping and feeding them through the entire year in the barn—as Mr. Quincy has; and throughout his long experience, he has undoubtedly attended to it with a persistency of care and observation that characterize very few of our agricultural experiments.

He says “there are six distinct advantages which those who advocate soiling, propose to themselves by the practice, and on which they establish the preference of this mode to the common one of pasturing cattle during the summer.

1. The saving of land.
2. The saving of fencing.
3. The economizing of food.
4. The better condition and greater comfort of the cattle.

5. The greater product of milk.
6. The attainment of manure.

The only offset to all these advantages, is the labor of raising and cutting the food, and feeding and taking care of the stock.”

Mr. Quincy discusses each of these heads with considerable minuteness; and sustains them by such reasons, as will go far to convince any person that his mode of managing his stock is a successful and profitable one. The Essays are full of important suggestions, and ought to be in the hands of our farmers generally.

We have enjoyed the pleasure of passing over Mr. Quincy's farm, and of listening to brief relations of his manner of treating his grass lands, of feeding his stock, cultivation of fruit and forest trees, &c. &c., and in their appearance found ample corroboration of what he states in his Essays. They ought, with his permission, to be published in the annual volume sent us by the State Board of Agriculture. We feel under personal obligation to him for the clear, comprehensive and valuable facts communicated, and will find an early opportunity to lay portions of them before the reader.

For the New England Farmer.

WATER CRESS.

The Water Cress, (*Nasturtium officinale*), is considered to be one of the most wholesome of all our salad herbs, and one of the oldest in use. Its qualities are warm and stimulating—the very reverse, in some respects, to most other plants

used in a green or uncooked state. The Dutch and English people use great quantities of this cress in spring, as an antiscorbutic. A salad so easily procured, being found in many of the running fresh water streams throughout Massachusetts, and withal so wholesome, particularly for those persons of sedentary habits, we should, at this season, when it is the proper time of the year to gather it before it runs up to seed, recommend its use.

The supply of water cresses brought every day to one market in London, is said to be, at least, ten thousand bunches, and this is probably not one-half the quantity sold in other parts of England daily.

J. M. I.

Salem, May, 1859.

For the New England Farmer.

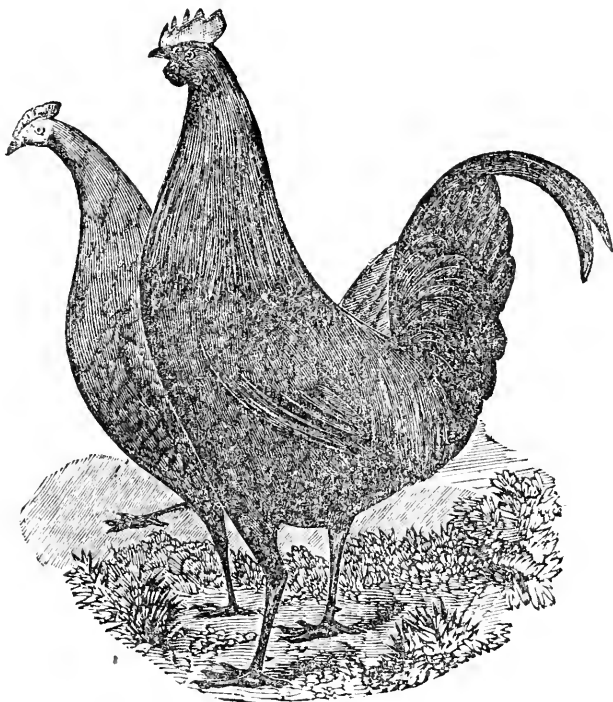
DECAY OF PEAR TREES.

Writers for agricultural papers disagree as to the cause of the failure of the pear tree of late years, but all seem to concede the fact. Some suggest a sea-air, others ascribe it to a faulty cultivation, and others to raising them from the sprouts from the roots instead of the seed. My experience makes all these suggestions erroneous. I was born and brought up in York, Maine, a seaboard town, where the pear tree, sixty-five years ago, grew and flourished; natural fruit was abundant, from which much perry was made, more than in all other towns within my knowledge. The tree then sprouted up abundantly so as to be troublesome. Farmers in setting an orchard, generally set few pear trees for that reason. Two horse teams would come from Massachusetts yearly, and get these sprouts to graft.

About thirty years ago, I wanted some to set in the town of Parsonsfield, and went to my brother's in York to get them. I knew the few trees he had used to sprout so as to be a nuisance. I was disappointed when I got there, on being informed that pear trees had almost entirely ceased to sprout up, not only on his, but on other farms. I procured a few, however, and set them out, but they did not grow well. I procured young, thrifty, grafted trees from the West, and they did no better. I planted seeds and raised several trees, and they did not succeed any better. I have still a few trees that bear sparingly, and are gradually dying out. I at first attributed my failure to various causes of location and culture, but am now convinced, from constant poor success under various circumstances, that the tree has ceased to flourish as formerly. Whether this deterioration will continue, or after a series of years the tree will again succeed as of old, remains to be seen. In the culture of the peach tree, since my remembrance, there has been a series of years when the tree was easily raised and did well, and then for a series of years none could be raised, and then again they succeeded well, except their liability to winter kill occasionally. It may be so with the pear. The cause seems to be among those hidden things in the operations of nature we cannotathom.

Parsonsfield, Me., 1859. RUFUS MCINTIRE.

Somebody says the conversion of a South Sea Islander is an easy matter, compared with that of a Fifth Avenue heathen.



A PAIR OF JAVA FOWLS.

The account of these fowls which we give below, we copy from Bennett's Poultry Book.

These, like all other pure Java fowls, are of a black or dark auburn color, with very large black legs, single comb and wattles. They are good layers, and their eggs are very large and well-flavored. Their gait is slow and majestic. They are, in fact, amongst the most valuable fowls in the country, and are frequently described in the books as "Spanish fowls," than which nothing is more erroneous. They are as distinctly an original breed as the pure-blooded Great Malay, and possess about the same qualities as to excellence, but falling rather short of them as to beauty. This, however, is a matter of taste, and some consider the pure Java superior to all other large fowls, so far as beauty is concerned. Their plumage is decidedly rich.

Mr. C. N. Bement, a distinguished breeder, and writer on the subject of poultry, says of this fowl:

"This is a singular breed, which partakes of the common fowl and the India fowl, peculiar to the island of Java, where they are seldom reared but for fighting; and are said to be so furious, that they sometimes fight together till death of one or the other separates them. According to Willoughby, it carries its tail nearly like the turkey. The Sieur Feurnier, informs us, that one of this species was kept in Paris; it has, according to him, neither comb nor wattles; the head is smooth, like that of a pheasant. This fowl is

very high on its legs; its tail is long and pointed, and the feathers of unequal length; and, in general, the color of the feathers is auburn, like the vulture. It is generally supposed the English game cock originated, or is a cross of, this variety."

The above quotation is a description of the wild Indian game, and not of the Java, except in color.

For the New England Farmer.

TURNIPS.

MR. EDITOR:—I have read with interest, the numerous articles on turnips which have recently appeared in your valuable paper. There seems to be quite a difference of opinion among agriculturists respecting their value, compared with other crops.

Experience proves that animals do not thrive best on the most concentrated food, nor is such food most conducive to health in man or beast. A man would not long survive if fed upon sugar or venison alone, and a dog would not live six months if fed wholly upon fine wheat flour. Yet all admit these substances are highly nutritious.

The analysis of the turnip shows a large per cent. of water to the nutritive matter, but I believe it to be more valuable to feed with other fodder, than a strict chemical analysis shows it. A change of food is beneficial to stock, and in

winter, when animals cannot get green food, turnips are excellent to keep the stomach in tone, and give them an appetite for dry feed.

The different varieties of turnips vary in nutriment. The Swedish I consider best, but my experiments have been mostly with the English, which I have raised and fed for several years.

I frequently winter a part of my cattle upon corn fodder, straw and turnips, until the latter are fed out, when I use corn meal as a substitute for the turnip. As nearly as I can judge from the growth and appearance of the stock, (and I have observed them closely, to satisfy myself,) six bushels of fifty pounds turnips are equal to one bushel of corn, to feed with coarse fodder. When corn is worth one dollar to feed, I value turnips at one shilling per bushel. In many localities, ten bushels of turnips are more easily raised than one of corn. I have frequently raised good crops, at a trifling expense in cornfields where the worms had destroyed a part of the corn, and it was too late in the season to replant it, by sowing broadcast and cultivating and hoeing in the seed.

JAMES R. WALKER.

Springfield, Vermont, 1859.

EFFECT OF GREEN RYE ON THE MILK OF COWS.

T. P. Shepard & Co. lately made the following statement to the Standing Committee of the Rhode Island Society for the Encouragement of Domestic Industry:

"On Thursday, Nov. 5th, we turned fifteen milch cows into a lot containing sixteen acres. Eight acres had been planted with corn this season, and harvested a few weeks before. Eight acres were sown with rye in September, which had come forward very fast, and commenced to joint. On Thursday and Friday the cows fed exclusively in the corn-field, gleaning the corn fodder and a few small ears of corn that remained upon the ground. During these two days there was but little increase in the milk, and no change in quality. On Saturday, Sunday, Monday and Tuesday, the cows fed in the rye field, and the quantity of milk was increased more than twenty per cent. On Saturday the milk had a slight unpleasant flavor, which increased, until Tuesday it was so offensive to the taste and smell, as to be wholly unfit for use. On Wednesday the cows were turned into the meadows, and on Wednesday evening the milk was perfectly sweet, and free from any unusual flavor. During these days the cows had no access to salt water, salt meadows or fresh bogs. There were no weeds in the rye field, and no more among the corn than is usual in a well cultivated field. The cows were as usual stabled at night and fed with clover hay."

REMARKS.—Our cows feed upon rye, not only without detriment, but with decided advantage. The land upon which it grows was plowed last September, and sowed to rye and grass seed. As soon as the rye was four or five inches high, we turned the cows upon it, and they have continued to keep it pretty well cropt. If it had been allowed to grow until it began to joint, and

the cows had then been turned upon it, we have no doubt they would have surfeited themselves and quite likely some unpleasant flavor would have been imparted to the milk.

That is not the way to treat cows with such food; it is no more rational than it would be to set fifteen hungry children down to make a dinner upon the richest pudding or cake.

Farmers must exercise a good sound judgment in every department of their labor; that is the only safe guide for them.

NURSING VESPER.

BY REV. J. E. RANKIN.

A row of little faces by the bed,

A row of little hands upon the spread,

A row of little roguish eyes all closed,

A row of little naked feet exposed.

A gentle mother leads them in their praise,

Teaching their feet, to tread the heavenly ways,

And takes this lull, in childhood's tiny tide,

The little errors of the day to chide.

No lovelier sight, this side of heaven is seen,

And angels hover o'er the group serene;

Instead of odors in a censer swung,

There floats the fragrance of an infant's tongue.

Then tumbling headlong into waiting beds,

Beneath the sheets, they hide their timid heads,

Till slumber steals away their idle fears,

And, like a peeping bud, each little face appears.

All dressed like angels, in their gowns of white,

They're wafted to the skies, in dreams of night,

And heaven will sparkle in their eyes at morn,

And stolen graces, all their ways adorn.

THE AMERICAN HOME GARDEN. Being principles and rules for the Culture of Vegetables, Fruits, Flowers and Shrubbery. To which are added brief notes on Farm Crops, with a table of their average product and chemical constituents. By ALEXANDER WATSON. Illustrated. Harper & Brothers, New York. A. Williams & Co., Boston.

This is a neatly-printed volume of 500 pp., on fine, white paper, and large, clear type,—capital recommendation to any book. The opening of the book gives a plan for a garden, aspect, fencing, protection, mechanical preparation of various soils, draining, plowing, &c., and then passes on, touching upon every possible topic and manipulation necessary in the management of an *American Home Garden*.

There are ten thousand families in New England to whom this book, if read and practiced upon, would save annually more than ten times its cost. It is handsomely got up, and has the great merit of having a good index. We do not mean to say that it contains all the amateur might want, but that it is admirably calculated to benefit the *American Home Gardeners*.

A USEFUL FACT.—In peeling onions, put a large needle in the mouth, half in and half out. The needle attracts the oily juice of the bulb, and any number may be peeled without affecting the eyes.—*Prairie Farmer*.

For the New England Farmer.

MENTAL ACTIVITY AMONG FARMERS.

The human mind was made for action, and is active, to a greater or less degree. From the utmost imbecility of infancy, there awaits it unlimited power, expansion and ennoblement, attainable by gradual steps of progress. Not by flights or leaps, but by toiling self-culture, does it rise from the mists and darkness of ignorance to the elevation and clearer light of knowledge. On its own self will depend its progress and development. The obscurest son of poverty has within him the germs of greatness and happiness, and that will for application which oft takes the precedence of genius, is of more value than Cæsar's wealth, with all its advantages and luxuries. Mind, then, in its normal and healthy condition, is capable of continual progress, which should be sought by earnest effort.

Whether the mind or the heart, thinking or feeling, is entitled to greater regard, as more important, is a question long agitated and variously decided by different individuals. But the candid and enlightened will admit that the mind is of equal worth, and should therefore receive equal attention. As an illustration of the baneful effects of an opposite course, we have only to look at certain Christians who make the cultivation of the religious sensibilities the main object. Their mental capacity remains about the same as twenty years ago, and so connected by sympathetic bonds are the mind and heart, that the religious feelings of the latter, are often paralyzed and bound in superstition by the neglect and consequent narrowness of the former. Bigotry follows, as a natural consequence, which to all is obnoxious, and injurious to the free exercise of holy influences.

Considering, then, the nature of mind as progressive, and the study of all to allow it development by proper action, what degree of mental activity as favoring this do we find among the farming population? Many writers and orators, particularly on certain festive occasions, would make the occupation of the farmer very intellectual. They parade the names of nearly all the sciences, and very logically prove them connected with it. That they are, may be true. It is also true that some of the most practical and successful farmers have no knowledge of these sciences, except of a few facts and some general principles. Now, however much agricultural writers and orators may flatter the vanity of the farming community in regard to their "glorious occupation," and what it may be, still the facts regarding their present condition remain as proofs that the occupation is not wholly scientific, and that farmers do not yet rank with professional men in point of intellectual culture. A farmer in our country towns can get along, and be successful to a certain degree, with a practical knowledge of his business, as well as can mechanics with theirs; admitting, however, that science may be, and often is, called into the aid of both, and that with the most happy results. But this fact is sufficient to our present purpose, that farmers can succeed without extraordinary, and even with meagre mental acquirements and advantages. This fact that they can, is indisputably established by the fact that they do. Still it may be

said that farmers rank as high or higher in intelligence, sound judgment and general information than any other laboring class. There are many things in their occupation favoring this. Their judgment, in particular, is called into almost daily exercise, and thus strengthens and matures. But as for a real desire for mental culture and development, resulting in earnest mental effort, farmers as a class, to say the least, are much below professional men; though they may rank as high or higher than other so-called laboring classes. But aside from these comparisons, their mental culture and development is much less than from the importance and worth of mind, duty plainly indicates. And as one reason why their minds remain so dormant, their occupation not absolutely requiring extensive mental acquirements, their minds reach not that state of mental culture in preparation for business, which awakens earnest and lasting desire for knowledge. Consequently, if they have sufficient business tact and practical information for success, they remain satisfied. Some minds among farmers, as among all classes, seem ever to have that desire, or to have had it awakened, by the requisite degree of mental training; and they reach more elevated positions, and rank as leaders. Still, it may be questioned by certain persons, whether the farmer's occupation is consistent with the possession and indulgence of a literary taste; whether the continual cultivation of the intellect is expedient, or even justifiable, in connexion with manual labor on the farm. But with what assurance can one argue that a farmer's knowledge and labor should be limited to his farm, and that his study should embrace only such subjects as are intimately connected with it, and directly subserve practical skill. Lord Bacon says, "Studies serve for delight, for ornament and for ability. Their chief use for delight is in privateness and retiring; for ornament is in discourse; and for ability is in the judgment and disposition of business." Now it cannot be denied but that farmers, generally, have great facilities in leisure and retirement for mental improvement. And we doubt whether there is any class of men, taking these facts into consideration, with the fact that their physical exercise keeps the mind fresh, and their relish for mental food ever keen, that may experience more delight and real happiness in studies, than farmers. For ornament in discourse, many, and perhaps the general class, are deficient. Even in our most prominent agricultural papers, where on one page will be glorification essays on farming and on farmers, on another, will be anecdotes or stories in which one of the characters will be a farmer, and where roughness and verdancy will be fully displayed in the ideas and language imputed to him. And had it not somewhat of a foundation in truth, it would not be sanctioned by public opinion. Again, if studies are useful in the judgment and disposition of business, it is certainly a consideration also worthy of their commendation. The farm would furnish for it ample scope, and return satisfactory reward.

One reason why studies are contemned by practical men is, that those who use them are too apt to spend time over them to the neglect of their business. This the same writer calls sloth. A man must use judgment here, as elsewhere, in

regulating his time and attention to his wants and pleasures. He who does this rightly, does much toward forming his character to a perfect sphere; the true object of man's life. Besides, in perfect physical development, manual exercise on the farm, combined with proper intellectual culture, would furnish examples more noble than perhaps any other calling. Among farmers at present, it is not so universally the rule as among merchants, and one or two other classes.

One of the great objections urged against farming is the lack of mental activity—that the mind lies so dormant. Admitting that the objection has its origin in truth, we confidently assert that sluggishness or emptiness of mind is not at all necessarily connected with farming. The fault, from causes we have mentioned, and which exist unreasonably and unnecessarily, is with the farmers themselves.

To recapitulate, our points are briefly these. Every individual has an immortal element within, called the mind. This mind is intended, and thereby fitted, for continual culture and development; consequently, it is duty to comply with these, being the requirements of God. That for various reasons, the minds of many among the class called farmers lie in too dormant a state. That they have no sufficient and warrantable reasons for this, and that the pleasures and advantages they would derive from mental culture would be sufficient, and more than sufficient, for the required labor and time. And that to many the great objection to farming—deficiency of mental activity—is not really attributable to farming, but to farmers; and that this, with many other objections, would be obviated by the course here advocated.

Life is not for inaction, quiet repose and the gratification of animalism. Beneath the pathway of every man lie the springs of happiness, and he must patiently dig for them, who would refresh his soul with their cooling waters.

Wayland, Mass.

L. H. SHERMAN.

For the New England Farmer.

HUNGARIAN GRASS—HUBBARD SQUASH.

MR. EDITOR:—As considerable interest seems to be felt in regard to the Hungarian grass, I will give the result of a trial of it made last year by Moses Parkhurst, in Paxton, about eight miles west of Worcester. On the 21st of June, he sowed two-fifths of a pint of seed on a little less than four rods of ground; on the 26th of July it was headed out; on the 21st of August I saw the piece, and cut up some stalks which measured five feet high. The piece would average about three or three and one-half feet high; the heads had begun to "turn" some, at this time. Enclosed I send you one cut at that time. It was cut the 1st of September, and twenty-eight quarts of seed were threshed from it, weighing at the rate of fifty-two pounds to the bushel. The soil was a good loam, such as would be considered good corn land. I am not able to state its value for fodder, but see no reason why it should not be a valuable crop.

The Hubbard squash being somewhat noted, I will state that last year I sent to Mr. J. J. H. Gregory for some seed, and raised upwards of

twenty, about half of which appeared to be the Hubbard, and the others gave unquestionable evidence that their predecessors had been quite familiar with the marrow squash. Most of the pure ones have been very good; some of them have had quite a strong, rank flavor, which detracted very much from their merits. Some of them, cooked in the fall, were as dry and mealy as a potato, so dry that milk had to be put with it to get it through the sieve. It does not require half the sweetening of the common marrow squash. I have some in my cellar now, though somewhat decayed. They have kept about two months longer than the marrow.

V. P. PARKHURST.

Templeton, April 27, 1859.

REMARKS.—We have received some half-dozen samples of Hungarian grass seed, all corresponding with each other; also, a sample of the grass itself, from which we have threshed the seed, and found it agreeing with the samples of seed. None of these are like the grass you were kind enough to send us,—nor does it bear any special resemblance to them. We think your specimen is not the true Hungarian grass.

For the New England Farmer.

REMEDY FOR KICKING COWS.

DEAR FARMER:—I do not much like your correspondents' (A. F. Adams and S. B. Hartwell) method of treating kicking cows, nor do I believe such means effectual or necessary. They are dangerous experiments—much more likely to spoil than to reform.

A number of years' experience with a large number of cows and heifers, has fully convinced me that *kindness* is the only safe application to make to kicking kine, as well as to most other vicious animals.

There is always some cause for cows kicking to be found either in their condition, or in the mode of treatment pursued by those having charge of them. This should be sought after till found, and then the proper remedy applied.

Heifers not unfrequently kick, and sometimes menacingly use their horns also, at the outset of their cow-life, from fear or fright. Some wild and furious boy or man is set to milk them for the first time, seizing their tender and unaccustomed teats with rough and uncautious hands; the timid creature does just what nature suggests, and what we should expect, viz.: kicks the blockhead over, and our decision is, "served him right."

Now comes a critical point. If kindness and forbearance be now substituted for a beating, the cow may be saved—otherwise she is lost almost to a certainty. A little timely caution, however, may save all trouble and risk. Let the milker take with him—or her, (and females are uniformly better hands at milking than males,) to the stable some choice bit of food, and feed it to the frightened and trembling brute from the hand; pat and rub her carefully about the head and shoulders, talking soothingly and kindly to her till she shall make your acquaintance, which she will soon do, and manifest it by signs which

you cannot mistake. Then approach and handle with care, her teats and udder—see if they are swollen or sore, which will often be found to be the case, and if so bathe them long and patiently with soapsuds, applying a little oil or grease to any chaps or cracks that may be found, and then she is in readiness for a very gentle attempt at milking.

Don't hurry, nor be in any perturbation from fear of being injured, but sit up closely, and continue to talk low and kindly to your subject; be very cautious not to hurt or frighten her in the least, and ten to one your task will be accomplished without the movement of a single hoof.

This process continued, will tame and subdue the wildest and most obstinate heifer to a gentle and loving cow, and I have seen them exhibit a degree of affection which intelligence might copy with profit.

If such, or similar treatment, will not tame the heifers or reform the cow, let them be fattened for the shambles, and others more tractable take their places, rather than subject them to the rope, strap, chain bull-ring, club, milking stool, or any such barbarous inflictions.

Springfield, Vt.

E. INGHAM.

For the New England Farmer.

BEE-HIVES.

I have put off re-writing the article on bee-hives that I mailed to your address some months since, hoping that it might turn up. Not seeing it in the *Farmer*, I suppose the little money enclosed for the advertisement tempted some thief among the mails, who took the money and destroyed the article. The article referred to, was in reply to "Norfolk," on a charge of inconsistency, wherein he accuses me of "Preaching what I do not practice. That my instructions are not for myself," &c. This, as far as myself is concerned, amounts to but little, but perhaps some readers of the *Farmer* might wish to know as well as "Norfolk," what right I have to recommend one hive, and afterwards use another. I intend to make a full confession, and if it does not fully exculpate me from blame, it may somewhat modify their feelings. I would say first, that I cannot be charged with altering some simple thing about a bee-hive, when obtaining a patent, and charging all a few dollars, who can be persuaded to use it. All that the bee needs in a state of nature, is a cavity suitable for rearing her broods, and depositing her stores for winter. All that man requires in addition, is an apartment that can be removed with surplus stores. A single box in the plainest form was used for twenty-five years, and nothing found to surpass it in convenience, safety, economy or profit. Believing it the best for the apiarian of any class, I recommended no other in the work alluded to by "Norfolk." And now for the sake of being consistent, must I adhere to this throughout, and deny myself the advantages that may arise from the minds of others? I think I would rather risk his charge of inconsistency. "The best way is as good as any," and the moment that a man settles down into the belief that he has arrived at the summit of improvement, there is no further advancement for him. There is a vast difference in the ability

to discriminate between what is an improvement, and what is *suil* to be.

The Rev. L. L. Langstroth presented me with the movable frame, or movable comb-hive; I saw at once, that I could, if I chose, still use the simple box with the addition of the frames, and I could take out and return to the hive all the combs without injury to a single bee. I transferred bees and combs into some of these in the spring of '56. In '57 and '58, I introduced new swarms in a large number, and have found the following advantages.

Most apirists know that their stocks are quite liable in some seasons to overswarm, and have witnessed with regret, swarms too small to be worth anything alone, continue to issue till the parent stock was reduced too much, to contend successfully with the worms. And as a consequence, both old and new colonies would be lost. With the help of the frames, such ruinous operations can be prevented. A few days after the first, and just before the second swarm, the comb can be examined, and all the queen-cells removed but one. When the queen in that matures, it finds no opposition—quietly remains, and soon becomes the mother in the old stock. I will presume that the natural history relative to this point is understood. This operation cannot be performed with a hive, in which the combs are fast.

Artificial swarms are successfully made with but very little trouble, as follows. When most of the bees are out in the middle of the day, taking out the frames, looking them over carefully till the queen is found, when the frame containing her is put in an empty hive, setting that on the old stand; and putting the old stock in a new place. Enough bees will return to the old queen to make the swarm. If done at the proper season, enough brood will be in the combs, together with those just matured, to keep the old stock sufficiently strong. If no queen-cells about finished are present in the stock, it is nearly always practical to procure one from some other, with a queen nearly mature, to introduce, and thereby gain several days in breeding.

If, from any cause, a stock or swarm is weak, but otherwise healthy, it may be assisted by some strong colony, merely by taking a comb or two filled with brood, and giving it to the weak one. In a few days, the maturing brood will add materially to its strength. In the same way, their winter stores may be equalized in the fall; some stocks will have too much, and others too little. The changing of a few combs will make all right, and benefit all.

Nature had to provide drones for isolated colonies, and when we bring together a large number, this instinct for rearing drones is retained, and each produces its number; when in reality there is no necessity in an apiary of fifty or a hundred stocks for any more drones than two or three colonies might produce. So many drones cannot be reared without much labor of the working bees, and cannot be supported afterwards without a great consumption of honey. Several patents have been granted, the chief merit of which is a trap to catch and destroy them. But with the movable combs, we can take the matter into our own hands, and say in the spring whether we will have thirty, three hundred, or three

thousand, reared in any stock. It is done by removing the drone comb, or any part of it, and substituting worker combs instead. Without these cells the bees cannot rear drones if they would. It is now pretty well demonstrated, that the eggs of a healthy queen are all alike, and the sex of the future bee depends on the cell in which it is deposited. If every drone we have reared was a worker, it would not only support itself, but would be likely to add to the common stores. The advantages would be, in having just enough.

The size of the hive can be graduated to suit the wants of any colony. If there are too many combs to be properly protected from the moth, a part may be taken away, and returned as needed.

The loss of queens in most apiaries is a serious damage. Except within the first few days after its occurrence, there is no further means of ascertaining this fact, short of several weeks; by which time it is often too late to save the stock. But with the frames it can be ascertained at any time; and after the young queen commences her maternal duties, only a minute or two is required to examine the brood combs; any cells containing eggs or brood indicate her presence. If she is lost, another can be provided in time to save the stock.

These are some, but not all the advantages that I have found in the movable combs. Suppose that I had recommended this movable comb hive immediately on being satisfied that I could make it profitable; and then, as with many other beautiful theories, failed in practice. I should have been worse off, than to be accused of "preaching what I did not practice." Prudence should prevent any one from recommending an improvement based on theory alone. "Consistency" dictates a different course. I have now used these frames three summers, and know from experience what I say respecting them. Having found them beneficial for myself, I think they might be so to others, and consider it a duty to give the public *all* the knowledge I possess in bee culture. I have, therefore, added an appendix to my treatise, giving directions for making and using these frames, an advertisement of which is enclosed.

"Norfolk" calls the "movable comb hive, unwieldly." I have seen some that I think are so. But I apprehend this to be a matter of taste; as I make the hive, there will be no complaint in this respect. The principal of the movable combs is the point that I consider constitutes the advantage.

In the controversy about the triangular guide, I have but little interest, further than I should be pleased to have all admit that it was public property. Whoever succeeds in establishing a claim, should give us something a little more reliable—something that would give us straight combs with certainty; because now a colony will occasionally make their combs crooked, and are of no value as movable combs, on that account.

I have given what to me are valuable points in the movable comb hive, and the reasons why they are so. Now will "Norfolk," "Clark," or any one, give us through the *Farmer* as minute an account of the "Union hive"—in what consists its superiority? It will hardly be satisfactory to say it is better, without pointing out what particular

makes it so. I am willing to adopt anything that is shown superior to what I already possess. My likes and dislikes are governed by what appears the utility of the thing.

In criticisms on this subject, it is best to avoid personalities. I shall consider I am not called upon to answer anything of the kind.

St. Johnsville, N. Y.

M. QUINBY.

For the New England Farmer.

CATTLE AND HORSES EATING BOARDS AND BONES.

A "Vermont Subscriber" asks "the reason why his cattle eat old boards and bones?" I presume the reason is, because he has kept them too close yarded, and has not let them get to the fresh earth during the winter, so that they could have the privilege to eat dirt, grass, shrubs, &c., as is natural to cattle and horses. After cattle have run out and grazed all summer, and then taken them up to hay, dry fodder and close confinement, they soon begin to hanker for a fresh bite of grass, or to lick the ground, and if you let them out, it is not uncommon for a creature to eat a pint or even a quart of fresh earth at a time. When I have been plowing in the spring I have had oxen want to stop and lick a mellow looking spot of earth that had been turned up by the previous furrow. I always let them stop and eat all they want. Cattle and horses should be let to run out on a field or pasture occasionally, during the winter, to gnaw the ground and grass roots, and if the snow covers the ground for a long time together, they should be supplied with a few shovelful of fresh earth from some clean place under the barn, or from the roots of an old decayed tree, if it can be had. I never knew cattle to gnaw the fence or their cribs in the summer when they run out, or even when they run at large in the winter, and if "Subscriber's" cattle have had access to the ground during the winter, and still gnaw boards, &c., they are unlike any cattle that I ever saw; will he please tell us about this? It is the same with the horse; I often hear people complain of their horses gnawing their cribs.

Colts are raised in the country, and graze in the pastures for more than half the year for their living, and when they are old enough to be put into stables and put to close confinement and hard work, and especially when they are brought to the city, they are changed from their native element of grazing, and rolling and stretching themselves out at full length on the ground to rest, and as the good people of old longed for the leeks and onions of Egypt, so they long and hanker for their old grazing pastures of the country, and in their faint stomach-hankerings do the next best thing, and gnaw the cribs, and every carriage and sleigh back they stand next to.

I purchased a five-year old horse six years ago, that had been brought from Vermont one year before, and in three weeks after I purchased him, he had gnawed through the bottom of a two inch plank crib, and before I discovered that he was a cribber, for my man took care of him. After this I put him out in a little yard two or three times a week, and let him pick some grass and ground, and roll for an hour at a time, if I could not spare

his services longer. I kept him two years, and after six or eight weeks he scarcely scarred his crib by biting it.

Four years ago I bought a five-year old mare, that had been brought from New Hampshire and stabled in Boston six months for sale. When I got her she would eat an apple tree limb as long and large as an ox goad, and I saw her strip a piece off a sleigh back, eighteen inches long and as thick as my thumb, and eat it, paint, varnish and all. I led her out two or three times a week, and held her by the halter while she rolled, and then hitched her to the fence, for I had no better chance, and treated her to as much old frozen grass and ground as she could reach. It entirely cured her gnawing in two weeks. So I have treated four horses within six years with perfect success, and I think if stable keepers should provide a soft place, 30 feet square if they could not get larger, for their horses to roll, three or four times a week, (for it is natural to a horse to roll and it rests them when tired,) and keep a barrel of fresh earth for them to eat when they want, their horses would be much more healthy, and they would have no cribbers.

Blinkers and check reins also deserve an article, but from some one more capable of expressing his thoughts on paper than

Malden, Mass.

A. S. HALL.

REMARKS.—Your remarks, friend Hall, are practical, and will undoubtedly be extensively useful. Now give us some as good on those useless and cruel tormentors, blinkers and check reins, and you will do the community a good service.

DRAINAGE---WHEAT-GROWING--- UNIVERSAL PLOW.

LETTER FROM LEVI BARTLETT, OF WARNER, N. H.

Warner, May 11, 1859.

MY DEAR SIR:—With much satisfaction I have perused your new work on "Drainage." Such a book was greatly needed, and I hope it may be largely patronized by our New Hampshire farmers.

It is now more than twenty years since I commenced underdraining my naturally wet farm, and I have done more or less at it every year, during that period. I have mostly used stone for the purpose, but in some instances they have failed by the burrowing of field mice and moles. I trust the time is not far distant when drain tile can be had at reasonable cost by the farmers in the interior of our State. There is a vast amount of valuable land in the State that needs draining, which, if properly done, would add tens of thousands of dollars to the agricultural interests of "the old Granite State."

I have succeeded in growing fine crops of winter wheat on underdrained land. From five years' experience in growing winter wheat I am full in the faith that it can be successfully grown in New England. There was a large amount sown in this town, last fall, and it is looking splendidly now. But to grow wheat successfully here, our farmers must better understand the true principles of preparing and manuring the land for the crop.

The improvement in agricultural implements

within the past twenty-five years is truly astonishing. It is mere pastime to labor with these improved implements, compared with that of wielding the old-fashioned tools used by our fathers. I have recently obtained one of Nourse, Mason & Co.'s "Universal Plows," with its series of mould-boards. I think it must soon become a general favorite with our progressive farmers. I am just getting ready to give it a fair trial. As yet I have only used it as a stubble plow, and find it A. No. 1. The team is ready to hitch on to my new plow, and I must exchange the pen for the plow-handles.

Yours, most respectfully,

LEVI BARTLETT.

HON. H. F. FRENCH, EXETER, N. H.

For the New England Farmer.

CRACKING OF APPLE TREES.

MR. EDITOR:—Your correspondent, S. D. M., of Mansfield, states that he has lost a number of apple trees the last winter, by the bursting and splitting of the bark, and asks if there is any remedy. I am afraid there is none but to dig up the trees and replace them. My own loss has been severe. I had two rows of fine, thrifty apple trees, planted in the spring of 1850. They had grown vigorously, were from twelve to eighteen inches in circumference, and had commenced bearing. Of these, I have lost ten, that I certainly would not have sold for two hundred dollars. One pair, especially, of Baldwins, so handsome as to be the admiration of all my visitors, was well worth a hundred dollars.

I discovered the injury some time in January; the bark was split from the lower branches to the ground, some five or six feet. The split was sometimes on one side of the tree and sometimes on the other; and before I finally dug them up, this spring, I satisfied myself that there was no hope of saving the trees, for I was able to pass my hands under the bark, on either side, and meet my fingers behind. One which stood near the barn cellar will survive, the split being only about eighteen inches long and the rest of the bark sound.

What was the cause of this mischief? These trees grew on a heavy, strong loam, resting on a hard, firm subsoil, retentive of moisture. The last summer was cold and wet, followed by a very mild and pleasant fall. So remarkably mild was the season, that I had dahlias in flower until November 10th, or three weeks later than ever before, and on that day gathered from my garden bouquets of flowers. The consequence was, the trees made a late and vigorous growth, and had not matured and ripened their wood. On the night of the 10th of November the temperature changed suddenly; on the morning of the 11th the ground was frozen hard, and ice made in small pools, strong enough to bear a man. Two days afterwards, on the 13th, my son was skating on a neighboring pond! The change from a summer to a winter temperature, so sudden and almost instantaneous, caught the trees full of sap, which froze and burst the bark as soon as milder weather thawed it. This, in my opinion, is the cause of the trouble; if any of your correspondents have a different solution, I hope to hear it.

The lesson I draw, is the importance of creating a dry soil by draining. Had this land been as thoroughly drained last year as it is now, I think I should have saved my trees. Of a large number of pear trees, and a few other apple trees, growing on similar soil, *but thoroughly under-drained*, I have lost none. C. A. HEWINS.

West Roxbury, May, 1859.

REMARKS.—The loss of which our correspondent speaks, to us would be a serious one. Money in any amount, would scarcely pay us for trees planted and reared by our own hands. We have had several fine apple trees badly cracked, but they have all lived, and appear to be doing well. The true mode of preventing it is, undoubtedly, as Mr. HEWINS suggests, underdraining.

TRANSACTIONS OF THE ESSEX AGRICULTURAL SOCIETY.

This is quite a volume, and one of the most interesting and valuable that has been issued during the past year. Eloquence and poetry have contributed their charms to add to its value. The addresses of Dr. LORING and EDWARD EVERETT are both eloquent and instructive, and Giles Corey's second dream is full of humor and wit. Then follows an account of the bequest of the Treadwell farm, and the arrangements for its management which have been made by the Society, and the contract with Mr. Brown, the farmer who has taken it in charge. We shall watch the operations on this farm with much interest. After these, commences the Report proper, with a paper of great value upon fruit culture, by J. M. IVES. Whatever he says upon this subject is reliable and instructive. He is entitled to speak, for by long experience and critical observation, he has acquired much knowledge in this department.

The next paper is a beautiful essay upon a beautiful subject—Flowers. The display of flowers was an attractive feature at the Exhibition. The 160 varieties of dahlies, with their 300 blossoms, was an exhibition by itself well worthy of a visit, and we think the \$8 premium well bestowed. There were \$40 awarded for flowers, and their display contributed more to the promotion of taste and refinement, than the exhibition of fast women, or fast horses, on any trotting course in the State. The letter of N. PAGE, on the robin, as a devastator of fruit, is racy and entertaining.

There is a valuable report by G. P. SARGENT, on the comparative value of crops as food for cattle, well worth a careful study, and shows much research upon an important subject. The reports of Dr. LORING and Mr. ROGERS, upon milch cows, are drawn up with much care, and are model reports. Liberal premiums were award-

ed for stallions, breed mares and farm and draft horses. Trotters and roadsters do not seem to have been admitted to the lists, not being considered farm stock. Sixteen premiums were awarded for plowing. Good plowing is always considered worthy of encouragement by the judicious managers of this Society. We are sorry to see a movement to abolish plowing-matches, though we confess that they need some radical changes.

There are valuable statements respecting the work and construction of *mowing-machines*, a subject of much importance to farmers who feel the need of such machines, and are unable to decide which is the best. There is an interesting paper upon *Poultry*, by JAMES J. H. GREGORY, and a valuable paper upon *Manures*, by WM. D. NORTHEAD, which contain much important instruction. The statement by SAMUEL RAYMOND, about his farm, will amply repay a careful perusal. Those on *underdraining* and the *reclaiming wet meadows*, show that these important subjects are receiving due encouragement in Essex.

The statements on the various subjects to which we have referred are carefully prepared. There are several of them which we should be glad to analyze, and point out their excellences. No awards are made by the committees of this Society without careful statements. This is as it should be. For these statements, when properly prepared, are really the most valuable part of the reports, and no premium should be awarded without them. The statement should be considered a part of the object for which the premium is awarded.

The volume closes with a list of the books contained in the library belonging to this Society, which is much the most valuable library belonging to any county society in the State. This library has contributed very much to make this Society what it is,—one of the most flourishing, harmonious and successful societies in the State.

For the New England Farmer.

DISEASES OF HORSES.

MR. EDITOR:—The 11th day of January last was the coldest day I ever experienced. A day or two after, I discovered that my young horse was diseased, and supposed it was caused by the severity of the weather. Upon examination I found the disease was in her spine, at its junction with the hips, as there she was very sensitive.

It is not necessary for me to describe the condition she was then in, for her disease was strikingly similar to that described by your correspondent, W. D. Searl; she continued to grow worse until her hind limbs were well nigh useless.

Of the nature of the horse and of his diseases I am totally ignorant, and having no one near

me capable of giving instruction, my only resort was to the small stock of common sense I possess. My judgment dictated a different course from that pursued by Mr. S. I neither took blood nor gave physic, but thinking that strength was better than weakness, I gave her a more generous diet—applied beef brine to the weak part often, and a stiff brush, and kept her covered with a warm blanket, (she had never been blanketed.) This treatment proved salutary, and she is now as well as ever. So sick was this beast at one time, it was thought she could not live 48 hours.

West Windham, N. H., April 20, 1859.

MARKET DAY AT NORTH ANDOVER.

The second of the market days or agricultural exchanges established by the Essex County Agricultural Society, was held on Tuesday at North Andover, about two miles from Lawrence. In point of attendance and extent of sales, of course, it was not so large as the market day at South Danvers a fortnight since. Considering the chilliness of the day, the busy season, and the fact that this was a first attempt at North Andover, the fair was as successful as could have been expected. In the middle of the afternoon, in the height of the bargaining and sales, some rain fell, which, of course, threw a damper on everything. The pens of the Society were erected on an elevation near the depot, and there were three or four hundred persons present most of the time. The entries of stock with the Secretary consisted of 22 horses, 95 swine, of different sizes, including pigs, 126 horned cattle, including oxen, steers, heifers, cows, calves and the like, about a dozen sheep and a number of coops of fowls. There were several good stallions brought forward for exhibition by their owners, and among the fat cattle some excellent specimens, including a pair weighing 3190 lbs., belonging to J. H. Barker, of North Andover; a pair weighing 3058, belonging to William Foster, of North Andover, and a yoke weighing 3360, to Dean Andrews, of East Boxford. There was one fat steer five years old, weighing 2400 lbs., which belonged to John Barker, of North Andover. In the matter of fat cattle the show was excellent, including no less than 14 yoke.

Among the private sales, a yoke of fat cattle belonging to J. French, of Danville, N. H., and weighing 3380 lbs., were sold for 8½ cts. per lb.; two fat cows, J. P. Putnam, Andover, 7¾; two heifers, for \$35; a sheep and lambs for \$12; one calf and sheep for \$8, and there were some other private sales which did not become known as to price, and were to drovers. Some shoats for \$4.50 each.

The sales at auction were more numerous. A yoke of oxen was sold to J. W. Smith, for \$52; another yoke to some person for \$100; a young bull for \$9; a horse for \$18; a cow for \$20, to Mr. Dame; a cow and calf to Seth Chase, for \$32; a horse belonging to Mrs. Sargeant, for \$44; another for \$41; an ox-cart for \$30; another for \$15; a wagon for \$63; horse-cart for \$11. There were in all some thirty sales at auction, but in many of these cases the animals were bought in by the owners, to save loss.

There were several wagon-loads of vegetables on sale, and that was all. Much attention was attracted by the agricultural implements exhibited on the ground, including a horse-hoe, some mowers and reapers, and the like.

The Board of Trustees held a meeting at the engine-house at 10 o'clock. Dr. Robinson, of West Newbury, presided, and Allen W. Dodge, Esq., of Hamilton, was secretary.

Mr. W. R. Putnam, of Danvers, made a well-founded report showing the great success of the fair at South Danvers a fortnight since. Reports were made in favor of holding market days as follows:

At Newburyport on the second Tuesdays of April and October; the fair in October will coincide with the annual fair of the Horticultural Society at that place, under the presidency of Dr. Kelly.

At South Danvers on the 3d Tuesday of October, annually.

At Georgetown on the 3d Tuesday in June, when will occur the annual meeting of the Board of Trustees of the Essex County Agricultural Society.

At North Andover, annually, on the 2d Tuesday of September.

At Lawrence on the 4th Tuesday of October.

Committees of Arrangements for the different market days were thus appointed:

At Lawrence and North Andover, J. Kittredge, of North Andover, H. K. Oliver, of Lawrence, J. H. Morse, of Lawrence, J. O. Loring and Otis Bailey, of North Andover.

At Newburyport, Major Ben: Perley Poore, Dr. Robinson, of West Newbury, Enoch S. Williams, of Newburyport, Paul Titcomb, of Newbury, Col. Colman, of Newburyport.

At Georgetown, Major Ben: Perley Poore, of Newbury, Moses Tenny, S. Little, George W. Boynton and Col. Nelson, of Georgetown, and D. S. Caldwell, of Newbury.—*Traveller.*

For the New England Farmer.

PREPARING MEADOWS FOR CRANBERRIES.

MR. BROWN:—I noticed in the *N. E. Farmer* for April 16th an article on raising cranberries which did not correspond with my views on the subject.

Your plan of covering the ground with sand is, it seems to me, too expensive, when the ground can be prepared as well, at less cost. My plan, (and I have had some experience,) is to take a piece of swamp, or meadow, which can be flowed, and keep it flowed for three years, which will be sufficient to kill the grass and bushes. The land is then in an excellent condition to set the vines, soft and mellow. The vines should be set near together, the nearer the better. The brush need not be removed from the meadow, as the vines will climb upon it, and in a few years it will rot and sink. I think this a much better way than sanding the ground. A layer of sand four inches thick, at 10 cents per yard, would cost \$56 per acre.

As the land which is best fitted for cranberry culture is, usually, the poorest for other purposes, and as good land for cranberries can be pur-

chased for from \$5 to \$10 per acre, it seems to me that when they can be brought into good condition in three years, by water, at very little expense, it is folly to expend \$50 per acre to hasten the growth two years. Besides, it is usually considered here that the deep muck of swamps is more favorable for the growth of cranberries than sand.

Land for cranberries, it is almost indispensable to have plowed in winter; in fact, their cultivation, where the land is not flowed, will always be attended by trouble and considerable expense, as the frost is sure to throw them out of the ground in winter.

I should like to inquire if anything can be done to prevent the frost injuring the berry? Would peat, old hay and brush, burnt in the meadow during frosty nights, save the berries?

ADDISON FLINT.

North Reading, May, 1859.

P. S.—Since writing the above I have seen a query in the *Farmer* in regard to the time of setting cranberries.

In answer to that I would say that experience has taught me that October is the best season to set vines, if they are to be covered with water; otherwise, May.

A. F.

REMARKS.—MR. Flint is one of the most successful cranberry producers in our knowledge. We have visited his meadows, and found them exceedingly fruitful, and the fruit of the finest kind.

When we spoke of covering land with sand, we intended to refer only to small patches sufficient to raise a supply for a single family's use. When a sand bank is directly on the margin of the meadow, however, the reclamation may sometimes be profitably made in this way.

For the New England Farmer.

GUANO ON ONIONS.

MR. EDITOR:—In the *N. E. Farmer* for April 23d, I saw a communication from "South Danvers." He says, "my neighbors wish to know something more about Mr. Emerson's discovery whereby he received a good crop of onions." And yet he says those same neighbors know every rope in the ship. No one can tell them anything about onions, &c. I only stated a fact that passed under my own observation, not to instruct people who know every rope in the ship, who cannot learn anything new, because they know every thing about it. For such people are beyond being benefited by any teaching.

I wrote it for the benefit of those who were not perfect, who, like myself, like to read the experiments of others, and profit by them, or, at least, try such as may benefit them.

I stated that I noticed that my onions were wilting; I should think one-third were down. I examined the wilted ones and found a maggot in the stalk, just above the onion. I sprinkled on a good coat of guano, and no more died, but the two-thirds grew finely. Whether all died that would have died, if I had not applied the guano, I could not tell. I supposed I should have lost them

all, or nearly all, if I had not applied the guano, as I had in years before.

That trial was in 1857. In 1858 I applied the guano in season and had no trouble with the maggot. They might not have troubled me if I had not used the guano. I do not know every rope in the ship. I raise very few onions—just a small bed for family use. Never raised 100 bushels in my life, and most likely never shall.

I sprinkled the guano on the onions, probably at the rate of 400 or 500 lbs. to the acre. I was satisfied with the result, and shall try it again.

ED. EMERSON.

Hollis, N. H., April 29, 1859.

EXTRACTS AND REPLIES.

BET SUGAR, AND PAPER FROM BEETS.

I was pleased to see the sensible article from the pen of your intelligent correspondent, Mr. Cruickshank, in the *Farmer* of May 7, on the value and use of beets for making sugar and paper. I have often thought, as I have been through a pretty thorough school of mechanics, and now a farmer, that if I had the capital, I would go to France and see the thing done, of making beets into sugar and paper, and then start it here. I am quite sure that there is no place where there is a greater per centage of sugar in the beet, and but few where it is so large, as in the free, sandy soils of Plymouth county. I have not a doubt it would be a paying business, combining Yankee ingenuity with French experience.

Please keep the "ball in motion" until capitalists can see that they can make money in producing clean sugar for our own use, sugar that has not been through the careless, slatternly hands of persons who have no interest in making it or keeping it clean.

CALEB BATES.

Kingston, May 9, 1859.

GRASS ROOTS AND "SWARD WORMS."

As your paper is made a medium through which the ignorant can display their ignorance and the learned impart their knowledge to others, I wish to make a little inquiry.

I have a field the soil of which is a deep, dark-colored, firm, moist loam, free from rocks, with the exception of a few granite boulders. After having been laid down to grass about three years, the grass roots are entirely destroyed, leaving but little sward on the field, and destroying the grass crop almost entirely. From the fact that there are great numbers of large white worms, known as "sward worms," to be found in the soil, I have been led to suppose that it is this worm that commits the depredation. If you, or any of your correspondents, have had any experience similar to this, or have seen anything of the kind, and can give or suggest a remedy, it will be gratefully received through your paper.

Greene, Me., April, 1859. ANDROSCOGGIN.

HOW TO RAISE CABBAGE.

Make a hole in the ground three or four inches deep with a stick, and put about a teaspoonful of fine salt at the bottom of the hole; rattle a little dirt in on to the salt, and then set the

plant. About a week after the cabbage has been set, taken root and begun to grow, put as much salt in a circle two or three inches from the plant on top of the ground; take care that no salt comes in direct contact with the roots. Do not put much manure under the plants, but leach the manure and put the liquor round them at sundry times. Do this, and I will warrant good cabbages.

WASHINGTON HALL.

Brewer, April, 1859.

LAW REGULATING THE SALE OF MILK.

Does it render farmers liable for delivering milk to the milk-venders who provide unsealed cans for its reception?

How does it affect existing contracts?

If under present contracts milk-venders refuse to provide sealed cans, what is the farmer's remedy? Shall he refuse to deliver, as heretofore contracted, or shall he deliver as usual, and obtain satisfaction by process of law?

When does the act take effect?

REMARKS.—We refer our correspondent to the entire law given in the *Farmer* of April 23, and which will be found in the monthly for June.

WIRE FOR FENCES.

What kind of wire is best for a fence? What is the cost of it, and where may it be obtained?

SAMUEL B. BIRD.

Framingham, May, 1859.

REMARKS.—We think number six wire the best size for a wire fence, though some persons use a much larger size. It costs about six cents a pound.

Mr. Bird has some of the long red potatoes for sale, recently inquired for. Price 60 cts. per bushel.

POTATOES.

The potatoes I send are a variety raised from the seed about fifteen years ago; they are an excellent, early potato. By your description of those sent you by Mr. Hazeltine, of Strafford, I think this may answer his inquiry, as I gave some to a man that lived in Strafford some years ago.

Thetford, Vt., May, 1859. A. C. HOWARD.

REMARKS.—Mr. Howard has our thanks for the nice potatoes sent us. They are not the color or form of those sent by Mr. Hazeltine. We will plant and test them.

TRANSPLANTING PINES.

Can you or any of your subscribers inform me, through your columns, the best time of year to transplant pine trees from the woods to decorate grounds around one's house, &c. Also, if any particular care is needed as to their transplanting? I wish to learn where I can obtain a "Muscova Drake" and two "Muscova Ducks," of the best breed known. Where may I be able to obtain them, and at what price? Any reply will be appreciated by your faithful reader and old subscriber,

"OAK HILL."

May 12, 1859.

MAPLE SUGAR.

Damon Bridgman, of South Hardwick, Vt., has made this season 7,100 lbs. of tip-top maple sugar.

Joseph Stevens, of East Hardwick, has made. I understand, over four tons. Beat this you Chinese cane breakers, if you can, at the same cost.

F. J.

Hardwick, April, 1859.

PLUM TREES.

I have some red plum trees which blossom full every year, but do not bear much; I have some white ones, also, which are set with the red ones, which bear. I have tried a great many things which have not done any good, and would inquire if there is anything that would make them bear? The trees are very thrifty.

Bethel, Vt.

A SUBSCRIBER.

For the New England Farmer.

PLANTS WITHOUT LEAVES.

MESSRS. EDITORS:—Having seen in the monthly *Farmer*, February, 1859, page 59, an article entitled "Roots cannot grow without leaves," and thinking the writer in error, I will state my opinion. It is a known fact that there are numerous exceptions to the general rule; for instance, there is the plant found growing in wet places, known as the bulrush; it shoots up numerous spikes or stems, that are from one to three feet in height, and from one-fourth of an inch in diameter downwards, without leaves, or the appearance of leaves, for the first four or six weeks, when it throws out the short stem on which the seed grows, but not any leaves. If any one doubts its having roots, try to pull one up! There is the button rush, with a stem of the thickness of a goose quill, or larger, but it has no leaves. There is the house leech, or live forever, the top of which will grow any length of time, severed from the roots, and suspended by a string. A good way to kill the Canada thistle is to cut off the top, close to the ground when in blossom, when the stalk is hollow. When it rains, the water runs down the stalk, and rots the roots. The absence of leaves will not do it, for without hollowness of stalk, you may cut them from July to December, clip, or burn as you please, but without effect.

REGULUS.

Ripton, Vt., April, 1859.

For the New England Farmer.

WINTER WHEAT.

Hundreds of farmers in this State do not raise this grain, simply because they think they cannot. I have tried both upland and intervalle, and find it does best on upland where I never manure it. I always select good, warm pasture land, (the older the better,) free from strong winds and standing water, and where the snow remains on as long as on any part of the farm. Break it up any time in July or August. Sow from the 20th of August to the 1st of September, at the rate of one and a half bushels per acre. Get it in two or three inches deep, if possible, with a plow or cultivator. After it is up a

coating of plaster, lime or guano, will help it very much, especially if dry. Prepare the seed the same as for spring wheat. Wash thoroughly, pickle in strong brine twelve hours or more, and mix with ashes or slaked lime.

In this way I get from twelve to fifteen bushels per acre, and think it doing well without manure. Have never tried manure on upland, but presume it would do well.

The kind of wheat called the White [Winter? E.L.] Blue Stem stands winter best. I have raised the above quantity, per acre, without applying anything but dry wheat and simply harrowing it in.

N. F. MORRILL.

Sanbornton, N. H., May, 1859.

REMARKS.—Excellent, plain, and reasonable suggestions. Try them. By applying a moderate quantity of well rotted manure to the pasture land spoken of, we have no doubt the crop would be increased from twelve and fifteen bushels to twenty bushels per acre.

CLAY AS AN AMENDMENT TO SANDY SOILS.

Soils void of clay, or containing it in too small a relative proportion, are materially improved by a top-dressing, and particularly when the clay finds its way to the soil through the compost heap. In such case it exercises its peculiar power of absorbing ammonia and other products of decay, and afterwards yields up to plants the materials thus absorbed. While the clay is thus performing an useful office, itself is changed in condition so as to lose its greater tenacity, only holding this property in a sufficient degree to add firmness to sandy soils after its addition. The quantity of clay required to amend a sandy soil incapable of retaining manures, and indeed when even blowey, is not as large as many suppose. One thousand bushels per acre is sometimes quite sufficient, if evenly spread and left on the surface for a time, before being plowed in, so that rains and dews, assisted by sun and air, may cause the division to become more perfect. It is not the clay alone which corrects blowey sands, but in addition to its own effects directly, the roots of crops, grown by its assistance, lend their aid. When clay and vegetable mould can both be added to sandy soils, as in the vicinity of muck deposits, then the amendment is still more perfect.

The value of this kind of amendment is its permanency; for as the clay is not appreciably used by plants, it continues forever to imbue the sand, and each year to re-perform its function of retaining gases, abstracting valuable constituents from solutions, in addition to its mechanical use in giving the necessary solidity and adhesiveness to the soil.

Many are not aware that some sandy soils, notwithstanding the peculiar light condition of the dry surface, are still more difficult to disintegrate deeply by a sub-soil plow than heavier soils, settling by rains like a sea beach; in such sands many kinds of clay seem to act as a lubricator to the surface of their particles, and after being clayed, they may be the more readily plowed.—*Working Farmer.*

For the New England Farmer.

HORSES.

Too much vigilance is seldom known on the part of proprietors of mares, in selecting a horse to breed from. Hundreds of horses are offered, and urged as breeding stallions, a large number of which are objectionable by way of sad blemishes, bad proportions, or age. Their proprietors have a smooth story to tell. If his feet are contracted, small and of course weak, that is nothing, he was stabled too young. This stock will be just as good as though he had good sized and strong feet. If his knees are sprung, small, and of course weak, the story will be, he was put into a stall of some peculiar form, that caused his knees to be so. But that will not affect his stock. And so of all other weaknesses, disproportions and blemishes. Old horses, or mares, are objectionable for breeders, from the liability of their stock to possess the debilitating effects consequent upon age, which may not be discovered until labor is required of them.

Stallions are taken to the premises of persons, and many good qualities asserted and urged to induce patronage. I would say, hesitate, look for yourself, if you have confidence in your own judgment, if not, take some friend who is unbiased, to assist you. Generally, the best horses are not taken around the country for customers. If a horse has a reputation at home, he may stay there and save his proprietor much labor and expense. I would select a horse to breed from with every good quality possible, combined, viz: feet, which should not be contracted or flat; legs which should not be too slim or clumsy, but wide and sinewy; well spread knees, and prominent hocks; cords large, and highly developed muscles; full in the flank, deep in the chest; round barrel, a well placed shoulder, neck long enough so that he can put his head up or down; not too thick under the joles, well proportioned head, and active ears.

If I wished to raise horses to sell in the city markets at high prices, I would select a stallion, the nearer thorough-bred the better, about 15½ or 16 hands high, with the above qualities, weighing about 1100 pounds, and possessing action of the highest degree. It is a fact that farmers may increase their interests in horse-raising to a very great extent, by judiciously selecting stallions and mares, the former of which is very much more under our control than the latter.

A. N. E. FARMER.

For the New England Farmer.

RAISING GRAPES.

MESSRS. EDITORS:—Within a few days I have become possessed of information in the culture of the grape, which is new to me. It may be so to some others who would like to grow the Catawba and Isabella in perfection, but are deterred by repeated failures.

A distinguished horticulturist residing within hail of Plymouth rock, told me a neighbor of his was enabled to ripen his Isabellas in perfection, having built a coping of some two feet on the top of his trellis. Confirmatory of the above, I give you an extract of a letter, received from Bridgeport, Conn., a few days since. "I find no

mildew on my vines when they are trained under a projecting cornice of my barns, so that they get no rain or drip. I have on a western exposure the most perfect Catawba and Isabellas when thus protected; while part of the same vines which are not so protected, but which continued beyond, are ruined in fruit and leaves. This has occurred for several years in succession. I have no doubt that vines on a lofty trellis or wall, with a coping of two or three feet, would be entirely free."

E. W. WIGHT.

Delham, May 2.

For the New England Farmer.

IT LOOKS VERY LIKE A SHAM!

MESSRS. EDITORS:—I have before me, and I presume many of our friends have received the same, a stylish circular, which calls upon all creation and his brother to save trees, plants, vines, and millions of dollars a year, simply by the purchase of a certain magical powder, which works in a magical sort of a way, throwing all the wonders of the ancient necromancy, far into the shade. The author tells us a great many wonderful things in this circular. It appears that this powder of his has only to be tucked under the bark of any tree, to give marching orders to every insect, from buds, leaves, bark, wood or fruits. *Mirabile dictu!* The theory of the man who controls this wonder-worker, is, that the tree has some way of swallowing the powder, and disseminating it throughout its structure. Being but an inquiring Yankee, I would like to ask him a question or two. Just to give him convenient standing-room, we will assume that the tree will take this powder into its circulation when thus applied; now, with the perpetual circulation of the sap during the growing season, and the continual change of raw material into organic structure, by what magic is it proposed to keep the virtues of this powder permanently in the tree, so that every new bud, leaf and twig, as it develops, may receive its quota of the marvelous protective power? If it is a fair inference that the protection, which he says, is the results of its application, turns on some disagreeable flavor given to the buds, leaves, fruit, &c., whereby the marauding insects become disgusted with their food; may not we, poor pigmies, be permitted to indulge the hope that at some very early day this great patent-powder man will extend the area of his benevolent operations, and enable each of us to flavor our fruits to suit our palates? What a capital thing it will be to have, say a patent "sweet apple powder," subject to our dimes, by clapping which under the bark, all our savage old crabs will forthwith be compelled to set their internal laboratories in action, and manufacture sugar to order, instead of vinegar! When these halcyon days dawn, farewell to budding and grafting, relies of primitive ignorance; I shall then have merely to shake a paper of the patent-powder on my old choke pear stalks, when, lo! this one, despite any natural aversion to the contrary, must yield Bartletts, and that one must yield Seckles; all opposition will be utterly useless; Mr. Patent-powder says so, and therefore old "choke" can't help itself.

There is one other question I would like to

ask this public benefactor, whom, I trust, the grateful public will not permit to wilt away like so many neglected geniuses of this class: Was it his great-grandfather, or was it his great-great-grandfather, that aroused a slumbering world, about a century or so back, by the wonderful discovery that all vermin and diseases of every kind might be expelled from our fruit trees, simply by boring holes into the trunk and filling said holes with good New England rum? And was it not his great-uncle who discovered, somewhat later in the day, that the enemies of our noble elm would be easily repelled upon boring like holes and filling with quicksilver? I feel a great interest in making these inquiries; I always love to look twice on the physician who tells me he is the seventh son of a seventh son, and am somewhat anxious to know whether our patent-powder man is not one of the same distinguished class.

There is one other miracle which he claims for his powder, and that is, if one table-spoonful be dissolved in a gallon of water, and any variety of garden seed be soaked in the solution, the plants which spring from these seed, will be preserved from the inroads of insects! Whew! Where is Mr. Mayor Tieman about these days?

A few years ago another distinguished friend of the farmer, (perhaps another relative of this philanthropist,) asserted, that after a pilgrimage of darkness and doubt, lo! these many years, he had suddenly found light, and discovered a sure preventive of the black knot on our plum trees, offering to reveal the same, for a consideration. Recently, I visited his grounds and looked with curiosity for the results, when, lo! the stumps of many plum trees were to be seen, but one or two trees remained; and alas, for human conceit, there stood the villainous black wart; there could be no mistake about it.

Now, I presume our patent-powder man has an extensive area, abounding with trees, shrubs, vines, &c., &c., all fully protected by his patent-powder, and open to public inspection, in proof of the perfect success of this original wonder-maker.

In conclusion, let me warn all friends, who may have proposed to themselves to invest in this thing, that powder is sometimes a very dangerous article, and that many a man has, before this, burnt his fingers in the handling of it. It may be that even Mr. Discoverer himself will get no gentle hoist before the public are through with it.

J. J. H. GREGORY.

Marblehead, Mass.

KIDNEY WORMS.—Swine are often troubled with a disease denominated by veterinarians, the "kidney worm." Corn, soaked in very strong lye made of wood ashes, is said to be an infallible remedy. Salt and brimstone, in small quantities, is a preventive, and, indeed, the only one known. Comfortable quarters and good food are of really more importance in the successful management of these animals than many are inclined to suppose, and should never, on any account, be neglected.

For the New England Farmer.

BEAUTY IN TREES.

MR. EDITOR:—I have been led to write under the above heading, on observing treatment of a beautiful promising grove in the cemetery of a thrifty town not far from Boston.

A young growth of white pines and white birch, mixed, from 15 to 20 feet high, appeared as though some wood choppers had been instructed to cut the birches clean and all the pine limbs they could reach. If the birches had begun to interfere with the pines, they should have been cut in August, to prevent their starting again. But the pines, with their fresh and vigorous branches, cut smooth to the butts, looked as though they had fallen into the care of those who could not find any beauty in trees.

To say nothing of the check to the growth, how their trunks will look! For a year they will present a mass of flowing turpentine, dripping and oozing like a cancer. Live branches should never be removed from pines, if it can be helped; but if the limbs must be cut, take them off one foot from the butt, and let the stub die a natural death—then trim close, and no turpentine will run. One blow of an axe can remove a lovely branch, but the wealth of the world cannot replace it if it proves a mistake.

The white pine, when it stands at the best distances to make a good forest, keeps a live cone about twenty-five years; that is, the limbs live about twenty-five years, and at that age it commences to have limbs die at the bottom as new ones form at the top. On cutting the tree across, no matter whether one foot from the ground or forty, if below the live cone, you will observe about twenty-five large growths, from one-quarter to one-half inch; the largest when the branches were in their greatest vigor. Then at the death of the branch a sudden reduction of the growth to perhaps an eighth of an inch. By this beautiful arrangement the tree rises to a great height, with but little taper to its trunk.

I think the beauty in the white pine is, to let its branches alone until they die.

Kingston, March, 1859. CALEB BATES.

OATS LODGING.

Why do oats lodge? We have sometimes heard farmers boast that their ground was in such excellent heart that the oats would lodge, inferring therefore that the crop of oats was extraordinarily large, so large that the straw could not hold them up. We would argue that no real practical farmer ever met with this difficulty. The soil cannot be said to be in perfect heart, merely because it contains an excessive quantity of barn-yard manure. To be in heart, it should be in such exact balance that every part of the plant can appropriate what it requires to secure its strength, as well as its quantity. The material which gives strength to the oat straw, is silicate of potash, silex combined with potash. Whoever knew a crop of oats to lodge when grown on soils containing a fair amount of wood ashes? Whoever knew any crop to show rust when grown on a soil fairly charged with phosphates, of potash, soda, and lime? Can a plant be in a healthy condition when the silicious coating which gives

it strength is deficient in quantity? The plant cannot avail of silex simply because it is surrounded by sand. There must be some alkali present to attach the surface of the particles of the sand, and to render the silex soluble in water. With that, the capillary action of the plant may elevate this soluble silex, and deposit it in such portions as require strength. This action upon the particles of sand, at the same time frees all the other constituents which go to make up its mass to the depth of the removal of the silex, the particles becoming smaller, and being so roughened at their surfaces by the chemical action of the alkali, as to prevent their settling by rains and dews so as to be too compact. All this is assisted in degree by the decay of roots in the soil; for these yield up among other constituents, alkalies, and of so progressed a kind as to have superior chemical power in the disorganization of the pent-up inorganic materials contained in every particle of the soil. Let no practical farmer then pride himself on having his land out of condition, and thus losing his oats for want of strength in the straw.—*Working Farmer.*

For the New England Farmer.

RUTA BAGA AND CORN CROPS.

MR. EDITOR:—In your number for May, I notice a communication from Mr. Cruickshank, on the raising of ruta bagas, and he is pleased to give us his name and place of residence at the close of it. He thinks them a remunerating crop, and asks the reason why I should be in doubt of it. I have been requested by others to give my experience in the cultivation of them. Influenced by them, and respect due Mr. C. for his experience and location, I am induced to state the reason for my doubts, for they are not removed, nor do I see that my questions are answered.

Thirty-five years ago, I planted as good a piece of land as I had with ruta bagas, with the intention of satisfying myself as to profit of their culture. I had a fine and plentiful crop; at the rate of more than 1,000 bushels to the acre, worth in our market 12½ cts. per bushel. Corn was planted beside on land as good, and all alike prepared, and produce 75 bushels per acre, worth \$1 per bushel; grain and stover I put down at \$75.

Well, sir, this looks well for bagas; \$125 per acre, and corn on like soil at \$85 per acre, making a difference in favor of bagas of \$40 per acre. But let the next crop speak. This was barley and grass. Where corn had grown the barley leaf was broad and green; where the bagas had grown, the leaf was sorrowfully weak and yellow, and appeared to regret ever having made its appearance. The seedtime result was 35 bushels of barley per acre where corn had grown, and 15 bushels where bagas had grown, worth in our market 80 cts. per bushel. This I call \$16 loss to the bagas. The next crop was grass; the hay was not weighed, but would compare well with the crop of barley, and so I charge the bagas with \$16 more. Here my estimates ended, but not the effect of the bagas, for that is visible yet. This experience is confirmed by yearly observation, and the experience of many in this region, if not all, who have raised them.

In conversation with the Hon. Mr. Brooks, of

Princeton, he admitted his experience was much the same, but that a liberal supply of phosphate would restore the soil to its usual fertility; but he says, too, "This will cost too much. Yes, sir, it costs too much to raise ruta bagas to justify their cultivation in this region." I might multiply cases like my own experience. While I am constrained to differ from Mr. C. in relation to the profit in raising ruta bagas, I cordially agree with him in the *killing effects of a luxuriant crop of them*. They will do the work pretty thoroughly. My saddest experience has been a sandy loam and gravel subsoil. On stiffer soil this effect has not been as bad. Yet there it has been to me a bad crop. Let me have 3 acres of corn, with a good hay-cutter, and I am perfectly willing any one else should have the acre of bagas. As to their value for the growth of stock, I admit they are good. But when fed to cows in milk, I should much prefer to sell the milk, though I confess I should have misgivings even then, for the cows would lose their credit, or I should my own.

Now, Mr. Editor, you have my experience and views in relation to the rutabaga crop, and of course my reason for doubts as the profit of raising them.

OTIS BRIGHAM.

Westboro', May, 1859.

For the New England Farmer.

EARNS AND LOAM—FACTS AND FIGURES.

MR. EDITOR:—I always enjoy reading the *N. E. Farmer*. Not that I always agree with the writers, but still, I am hardly the less interested in reading. Sometimes I take my pencil, and figure up the cost of the propositions therein proposed as improvements.

This week John H. Constantine proposes a new arrangement for a barn; said barn is to be from 80 to 100 feet square, with a cellar under the whole, 10 feet deep. My calculation on 100 feet square, makes the cost more than \$3000, if built well, with a good stone basement on three sides. For a poor farmer, \$3000—"I promise to pay," is an ugly customer to pay. The interest, taxes and repairs are more than \$200 a year!

When he gets his barn built, and his stalls, 12 by 12, all ready, he is going to cart in his marl, &c., for winter use. Before he puts his stock into the pens, he is going to put into each stall one foot in depth of his marl, &c.; i. e., 144 feet. I took the stock I had wintered the last year, to see what it would cost me. I must have 40 stalls for my stock; $144 \times 40 = 5760$ solid feet, or 45 cords, or 135 common ox-cart loads. That is to fill the stalls once.

Now if a man will dig and cart into my barn-yard, what will make, when dry, six loads a day, I will be satisfied with his day's work,—135 divided by 6 = 22½ days. Thus it will take a man and a team 22½ days to draw the first laying. He proposes to change this one a month—say six times; then it would take a man and team 135 days to draw the marl, &c., for winter use,—at \$2 a day, \$270. When you add the dropping of the stock, it will cost about the same to cart it on to the land, unless the farm is close to his barn, say, \$270.

Now, he proposes to have 45 cords, or 135 loads, shovelled over once a week, and once a month to take out what is in the stalls, and put in fresh marl, &c. This is rather hard to calculate, as I do not know how he proposes to make the exchange; but I will venture to guess that it would take three hands all the time; at \$20 a month for labor and board six months, this would amount to \$360, making an aggregate of \$900.

Some farmers may be so situated that they can make the above experiment for less; and it would cost others more. But I still find another difficulty. Where am I to get marl, &c., say 810 loads a year, for winter use? It would soon make my meadows all fish-ponds! If a man is rich enough, he may go into such experiments; but woe to the farmer worth from \$3000 to \$4000 who should try it. When Mr. Constantine gets his barn built, I shall call and see it, if I can.

Hollis, N. H., 1859.

ED. EMERSON.

For the New England Farmer.

NUMBER OF TILES TO THE ACRE.

The following rule for ascertaining how many tiles per acre will be required for drains at a certain distance apart, may be found convenient, and is easily remembered.

In estimating, to include main drains, divide 48000 by the distance apart in feet. Thus: if the drains are to be 30 feet apart,

$$\begin{array}{r} 30 \overline{)48000} \\ \underline{1600} \\ \end{array} \text{ the number required.}$$

If forty feet apart,

$$\begin{array}{r} 40 \overline{)48000} \\ \underline{1200} \\ \end{array} \text{ the number required.}$$

Unless the drains are to be laid at an odd distance apart, the division may be made mentally in a moment.

The percentage of tile to be used in the main drains varies with the length of the laterals and with their distances apart. The above given rule supposes the laterals to be forty feet apart, and to have an average length of about four hundred feet each.

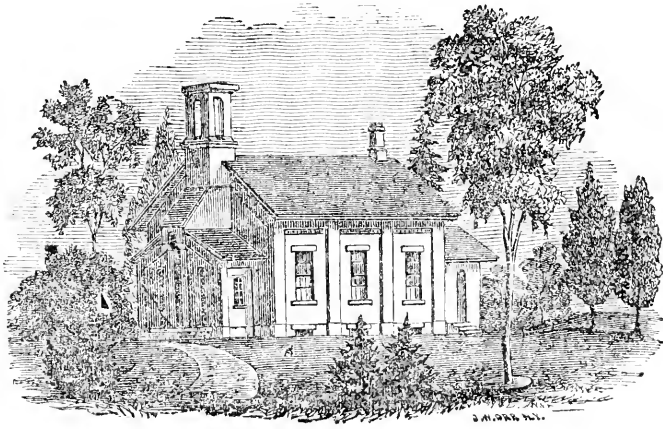
If it is required to know how many tiles would be used for lateral drains only, divide 43,560 by the distance apart. Thus: for lateral drains, 36 feet apart,

$$\begin{array}{r} 36 \overline{)43560} \\ \underline{1210} \\ \end{array} \text{ the number required.}$$

These estimates suppose the available length of tiles to be one foot each, and in using those which are cut from the machine in lengths of 14 inches each, it will be found that about one thousand and in number are required to lay one thousand feet in length. This is owing to the shrinkage of the clay in burning, to breakage in transportation, and to the rejection of imperfect tile.

Boston, May, 1859. J. HERBERT SHEDD.

CATTLE SHOW AND FAIR.—The Martha's Vineyard Cattle Show and Fair will be held at West Tisbury, on Wednesday and Thursday, Oct. 11 and 12, 1859.



DESIGN FOR A COUNTRY SCHOOL-HOUSE.

Perhaps we cannot better subserve the interest of the reader, in one issue, than by presenting him a pleasant and convenient design of a country school-house. We think our people, at present, are a little inclined to show and extravagance in the construction of their school-houses, and sometimes burden themselves with taxes that are *not* fully paid by the feeling of gratification, or pride, which they realize in the view, or contemplation of their handsome building. It is evidently economical to erect a substantial and well-arranged school-house, as well as an evidence of a high degree of good taste, of civilization, and a desire for progress in what ennobles and makes man better. But when we go beyond this, and add fanciful decorations that are somewhat questionable, and certainly expensive, we build monuments of folly, and load the community with burdens which they ought not to bear.

We copy this design by consent, from JOHONNET'S country school-houses, published by *Leison & Phinney*, New York, and suggest to those engaged in building or altering school-houses to send for the book.

SOAP SUDS FOR CURRANT BUSHES.—A correspondent of the *Indiana Farmer* says: "I have found the cultivation of currants to be very profitable. By care and attention I greatly increased the size of the bushes and the quality of the fruit. My bushes are now about six or eight feet in height, and are remarkably thrifty. The cause of this large growth, I attribute in a great measure to the fact that I have been in the habit of pouring soap suds and chamber lye around their roots during the summer season. I am satisfied from my own experience and that

of some of my neighbors, that this treatment will produce a most astonishing effect upon the growth and product of the bushes, and would advise others to give it a trial."—*Ohio Valley Farmer*.

BOLLES' PATENT ROCK LIFTER.

This famous machine was in operation at the Shaker Village in Harvard, on Tuesday, May 31, and we had the curiosity to look at its operations again, to see whether its achievements would corroborate our former good opinion of it. On arriving upon the ground we found the machine in operation, and it only required a few moments' observation to satisfy us that no question with regard to its ability was left open—it did all that was required of it, in so brief and quiet a manner, that no opportunity was given for doubt or excitement. So, after looking at it for an hour, we hurried off to a machine-shop to catch a little excitement among trip-hammers, turning-lathes and morticing-machines, leaving the Rock-Lifter to an admiring crowd of men and women who wore few, if any, *hoops!* They stood aghast to see rocks of five tons' weight exhumed at the rate of six or eight per hour, and probably wondered "what in natur' would happen next." It was said by good judges present, that the machine, aided by three men, a pair of oxen and a horse, accomplished more in one day, than six men and two pairs of oxen could have done in a week. We believe they were correct.

We are under obligations to Deacon AUGUSTUS GROSVENOR for "the key to his office," and for pleasant invitations to "take tea" within his neat and orderly precincts.

PORTRAIT OF AN ANTI-BOOK-FARMER.

The following very readable remarks we extract from Henry Ward Beecher's new book, "Plain Talks to Farmers," to be published June 4th, by Messrs. Brown, Taggard & Chase, of this city :

Whenever our anti-book-farmers can show us better crops at a less expense, better flocks, and better farms, and better owners on them, than book-farmers can, we shall become converts to their doctrines. But, as yet, we cannot see how *intelligence* in a farmer, should injure his crops. Nor what difference it makes whether a farmer gets his ideas from a sheet of paper, or from a neighbor's mouth, or from his own experience, so that he only gets good, practical, sound ideas. A farmer never objects to receive *political* information from newspapers; he is quite willing to learn the state of markets from newspapers, and as willing to gain religious notions from reading, and historical knowledge, and all sorts of information except that which relates to his business. He will go over and hear a neighbor tell how he prepares his wheat-lands, how he selects and puts in his seed, how he deals with his grounds in spring, in harvest and after harvest-time; but if that neighbor should write it all down carefully and put it into paper, it's all poison! its *book-farming!*

"Strange such a difference there should be
"Twixt tweedledum, and tweedledee."

If we raise a head of lettuce surpassing all that has been seen hereabouts, every good farmer that loves a salad would send for a little seed, and ask, as he took it, "How do you contrive to raise such monstrous heads? you must have some secret about it." But if my way were written down and printed, he would not touch it. "Poh, it's bookish!"

Now let us inquire in what States land is the best managed, yields the most with the least cost, where are the best sheep, the best cattle, the best hogs, the best wheat? It will be found to be in those States having the most agricultural papers.

What is there in agriculture that requires a man to be ignorant if he will be skilful? Or why may every other class of men learn by reading except the farmer? Mechanics have their journals; commercial men have their papers; religious men, theirs; politicians, theirs; there are magazines and journals for the arts, for science, for education, and *why not for that grand pursuit on which all these stand?* We really could never understand why farmers should not wish to have their vocation on a level with others; why they should feel proud to have *no* paper, while every pursuit is fond of *having* one.

Those who are prejudiced against book-farming are either good farmers, misinformed of the design of agricultural papers, or poor farmers who only treat this subject as they do all others, with blundering ignorance. First, the good farmers; there are in every county many industrious, hard-working men, who know that they cannot afford to risk anything upon wild experiments. They have a growing family to support, taxes to pay, lands perhaps on which purchase money is due, or they are straining every nerve

to make their crops build a barn, that the barn may hold their crops. They suppose an agricultural paper to be stuffed full of wild fancies, expensive experiments, big stories made up by men who know of no farming except parlor-farming. They would, doubtless, be surprised to learn that ninety-nine parts in a hundred of the contents of agricultural papers are written by *hard-working practical farmers!* that the editor's business is not to foist absurd stories upon credulous readers, but to sift stories, to scrutinize accounts, to obtain whatever has been abundantly proved to be fact, and to reject all that is suspected to be mere fanciful theory. Such papers are designed to prevent imposition; to kill off pretenders by exposing them; to search out from practical men whatever they have found out, and to publish it for the benefit of their brethren all over the Union; to spread before the laboring classes such sound, well-approved scientific knowledge as shall throw light upon every operation of the farm, the orchard and the garden.

The other class who rail at book-farming ought to be excused, for they do not treat book-farming any worse than they do their own farming; indeed, not half so bad. They rate the paper with their tongue; but cruelly abuse their ground, for twelve months in the year, with both hands. I will draw the portrait of a genuine anti-book-farmer of this last sort.

He plows three inches deep, lest he should turn up the poison that, in his estimation, lies below; his wheat-land is plowed so as to keep as much water on it as possible; he sows two bushels to the acre and reaps ten, so that it takes a fifth of his crop to seed his ground; his corn-land has never any help from him, but bears just what it pleases, which is from thirty to thirty-five bushels by measurement, though he brags that it is fifty or sixty. His hogs, if not remarkable for fattening qualities, would beat old Eclipse at a quarter-race; and were the man not prejudiced against deep plowing, his hogs would work his grounds better with their prodigious snouts than he does with his jack-knife plow. His meadows yield him from three-quarters of a ton to a whole ton of hay, which is regularly spoiled in curing, regularly left out for a month, and very irregularly stacked up, and left for the cattle to pull out at their pleasure, and half-eat and half-trample underfoot. His horses would excite the avarice of an anatomist in search of osteological specimens, and returning from their range of pasture, they are walking herbariums, bearing specimens in their mane and tail of every weed that bears a bur or a cockle. But, O, the cows! If held up in a bright day to the sun, don't you think they would be semi-transparent? But he tells us that good milkers are always poor! His cows get what Providence sends them, and very little beside, except in winter, then they have a half-peck of corn on ears a foot long thrown to them, and they afford lively spectacles of animated corn and cob-crushers—never mind, they yield, on an average, three quarts of milk a-day! and that milk yields varieties of butter quite astonishing.

His farm never grows any better, in many respects it gets annually worse. After ten years' work on a good soil, while his neighbors have grown rich, he is just where he started, only his

house is dirtier, his fences more tottering, his soil poorer, his pride and his ignorance greater. And when, at last, he sells out to a Pennsylvanian that reads the *Farmer's Cabinet*, or to some New Yorker with his *Cultivator* packed up carefully as if it were gold, or to a Yankee with his *New England Farmer*, he goes off to Missouri, thanking Heaven that he's not a book-farmer!

Unquestionably, there are two sides to this question, and both of them *extreme*, and therefore both of them deficient in science and in common sense. If men were made according to our notions, there should not be a silly one alive; but it is otherwise ordered, and there is no department of human life in which we do not find the weak and foolish men. This is true of farming as much as of any other calling. But no one dreams of setting down the vocation of agriculture, because, like every other, it has its proportion of stupid men.

Why then should agricultural *writers*, as a class, be summarily rejected because some of them are visionary? Are we not to be allowed our share of fools as well as every other department of life? We insist on our rights.

A book or a paper never proposes to take the place of a farmer's *judgment*. Not to read at all is bad enough; but to read, and swallow everything without reflection, or discrimination, this is even worse. Such a one is not a book-headed but a block-headed farmer. Papers are designed to *assist*. Those who read them must select, modify, and act according to their own native judgment. So used, papers answer a double purpose; they convey a great amount of valuable practical information, and then they stir up the reader to habits of thought; they make him more inquisitive, more observing, more reasoning, and, therefore, more reasonable.

Now, as to the contents of agricultural papers, whose fault is it if they are not *practical*? Who are the practical men? who are daily conversant with just the things a cultivator most needs to know? who is stumbling upon difficulties, or discovering some escape from them? who is it that knows so much about gardens, orchards, farms, cattle, grains and grasses? Why, the very men *who won't write a word for the paper that they read*, and then complain that there is nothing *practical in it*. Yes, there is. There is practical evidence that men are more willing to be helped than to help others; and also that men sometimes blame others for things of which they themselves are chiefly blameworthy.

For the *New England Farmer*.

MOWING MACHINES.

I am frequently asked what kind of mowing machine had I better obtain for the cutting of the grass on a farm of about one hundred acres—fifty of which are upland mowing? A mower moved by one horse should be sufficient for such a farm; though if two or more adjoining farmers could unite in purchasing a machine to be moved by two horses, the work would be better done. The best way you can fix it, it requires power, and considerable of it, to carry through a swarth three and a half or four feet wide, where there is a burden of grass of two tons to the acre; and

no enterprising farmer should remain satisfied with a crop less than this, on land of fair quality. I know that the average product, throughout the State, is less than one ton to the acre; but this does not prove that it ought not to be two tons; it only proves that the present state of culture is far below what it ought to be. So many have practised *skinning their land*, by running the plow only four or five inches deep, and *scrimping* it by dealing out their manure with a small shovel—that the small crop mentioned is the consequence.

ESSEX.

May 2, 1859.

COTTAGE SONG.

BY JOHN S. ADAMS.

We've a cottage clothed with roses,
Near a wood,
Where the singing birds of summer
Nest and brood;
There in early spring the daisies
Gem the sod,
Looking up to heaven above them,
And to God.

There in holy calm we worship
One above,
Through His works that all around us
Speak His love;
Read we there His will in every
Rock and tree,
While His blessings fall upon us,
Rich and free.

Beautiful the morning sunlight
Cometh there,
Crowning Nature at her early
Morning prayer;
And at evening, when the twilight
Closeth round,
Still, devoutly at her worship,
Is she found.

We are not alone, for angels
Come and go,
Walking often through our cottage
To and fro;
Promising to guide and guard us
With their love,
Till we go to live among them,
Up above.

Simple life is ours; we follow
Nature's way,
Learning of her truthful lessons
Day by day;
Striving to fulfil our mission,—
Doing good:
Living happy in our cottage
Near the wood.

SOUR MILK IN GREECE.—Dr. Landerer states that the Greeks, as well as the Turks, are great lovers of milk, especially sour milk, called by the former *xynogalon*, and by the latter *jagusti*. Immense quantities of this sour milk are brought from the neighborhood of Attica to Athens, and every one hastens to purchase it in the belief of its wholesome qualities. And, in fact, this *xynogalon*, which exhibits a gelatinous coagulum, is a very cooling and nutritious article. It is consumed with almost every dish. The shepherds prepare it either with rennet or from some of the dried coagulum of the milk itself;

but the milk-sellers of the town employ alum for the purpose, or place in the warm milk an old Spanish coin, supposed to be of peculiar efficacy in securing coagulation.

EXTRACTS AND REPLIES.

ARTICHOKES FOR COWS--WHITE SPECKS IN BUTTER.

Will you be so kind as to inform me through the columns of your paper, whether or no artichokes are useful to give cows.

I have, for years, occasionally noticed white specks in butter, and have made inquiry for the cause, but no one can tell. If you rinse the butter, many of those white particles will float on the top of the water, but it is impossible to get them all out. If you can tell me the cause or preventive, you will favor one who is interested in your journal.

What soil is best for white blackberries, and what will make them productive. T.
Felchville, Vt., 1859.

REMARKS.—Artichokes are good for cows, given in proper quantities.

In churning, as soon as the butter begins to come, all the particles of cream that have been thrown to the top, or any other part of the churn, should be carefully scraped down. If they are left, they will, more or less of them, mingle with the butter, and make white spots. Sometimes, however, butter will have white streaks through it. This may be occasioned by collecting the cream at many different times, so that in churning some of it is quite fresh and does not "come" so readily as the rest. The cream, while being collected, should be salted a little, and carefully stirred every day.

OBSTRUCTED MILK.

I have a valuable cow which calved about ten days ago; she has an obstruction in one of her hind teats. The milk will only flow in a very small fine stream and takes as long to milk it as it would two cows. The teat or udder does not swell, no appearance of garget; but there appears to be a small hard bunch in the teat in the milk passage close up to the udder. Can you, or any of your readers, tell me what to do for it?
Atkinson, N. H., May, 1859. L. KEEN.

REMARKS.—Take one-half of a small pair of scissors, and grind down to a sharp edge on both sides, and running down to a small point. Hold the teat firmly in the left hand and thrust the instrument up the teat, gently, so as to make an incision one-sixteenth or one-eighth of an inch wide. If you find the stream obstructed in a day or two, repeat the operation.

TO SAVE VINES FROM BUGS.

The most sure remedy is to go over the hills early in the morning, and kill all you can find; get some old shingles or bits of board, put a little tar on one side, and lay it so the bugs can

crawl under, by the side of the hill; they can then be readily found about the middle of the day and killed. I sometimes use a mixture of three parts flour, two of sulphur, one black pepper, and sprinkle a little on and around the vines. Last season, I entirely gained the victory over the bugs in three days. Perhaps some may think my mode requires a deal of labor, but one hour in the morning and another at noon for a few days will save an acre, that is, if the bugs do no worse than heretofore.

Shaker Village, N. H. HENRY J. DURCIN.

RECLAIMING LAND.

I have a small piece of wet land that was covered with brakes and small brush, and bore little worth anything. In August, 1855, I mowed it with a bush scythe, and let it dry well, and then burned it. After which I took a team and plow and tore it up, and let it rest until the next June, 1857; then I took a bog-hoe, and levelled it, and dug a ditch, and sowed herds-grass, red-top and clover seed and a few ashes. In 1858, I cut two crops of hay; the first was as large as I could well dry on the land. I have tried a number of pieces in the same way with equal success.

Ashby, Mass., 1859. A. TAYLOR.

GREEN WORMS--INCH WORMS.

Last year the currant and gooseberry bushes of this place were stripped of their leaves, by a green worm about an inch long when full grown, by some called the inch-worm. When the bush is jarred, it will suspend itself by a web some six or eight inches long, and then return to its work of destruction. They are so numerous in some localities that it would be an endless job to pick them off by hand. Can you tell of some more expeditious method of ridding our gardens of this pest? They commence their work about the last of May or first of June.

Great Falls, May 16, 1859. I. G. J.

REMARKS.—We know of no remedy, as the common application of whale oil soap, &c., would be quite likely to spoil the fruit.

ROOT CROPS.

Having read considerable discussion in the *Farmer* the past winter, on "Root Crops," I would refer you to an article written by myself at your request, printed in the *Farmer* of April 5, 1856, on the first page, in regard to "Root Crops."

I wish to say that I have practiced the same mode of farming with equal success, and that I now have a cow five years old that weighs 2360 lbs., being 300 lbs. heavier than either of those I had at the United States fair at Boston.

I wish to have it understood that her principal extra feed during the winters has been roots.

Westmoreland, N. H., April, 1859. JOSIAH BENNETT.

COCKROACHES.

Can you, or any of the readers of your valuable paper, inform me what will exterminate cockroaches?
A SUBSCRIBER.

For the New England Farmer.

STRAIGHT COMB.

MR. EDITOR:—I fully agree with Mr. Quinby as to the advantage of the movable comb hive. Indeed, it is difficult to understand how any one who has given it a fair trial could come to any other conclusion. Mr. Quinby says that he should be pleased to have all admit that the *triangular guide* was public property. I understand that it is, and that any one has a right to use it. Soon after I commenced keeping bees in the Langstroth hive, Mr. Clark's partner or agent called on me, and forbid my using the guide. I subsequently learned from the Patent Office that neither Mr. Clark nor Mr. Langstroth had obtained a patent for this part of the hive. Which of the claimants is entitled to the invention is a matter of little interest to me, as I do not now use it, and consider it of no value.

Mr. Clark's partner or agent did not succeed in forcing me to pay him five dollars for his pretended patent, but he did succeed in calling my attention to the possibility that there might be other ways of securing straight comb quite as good, and perhaps better. I shall now endeavor to describe a plan so easy in its arrangement, so certain in its results, that I doubt if a better can be desired.

Take worker comb one or two years old and cut it into strips one and a half or two cells wide. With a small brush, coat the under side of the top strip of the frame with melted rosin and bees wax, and immediately lay on one of the pieces of cut comb, placing it so that the divisions between the bottom of the cells will form a line through the centre of the top piece of the frame from end to end. If the comb is crooked it can be straightened, and as it adheres firmly to the wood, it will remain so. One frame full of comb will cut enough for several hives. As the comb does not cut smooth and neatly with a cold knife, I make use of a plan by which the knife is always kept warm, cutting the comb so smooth that the bees take up the cells where the knife leaves them, and proceed with their work without cutting away any of the comb. This arrangement for obtaining straight comb costs less than the triangular guide, is more reliable, and is free to all.

E. A. BRACKETT.

Winchester.

For the New England Farmer.

HOW CUT NAILS WERE INTRODUCED.

MR. EDITOR:—In your paper of March 12, under the head of "American Inventions," is a communication from CALIB BATES, Kingston, Mass., upon the invention of screw augers and cut nails. I have some facts in regard to the first invention of cut nails, received mainly from the Hon. John Folsom, formerly of Chester, once well known in various public offices, and as the keeper of a public house, which I will relate perhaps more in detail, and be more personal than will be generally interesting, but I think will interest many individuals.

Mr. Folsom told me that his father, David Folsom, was the first inventor of cut nails. The idea was suggested to him by seeing some person cutting with a pair of shears, some pieces off the

end of an iron hoop. He commenced cutting nails with shears, and heading them in a common vise. He then improved by having his cutting apparatus operated by a crank motion with a fly wheel, and a treadle operated by the foot. In heading, the vise was superseded by dies, a stationary one fastened to a bench, and a movable one attached to a lever, and drawn together by the foot. When this was first invented, every nail was taken from the dies, as well as put in, with the fingers. They soon bored a hole through the bench, so that the nails could drop out by their own gravity.

The introduction of the business, I think, was at Tamworth, N. H., or that vicinity. My informant was born in 1776, and I think that when he was eleven years old, which would be about 1787, his father removed with his family to Harrisburgh, Pa., and there set up the business, but died in a few months, leaving another son, William Johnson Folsom, some four or five years older than John, and they carried on the business there until John was about sixteen, or about 1793, when they removed back to Tamworth, and set up the business.

In April, 1794, Hon. Joseph Blanchard, of Chester, N. H., who owned the mills at what is now Auburn village, married the widow Folsom, who was a daughter of the Rev. William Johnson, of West Newbury, Mass., and in the course of a year, the young Folsoms removed there, and carried on the business, and after a while, commenced cutting by water, but still heading by hand.

After the New Hampshire State Prison was established, nails were cut there and carried to Concord to be headed by the prisoners, but the self-heading machines having come into use, it became a losing business, and was given up.

Auburn, N. H., May 3, 1859. B. CHASE.

MIDDLESEX AGRICULTURAL SOCIETY.

This Society, although the oldest county society in the State, is still hale and hearty. Its affairs are systematically managed. Its officers are energetic men, and the programme of its last exhibition was promptly carried out. The sum awarded in premiums was \$708.30.

Their last Transactions has several valuable reports of committees. One on heifers contains several useful suggestions to breeders.—The paper by ASA CLEMENT, of Dracut, is both witty and instructive, and tells the truth plainly about dwarf pears. The result of this department of fruit culture has not hitherto proved very satisfactory. We think there has been money enough expended in it, and we cannot, in conscience, recommend it, except in localities that have been found peculiarly favorable.

The report by SAMUEL H. RHOADES, of Concord, on *stallions*, is a good one. That upon *bread*, by MINOT PRATT, of Concord, shows that he both knows what good bread is, and how to make it. Several of the statements by competitors for premiums are rather meagre. We should

be glad to see them more full and particular. The two most important papers in the report are a story by the Secretary, Dr. JOSEPH REYNOLDS, designed to illustrate farm management—and the address at the table by RALPH WALDO EMERSON. These are both interesting, and both suggestive of thought. Mr. Emerson's address is in his own peculiar style. He has a wonderful faculty of clothing old ideas in a new garb, so as to make them appear original and impressive. He can say more in a few words than most men, and he takes a philosophical view of everything he looks at. We heard of a remark with regard to the story upon farm management from one of the best farmers in the county, which we think, will afford the author more pleasure than the premium he received for it. It was this. The farmer said if he had a son who was going to farming, he knew of nothing he would sooner put into his hands, than that simple story. Both the story and the address have been extensively copied, not only by the agricultural press, but other papers also.

We do not notice any premiums awarded for flowers, or for farms, or experiments. We would recommend the offer of premiums for experiments in reclaiming pasture lands, as a subject of great importance in Middlesex county,—the greatest milk-raising county in the State. The pastures in Middlesex are very much exhausted, and if anything can be done to restore them, it will be of immense value to the county.

There is much experience in this county with respect to feeding stock, which if it could be brought out, might result in securing much larger products from the same means.

For the New England Farmer.

SECOND MARKET DAY FOR ESSEX.

This came off near Sutton's Mills, in North Andover, yesterday. The gathering was large, the animals presented of superior character, and trading brisk and satisfactory. So well satisfied were the trustees of these markets that they determined to hold a third at Georgetown, on Tuesday, the 21st of June, 1859. The probability is, double this number would have been at Andover had it not have been for the rainy aspect of the skies; but the rain did not essentially mar the utility of the fair.

I was pleased to see on the ground a mower, to be moved by one horse; and wheels for guiding the plow without hands; and corn cultivators, said to do the needful, without disturbing the roots of the plants. I have entire confidence, that market fairs are to be one of our

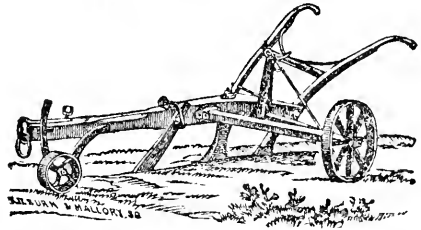
May 18, 1859.

YANKEE NOTIONS.

AGRICULTURAL BOOKS. — Messrs. CROSBY, NICHOLS & Co., Washington Street, Boston, keep a large assortment of agricultural books

which they offer at low prices. A good farmer cannot afford to be without good agricultural books, as he will find his profits increased by their perusal.

A NEW PLOWMAN.



Labor-saving implements and machinery are desirable, we believe, on every account; at least, we know not what possible disadvantage is connected with any good labor-saving machine.—If they are useful and profitable under our present mode of culture, they will be likely to remain so until superseded by something still more useful and profitable.

Under existing circumstances, where so large a portion of the farm labor of New England is performed by our trans-Atlantic brethren, we want one of two things—machines that will *think*, so as to perform all this labor in the cheapest and best manner, or some person must put his *own thoughts into machines*, and so contrive them as to make them work *without* thought, when the motive power is applied to them!

The farmer will surely be disappointed, who expects to conduct his affairs satisfactorily with only the heads and hands of these excellent brethren in their way, to whom we have alluded. They have broad shoulders and strong hands, with some impulse and great persistency in labor, but nothing, or little, to guide it. They must pass many more years yet in a course of preparation, aided constantly by Yankee teaching and examples of aptitude, before they will become qualified to take the lead in our agricultural operations.

The *Plowman*, introduced at the head of this article, is a machine of the latter description. Hitch it to your motive power, set it in place, and your men, without heads, or at least, heads innocent of much thought, will perform for you a good work. The *Plowman*, like most good contrivances, is a very simple affair—merely a triangle of cast iron, with a wheel at one point. It is attached to the beam of the plow by bolts or screws, and is not easily broken or put out of place. In company with Mr. J. M. WHITNEY, of Bolton, Mass., the inventor, we took it to the field and set it in motion. When once in place, and properly adjusted, it kept on its way un-

touched by any one, and did work that would do credit to the best workmen. Its employment will save the labor of one hand, in many instances, and a saving may be made in a single week sufficient to pay for it. Look at it, and if it seems comely to you, test it.

For the New England Farmer.

AGRICULTURE.

MR. EDITOR:—In order to obviate some of the prejudices which, unfortunately, exist among farmers against *book knowledge*, I wish to say a few words upon *scientific, experimental and practical agriculture*.

Scientific agriculture, as I understand it, explains the various methods of cultivating, improving and beautifying the earth, so as to render it more productive and delightful. The term *agriculture*, it derived from "ager," a field, and "cultura," culture, so that, according to its etymology, it means *field-culture*. In a restricted sense, it is confined to, and explains, the different operations required in the cultivation and improvement of arable and grass lands, and whatever appertains to the same; the cultivating and preserving different kinds of crops, fruits, &c. In a more extensive sense, it includes the breeding, rearing, feeding and management of all kinds of stock, and the disposal of the same. And it is the particular province of *scientific agriculture* to explain the reasons why things should be done thus and so, and not in a different manner. *Science* means knowledge; and he who possesses it, is master of his subject, and is competent to explain it. But, as it is human to err, and there is no such thing as human perfection, it frequently happens, that our most scientific men are mistaken in some points, and therefore are not perfectly reliable in all their statements; and the reason is obvious, either because they have been deficient in scientific knowledge, or because they have carelessly overlooked some of the causes which have contributed to produce a certain result, or have attributed the result to wrong causes. In either case, it does not prove the uselessness or the worthlessness of science, or book-knowledge, but directly the reverse; for, if the most knowing and scientific sometimes make mistakes, the least scientific, that is, the most ignorant, will be the most likely to make the most frequent mistakes. Errors of this kind are the result of ignorance, and not of science or knowledge; and their frequency is generally in proportion to the degrees of ignorance which prevail. Ignorant people on this subject, are like narrow-necked bottles, the less they have in them, the more noise they make in pouring it out. They seem to think that "a little knowledge is a dangerous thing," especially if it be derived from books. At least, they think it quite unnecessary for farmers to trouble themselves much about book knowledge, or to try to educate themselves beyond their immediate labor in the field. They seem almost to entertain a prejudice against one who devotes much attention to subjects of art, or science, or general literature, as though such studies were inconsistent with the ordinary business of a thrifty farmer. Very few farmers are so burdened

with work, that they cannot find one or two hours each day for other studies besides those which relate to agriculture. The objects of all our private studies should be the better to qualify ourselves for our work, to make us more intelligent, more skilful, more scientific, and thus to raise ourselves above mere serfs and laborers, to a position of influence and growing usefulness.

Experimental agriculture differs in some respects from the scientific, inasmuch as it consists in endeavoring to find out by a series of experiments, what science already knows and is prepared to teach systematically. All experiments are more or less expensive. It may cost hundreds and thousands of dollars to test and to make sure what we desire to know. To accomplish our purpose, time and money and labor are required. But, when we have once obtained our knowledge by well tried experiments, and printed the results in a book, it then ceases to be experimental, and is so much added to our present stock of scientific knowledge. Every one who tries experiments should be a man of thought and reflection, who knows how to combine elements, so as to make wheat, corn, roots and other vegetables grow, upon which man and beast subsist. He should be a reader of agricultural books and periodicals, a careful observer of nature, a close thinker, a correct reasoner, so as to be able to draw correct conclusions. In making experiments, he should do it at first on a small scale, and according to his means, and repeat them a sufficient number of times to establish their certainty. But, then, there would be less need of his making experiments, if he read more and understood better the experiments of others. Books should be "the man of his counsel and the lamp to his feet to guide him in the path of duty," because books contain the experiments and the experience of others. Still he should not believe in the truth of every statement which he finds in agricultural books and papers, especially in the latter, because many of the writers in the agricultural papers are uneducated men, honest and truthful, but they do not know the whole truth, and are liable to make wrong statements. For instance, in the use of salt, quicklime, potash, &c., for agricultural purposes, great caution is necessary, however strongly they may be recommended; because, when improperly used, or in wrong quantities, they are very destructive to vegetation. It is chiefly owing to the mistakes which have been made in the use of these and such like articles, that so many prejudices exist against book knowledge.

Practical agriculture is founded on science, experiment and experience; in other words, it is practical knowledge applied to farming, whether that knowledge be derived from books containing the result of other men's experience, or from our own thoughts, study and experience. At any rate, it is not visionary or theoretical, but practical. It consists in applying the well-known and well-established principles in the science of agriculture to the cultivation and improvement of the soil, in rendering it more productive and better fitted for the support and accommodation of man and beast. We have many practical farmers who do not pretend to be very scientific, or much given to experiment, but whose practice works to a charm. They read and think and

judge for themselves, and apply in practice whatever appears to be right and reasonable. They are not only practical, but progressive farmers. They are continually learning more and more, and doing better every year. They go on from one degree of improvement to another, so that you may know them by their *good fruits*, as well as by their good works.

JOHN GOLDSBURY.

For the New England Farmer.

TASTE AMONG FARMERS.

MR. EDITOR:—There seems to be a great want of taste among many of our farmers. They appear to think that taste is of no importance whatever—something which they have nothing to do with—and if they only attend to the important duties of the farm, they care nothing for appearances.

One way in which they show want of taste, is in the surroundings of their dwellings; they will leave an ox-cart, sled or hay-rigging, in the doorway, or in close proximity to the house, rather than be at the trouble of removing it a rod or two farther, where it would not be so unsightly.

Some will have piles of manure, heaps of stones or huge piles of wood, left where they give an air of slovenliness to the homestead, no matter how new or handsome the buildings may be.

There are some farmers who limit their shade trees to a few so situated that they cannot damage land which they care anything about, making *that* the standard, and sacrificing a noble elm, or handsome oak, or maple, because they draw the juices of the soil, and they fear they shall have a few less hills of potatoes or corn, if they let them remain.

Perhaps some will say, well, my buildings are old, and I don't think it makes much difference what I have around them; but *I* say it *does* make a great difference. What if the buildings are old? if there is an air of thrift and neatness about them, they will not look one-half so unsightly. Who would not see a difference between even a hovel without a shade tree or a rosebush, and one precisely like it with rosebushes and wood-bines, climbing up its weather-beaten walls, covering its numerous imperfections, and with the addition of one or two shade trees, making the spot look really attractive? It makes nearly as much difference as there is between neatness and negligence, in the interior of a dwelling.

Think not that I believe all farmers show a want of taste, for many a farmer's home exhibits an appreciation of the tasteful and beautiful highly creditable to the proprietor. Let not the farmer think it is beneath him to attend to such things, nor consider that time lost, which he spends in making the surroundings of his house tasteful and attractive.

"Let the green tree wave by thy cottage door,
And the rose in thy garden bloom;—
With them shall the planter's memory soar,
When he rests in the quiet tomb:—
And oft shall the travellers pause to view
The works of thy patriot hands,—
The rose and the tree—the elm or the yew,
That now by thy door-way stands."

Concord, Mass., Feb., 1859.

TASTE.

For the New England Farmer.

PRUNING AND RAISING APPLE TREES.

My attention was called to make this communication by seeing one signed by Thomas Ellis, of Rochester, in the *N. E. Farmer*, monthly, vol. 10, page 539.

I have got into the same dilemma myself that the writer of that article did. I have tried for a number of years to raise an orchard, and have succeeded in getting about a dozen trees to bear about as many apples each, and a small nursery for my own use of about one hundred trees large enough to set, all grafted. Now I am willing to confess I pruned my trees the wrong season of the year.

About a year ago I examined articles on pruning in the *N. E. Farmer*, from vol. 2 to that time, and with more light, as I thought, than I had possessed before, made up my mind to prune my trees about the middle of June, although the editor quoted in one place from Downing, that "small branches may be taken off any month in the year with safety." This can't be so, and I did not believe it when I read it, but did think it would be safe to prune about the middle of June. I began to prune some the 11th of June, but did the most of it just after the middle. I covered the wounds with cement, but they soon commenced bleeding, and I could not stop them. I thought of searing them with a hot iron, but had never seen that recommended. If they run very much, the tree is ruined; it makes it sickly, and soon dies; the sap running down, kills the bark and rots the tree. I have lost a number of trees by having them injured by cultivating among them, by breaking the branches off, or otherwise maiming them. And with all the light of the present day, probably not one tree out of four lives to grow up a healthy tree. A great many orchards are killed by pruning, some by mice, some by cattle, so that the chances for getting an orchard are small. From what little experience and observation I have had, it is my opinion that any farmer may set an orchard on good ground with trees grafted or budded, then cultivate yearly, and in ten years from the time the trees are set, not more than one in four will be worth what it cost when set.

We think the present age is an enlightened one; that our forefathers were "old fogies." It may be so, in some instances, but is it so generally? I think not. Even in orcharding, farmers took great pains to get trees; some carried them miles on their shoulders to set orchards, selecting the best situation, preferring a side-hill. After being set, they were left to grow, not torn up by the roots with a plow, or barked by the ox-yoke or the harrow, nor pruned to death. Grafting and budding were not practised as now, it is true; the object was then to raise apples for the family, and apples for cider. This they did to a good purpose. It is true they did not have so good a variety as at the present day, but many of our best apples are from the "native" trees.

The editor, in his remarks on Mr. Ellis' communication, when speaking of our fathers, says: "They probably pruned apple trees in March or April, because it more was convenient, and as they did not graft nor bud and produce as many valuable trees as we do now, they cared less if

they did die, and would supply their places with another set of natural fruit." Here, in the cold State of Maine, March is the best time to prune. I have known trees for thirty years that had been pruned in March that are now healthy trees. Three years ago I had small trees in my nursery trimmed by the snow settling in March. The branches were broken off, so as to leave a cavity in the main stem, and I never saw trees heal so quick, and that were so smooth where the branch came off, as they are now.

E. G. C.

Canaan, Me., May, 1859.

REMARKS.—Trees are governed by natural laws just as much as animals, or the winds or rains. If the land of "Canaan," where our correspondent dates, is so cold and backward a region as he intimates, then July would be the time to prune, according to our theory.

MIDDLESEX SOUTH AGRICULTURAL SOCIETY.

This society appears to be in a flourishing condition. It is in the hands of energetic and progressive men. The address of Hon. EMERY WASHBURN contains many useful suggestions. The dinner was enlivened by the presence and remarks of several eloquent gentlemen. This society has usually been fortunate in the selection of guests which have honored their board.

The various statements of the poultry fanciers are an interesting feature in the reports, and show what can be done in this department of the farm, by care and judicious management.

The only premiums awarded for horses, were for farm and working horses. Such premiums clearly come within the range of farm premiums. As the labor of horses is fast taking the place of ox labor, we should be glad to see the breeding of this class of horses encouraged. Several premiums were awarded for cut flowers and bouquets. These add much to the beauty of the exhibition in the hall, and their culture is a source of much pleasure, and a gratification to any person of taste, and we hope all our county societies will offer premiums for their exhibition. We notice that several have done so this past season.

Awards were made for apple orchards, for pear trees, for peach orchards, for grain crops, root crops, and for reclaimed meadows. Many societies confine their awards to articles exhibited at the tables—the products of the garden and the field. We doubt the expediency of this. The skill of the cultivator is better exhibited in the culture of the trees in the field, than in the dish of apples or other fruit, which may often be the result of accident, or of the skill of some one who has owned and cultivated the trees before him. But the man who has planted and brought into bearing a fine growth of trees, gives proof of his own skill, and has made some permanent im-

provement of his farm. Premiums for entire crops are more satisfactory, and we think more useful than for samples. Such premiums bring out statements of the methods of cultivation on different soils, and in different localities, that are often highly interesting and valuable. We think the trustees of this society have shown much sound judgment in the selection of the objects of their awards. There are many other subjects deserving their attention, and we doubt not they will receive it in due season.

For the New England Farmer.

AGRICULTURAL BOOKS.

MR. EDITOR:—The following remarks were read a few evenings since before the Concord Farmers' Club. At your request, I send you a copy. Yours, &c., J. R.

A new department of literature has been created within a few years. We have books on soils, on manures, on horticulture, on field culture, on tree culture, on fruit culture, on cattle, on horses, sheep, swine, draining, farm implements, &c. &c. These may be considered chiefly scientific. Then we have a wide range of what may more properly be called agricultural literature, consisting of agricultural papers, periodicals, transactions, addresses, reports and essays, relating to agriculture or collateral subjects. All these constitute a great body of reading. Men are better educated than formerly, and read more on all subjects. No man is now satisfied with the knowledge of his own business which he gains by his own experience. He avails himself of the knowledge of others as well. He must do so, to keep up with the progress of the times. This is as true in agriculture, as in any other pursuit. Farming is progressive. Principles must be understood, and their application varied according to circumstances. To do this, principles must be studied, and the circumstances which require their varied application must be studied. Young farmers all read, and find their views enlarged, and their stock of ideas increased by it. They thus acquire food for thought, and learn to reason. The interchange of ideas by means of books, is like the interchange of products by means of commerce. It contributes to the wealth and prosperity and comfort of all parties engaged in it. This interchange of ideas is the great means of civilization and refinement. The man of ideas is the man of power. But his ideas are chiefly obtained from others; for no one man originates more than a few ideas. If he did, he would become too powerful, and would swallow up his neighbors. Reading serves to distribute and equalize the amount of existing ideas, as commerce serves to distribute and equalize wealth. Before commerce was established, a few men had the wealth and power, and the rest were dependent. Before books were made, and men learned to read them, a few men had the knowledge, and the rest were their tools—their hands.

There is no subject that requires a knowledge of so many things as agriculture, unless it be

medicine. No one man has the time, even if he had the means, to work out all the various kinds of knowledge which he needs; it would take a lifetime. We must be content to take it from others; and thus in a short time we can get more knowledge by reading, than we could get in a whole life, without it. The demand for books on agriculture, has increased greatly of late.—The facilities of communication in the vicinity of cities has led many business men to live in the country, and thus made a great many amateur farmers. They want agricultural knowledge for immediate application; they have not time to acquire it by experience; they go to work as they do in other business, and consult those who profess to teach the knowledge they want, just as they consult an architect, a mechanic or a seaman; they read books, and apply the knowledge they get; it may not always be the best, but it is the best they can get; it is better than none. This class of men create quite a demand for books of many sorts; this is a good class of men,—in fact the best class; they are active and energetic, and therefore successful; they are public spirited, and make good citizens in the towns in which they reside. Notwithstanding the farmers sometimes laugh at their operations, they impart a portion of their business energy to the farmers, and make experiments for them, which they would never try for themselves; and if they fail, they teach the farmer what cannot be done, as well as what can be.

At the present day, a periodical which keeps a man posted up in matters relating to his particular calling, is necessary to success. The minister, the physician, the lawyer, the mechanic, the merchant, the sportsman, the military man, must each have a magazine which contains the latest inventions, discoveries, and information relating to his business or profession; without this he cannot keep pace with his competitors. This is no less true in agriculture; hence, agricultural papers have become a necessity. If a farmer can read but one thing, let him read an agricultural paper; but papers are for the most part filled with short articles, hints, suggestions, single facts and experiments. If a man wishes to study a subject more fully, he must read books. Books upon agriculture, as I have already remarked, have rapidly multiplied, and are sold at a very low price. Libraries have been established, by means of which farmers may refer to a great number of books for a small sum. For those who can afford it, I think the best way is to own and always have at hand a few good books, and then add to the number one or two good books annually. I think they will, in this way, read and digest them better than when they are in a library at some distance, and they can keep them but a week or two, when they get them. Many say most good agricultural books, are books to be referred to frequently, rather than to be read at once. Still, it is well to have a library, containing many more books than one can afford to own.

Many of our agricultural books are of very little value; some of them are worse than nothing, because they mislead those who rely upon them; many are published by book manufacturers, and are mere compilations from other works, made by men who have neither sufficient judg-

ment or experience to correct the errors and misstatements they contain. When I take up a book, and find it a mere compilation, by some man in the employment of a publishing-house, I shut it up; I have not time to read such a book. But when I find a book which is written by a man because he has something to say, I generally find that it pays for reading. I have frequently thought it would be a good thing, if some competent man would set himself to review the principal agricultural books in the market, and point out their excellences and defects, and publish the results of his investigation in some of the leading agricultural papers. Probably a good many authors and publishers would not thank him for his labor; until such a review has been made, I will not attempt to point out a list of books, which I would recommend to our young farmers.

For the New England Farmer.

MINISTER (WINTER) APPLE.

This New England fruit was introduced to notice by the late Robert Manning, of Salem. It originated on the farm of Mr. Saunders, of Rowley, in this State. The fruit is large and oblong, resembling in form the Yellow Bellflower, of New Jersey, readily identified from its beautiful stripes of red from stem to eye; it has been confounded with another, Rowley Seedling, which has been sold for the above. The true Minister apple, when gathered in the fall, is quite acid, but if kept into spring, becomes one of the finest fruits of its season. The skin of this apple is very thin, hence it requires to be gathered with the greatest care to prevent its being bruised. With that precaution, it will keep into May. I have one before me, raised upon the farm of R. S. Rodgers, Esq., of South Danvers, in the most perfect keeping, with its fine aroma. I have always found this variety to be a great bearer on a light and warm soil, as well as upon one of a more retentive nature.

J. M. I.

Salem, May, 1859.

UNDERDRAINING.

Some good land requires underdraining, to insure good crops. We might instance some of the land near Cleveland, which is a warm, sandy soil, but too swampy for cultivation, until drained of its surplus water. Soils which contain standing water within thirty inches of the top, must be underdrained, or they will not produce well. On such land, there is a constant drainage of water to the surface, as in a flower-pot, when the water is placed in a saucer at the bottom, but soon moistens to the top. Constant evaporation keeps the soil and air cold, and excludes the air from the soil, which is wanted there, that the oxygen in it may decompose the vegetable matter in the soil, and change the poisonous protoxide of iron into the beneficial peroxide. This kind of land is composed of a hard clay sub-soil, on the top of which is a layer of sand. If the water cannot penetrate the clay, it is held, as in a saucer, and unless drained off, its only way of escape is by rising to the surface and evaporating. This will soon drown out everything but water-grass and pond lilies.—*Ohio Farmer.*

ASHES AGAINST PLASTER.

Many farmers will expend money freely for plaster, and consider it a profitable investment, but at the same time throw or give away their wood ashes! At least, such has been the case. This is poor economy. While we regard plaster as a valuable article, we, at the same time, rank wood ashes much higher in the scale of fertilizers. It is true that no very accurate experiments have as yet been made to ascertain precisely the specific value of plaster and ashes; yet every one who has applied them to his soil and growing crops must have seen enough to convince him that both are serviceable, and especially that ashes should always be collected and preserved with care. In the "*Buckeye Plowboy*," some years since, a writer apparently desirous of placing this subject in its proper light, but with somewhat less minuteness of detail than is perhaps requisite to the consummation of such an undertaking, details a single experiment instituted by himself as follows:

"I took three rows in a small piece of corn by the side of my garden, and put a handful of ashes on each hill of one row, a teaspoonful of plaster on each hill of another, and the third, left without putting on any of either. I cultivated them all alike, hoeing them twice. During the season some pigs got in and rooted up one end of the rows, leaving but about five rods of each that came to maturity. In the fall I husked the rows, as far as they had not been injured, and weighed the ears of each:

Weight of the ashed row.....	49½ lbs.
Weight of the plastered row.....	48½ "
Weight of the row which was neither ashed nor plastered.....	41½ lbs.

The ground was green-sward, turned over in the spring, the soil clay, inclined to loam."

We present the following analysis of the ashes of the sapwood of white oak, (*Quercus alba*.)

Potash.....	13.41
Soda.....	0.62
Sodium.....	2.78
Chlorine.....	4.24
Sulphuric acid.....	0.12
Phosphate of Peroxide of Iron, } Phosphate of Lime, Phosphate of Magnesia, Carbonic Acid.....	8.95
Lime.....	30.85
Silica.....	0.21
Magnesia.....	0.35
Soluble Silica.....	0.80
Organic matter.....	5.70
	100.19

Many analyses have been made of the corn crop, and the following, embracing the ashes of the kernel, leaves and cob, we give, in order better to enable the reader to understand why ashes applied to this vegetable, as a manure, must necessarily be productive of beneficial effects.

Analysis of the ash of the kernel of white flint corn, "grown on a sandy soil, and manured in part with coal ashes."

Silica.....	9.500
Alkaline and earthy Phosphates.....	35.500
Lime.....	0.160
Magnesia.....	2.410
Potash.....	23.920
Soda.....	42.590
Chlorine.....	0.405
Sulphuric Acid.....	4.385
Organic matter.....	0.367
	99.237

Analysis of the ashes of the leaves :

Silica.....	53.550
Earthy Phosphates.....	19.250
Lime.....	6.092
Magnesia.....	1.250
Potash.....	12.702
Soda.....	8.512
Chlorine.....	0.762
Sulphuric Acid.....	4.185
	115.363

Analysis of the ashes of the cob :

Silica.....	13.600
Earthy Phosphates.....	23.924
Lime.....	0.300
Magnesia.....	0.900
Potash.....	35.802
Soda.....	5.914
Chlorine.....	0.132
Sulphuric Acid.....	0.345
Organic matter.....	2.314
Carbonic Acid.....	6.134
	89.365

The reader will not fail to observe how largely those elements prevail which are the most important to nearly all plants, such as the earthy phosphates, the potash, soda, and silica, or sand. He will observe, too, that they are far from being insignificant even in the coal ashes. If this analysis is correct—and we have no reason to doubt it—coal ashes ought to be more generally preserved and used as a fertilizer.

The ashes of all wood are composed very nearly of the same materials, and so far as effects upon vegetation are concerned, it is of very little consequence whether they are from oak, elm, maple, or any other variety. Ashes from soft wood are said to be less valuable; but we have high authority that the ashes of the hardest oak and the softest pine vary but a trifle in the materials, which compose them.

For the New England Farmer.

THE PIONEER FARMERS' CLUB.

MR. EDITOR:—Some little time since, as we were about taking measures to institute a Farmers' Club, I sent a request that you would offer some suggestions in regard to its formation. You very kindly complied by an article just suited to our peculiar necessities. If the result of our effort will be of any interest to you and any encouragement to others to form similar associations, I will briefly describe our success, hoping that it may not exclude more important matter from the columns of that weekly visitor, which, to use the words of a grey-headed neighbor of mine, "tells more about farming every week than we ever knew."

Having completed such an organization as our circumstances required, our President visited Mr. Secretary Flint, and obtained a package of books which laid the foundation for a valuable library.

Other volumes have since been purchased from the funds of the Club, and we have now a respectable little library, which has been repeatedly consulted and referred to by those who have taken part in the discussions, and from which a great amount of useful information has been derived.

The discussions have been animated, and have laid bare a vein of thought which has hitherto been little worked.

Even the ladies, without whose aid no good cause has ever prospered, have been constant attendants at the meetings, and have contributed to their interest by reading a manuscript paper entitled "*The Farmers' News.*" Gentlemen of no professed literary talent have prepared and delivered addresses, which, if not in beautiful sentences and well turned periods, in practical though and useful principles would bear a favorable comparison with those delivered at the dinner tables of the exhibitions of some of our county societies. At a recent meeting, a full grown apple tree borer which had been preserved alive, and without food, for a period of more than three weeks, was exhibited, and his habits explained by a gentleman present. An antiquated looking spade which had been known among men a hundred years, and which presented a striking contrast to the well-finished implements of modern days, was exhibited by another gentleman.

But I should occupy altogether too much space should I attempt to tell one-half that is interesting concerning this little institution, which has been to us, and something similar to which would be to every neighborhood, an invaluable means of acquiring practical information in regard to that profession which has been honored by such men as Cincinnatus and Virgil of ancient, and Washington and Webster of modern times.

G. A. ADAMS, *Secretary.*

Hopkinton, May 11, 1859.

TO RAISE POTATOES.

A correspondent—Wm. Aldridge, of Goreland, Ind.—writing to the *Prairie Farmer*, states that having noticed how potatoes were interrupted in their growth, and invariably pined away and died if disturbed and bruised when wet with dew or rain, he selected a patch of a potato field, the whole of which was good soil, and in good order to try an experiment. This patch he only plowed once, and then loosened the soil with the hoe when the vines were above ground, and in the heat of the day when they were perfectly dry. He never touched them afterward until they were dug in October last year. These vines kept green throughout the season, and the yield of potatoes was very large. The other portion of this same potato field was purposely worked three times, when the vines were wet with dew. These blighted early, did not produce half a crop, and the potatoes were of a very inferior quality. The ground, seed, and time of planting in both patches, were the same.—*Scientific American.*

CURCULIO.—A remedy for this pest is proposed in the *Ohio Valley Farmer*, by Mr. Walker, of Kentucky. As soon as the fruit is attacked, take a tin pan into which soapsuds has

been placed to the depth of an inch or so; place it in the tree, and place a small glass globe lamp in the middle of the pan, which permit to burn all night. In darting towards the light, the curculios strike the glass, and are precipitated into the liquid, from which they are unable to extricate themselves.—*Homestead.*

FARM DRAINAGE.

We cannot too earnestly call the attention of readers to the subject of draining their lands.—We ask them to make a single practical test, in a proper manner, on a small piece of land, and then they will be able to decide for themselves whether draining will not save them a great deal of hard labor, and at the same time greatly increase their crops. Believing this *will be the result*, we shall present such portions of Judge FRENCH'S excellent work on "Farm Drainage," as we think will induce them to commence the good work.

An acre or two of land which we thoroughly underdrained two years ago, laying the pipes down four feet below the surface, has been affected about as much as though the season had been lengthened some three weeks, or the land had been removed south as far as New Jersey.

Below we give an extract from the recent work on Drainage spoken of above:

Drainage is a new subject in America, not well understood, and we have no man, it is believed, peculiarly fitted to teach its theory and practice; yet the farmers everywhere are awake to its importance, and are eagerly seeking for information on the subject. Many are already engaged in the endeavor to drain their lands, conscious of their want of the requisite knowledge to effect their object in a profitable manner, while others are going resolutely forward, in violation of all correct principles, wasting their labor, unconscious even of their ignorance.

In New England, we have determined to dry the springy hillsides, and so lengthen our seasons for labor; we have found, too, in the valleys and swamps, the soil which has been washed from our mountains, and intend to avail ourselves of its fertility in the best manner practicable. On the prairies of the West, large tracts are found just a little too wet for the best crops of corn or wheat, and the inquiry is anxiously made, how can we be rid of this surplus water.

There is no treatise, English or American, which meets the wants of our people. In England, it is true, land-drainage is already reduced to a science; but their system has grown up by degrees, the first principles being now too familiar to be at all discussed, and the points now in controversy there, quite beyond the comprehension of beginners. America wants a treatise which shall be elementary, as well as thorough—that shall teach the alphabet, as well as the transcendentalism, of draining land—that shall tell the man who never saw a drain-tile what thorough drainage is, and shall also suggest to those who have studied the subject in English

books only, the differences in climate and soil, in the prices of labor and of products, which must modify our operations.

With some practical experience on his own land, with careful observation in Europe and in America of the details of drainage operations, with a somewhat critical examination of published books and papers on all topics connected with the general subject, the author has endeavored to turn the leisure hours of a laborious professional life to some account for the farmer. Although, as the lawyers say, the "presumptions" are, perhaps, strongly against the idea, yet a professional man *may* understand practical farming. The profession of the law has made some valuable contributions to agricultural literature. Sir Anthony Fitzherbert, author of the "Boke of Husbandrie," published in 1523, was Chief Justice of the Common Pleas, and, as he says, an "expeyenced farmer of more than 40 years." The author of that charming little book, "Talpa," it is said, is also a lawyer, and there is such wisdom in the idea, so well expressed by Emerson as a fact, that we commend it by way of consolation to men of all the learned professions: "All of us keep the farm in reserve, as an asylum where to hide our poverty and our solitude, if we do not succeed in society."

Besides the prejudice against what is foreign, we meet everywhere the prejudice against what is new, though far less in this country than in England. "No longer ago than 1835," says the *Quarterly Review*, "Sir Robert Peel presented a Farmers' Club, at Tamworth, with two iron plows of the best construction. On his next visit, the old plows, with the wooden mould-boards, were again at work. 'Sir,' said a member of the club, 'we tried the iron, and we be all of one mind, that they make the weeds grow!'"

American farmers have no such ignorant prejudice as this. They err rather by having too much faith in themselves, than by having too little in the idea of progress, and will be more likely to "go ahead" in the wrong direction, than to remain quiet in their old position.

FEEDING OFF PASTURE LAND.

"It is certainly advantageous to pastures," says Thaer, "to remove the cattle from them now and then, in order that the grass may have time to recover itself. For this reason, on the best conducted farms, the pasture land is divided into separate parts. The animals which require the most succulent and nourishing food are first turned to each separate division, and after they are removed, the other kinds, which need a smaller quantity of nutriment, are fed there. By this means the whole of the grass is eaten, those kinds to which cattle are least partial with the rest. The herbage is then left to recover itself for a sufficient time, and afterwards the first herd is again allowed to feed upon it."

This system possesses decided advantages over the practice of suffering the cattle to wander over the whole extent of pasture ground. If the space is large, a great deal of herbage is spoiled or destroyed by the trampling of the cattle; the pasturage is never uniformly eaten off, but some portions are left to grow until it becomes dry

and hard. The luxuriant but distasteful herbage is constantly increasing, and in time crowds out the finer kinds, already lessened by being cropped so closely and continually. Another advantage is, that stock are more quiet, and consequently feed better and keep in better health.

The succession of the various kinds of stock must be regulated by the circumstances of the owner. Thaer says, that in spring the best pasturage is often given to ewes, because it is needed to increase their supply of milk, and give them strength to nurse their lambs. The grazing of lands with sheep in spring, if not allowed too long, has a tendency to thicken the growth of grass. But they cannot be followed by cattle immediately, with advantage; at least three weeks should intervene, to allow the smell of their dung to dissipate, and the grass to get a fresh start.—*Country Gentleman.*

For the *New England Farmer.*

ORNITHOLOGY.

MR. EDITOR:—I do not see as any of the advocates for the preservation of robins advance one idea in their favor, except their singing; no injurious insect do they prove that they destroy. I will admit that for fructiferous birds nature requires some animal food, but the robin never takes any except the angle-worms, where they can be found.

In Vermont and New Hampshire angle-worms are very scarce; in many places in these neighborhoods one square foot will contain more of these insects than hundreds of acres in those States. Trout fishers know well that one dollar per gill is the standard price at the White Mountains for them to be used for bait. Such scarcity will account for writers in these States asserting that they eat grubworms, which, under those circumstances, I will not dispute. But where angle-worms abound, grubworms need procure no life insurance.

To my mind, the robin possesses no taste; it selects and takes its food to the fancy of its eye; for we observe them eating every variety of fruit, selecting the most beautiful and mellow, including all kinds, from the strawberry to the most sour apple, providing it is yellow and handsome; but after these are gone, they eat, with apparent relish, the cedar and buckthorn seeds, though intensely bitter. Sometimes I am led to think, when I see him attack an angle-worm, and gulp him down his throat, as if he loathed him; like a child taking Epsom salts, he is only gratifying his vicious destructiveness.

The two lower counties of New Jersey are almost entirely covered with wintergreen loaded with berries. Extracting essential oil from the plant is the employment of many of the inhabitants. Those extended wastes are the home of the robin, in winter, living exclusively on the berries of that plant. That locality is the robin's northern winter limit, extending from there south to the Gulf of Mexico.

Our statute law fines us two dollars each for every robin which we may put in a pot-pie; so a respectable sized pie may cost us fifty dollars, besides the materials, the fine to go to any re-

vengeful scape-goat who may enter the complaint.

I inquire where the committee appointed by the wisdom of the State is? I saw their report of the habits of the robin before the fruit season; they reasoned that they were not a fruit-eating bird; where is the basis for such reasoning? Neither are our convicts confined in prison rum-drinkers while there, simply because they cannot gratify that appetite. Who ever heard of robins eating fruit in March, April or May?

Legislation talks about insect defalcation, depredation and destruction. Their microscopic eyes, however, never discern the ravages of the gilded, cowardly robin, whose cowardice induces him to locate near dwellings, that his craven spirit may never be aroused to defend his domicile from the depredation of his kind, fleeing, like the one whose protegee he is, when no one pursueth. N.

South Danvers, 1859.

For the New England Farmer.

THANKSGIVING DAY AT THE SANDWICH ISLANDS.

MAKAWAO MAUI, HAWAIIAN ISLANDS, }
DECEMBER 30, 1858. }

EDITORS FARMER:—*Gentlemen*,—Reminded by the closing year of my delinquency in writing you, I hasten to devote a part of this day of public thanksgiving to this purpose. The occasion will suggest a subject of interest to you and your readers, as Thanksgiving day, though at a distance, will remind them of scenes in which they all delight to participate.

"Hawaiian Thanksgiving!" do I hear you exclaim? with the remark, "You can be as thankful, certainly, as any of us, and God, who is no respecter of persons, will accept your gratitude. But as for the Thanksgiving supper, with tables groaning with New England luxuries, around which gather hosts of friends, this, of course, you know nothing about. A dish of poi and a baked dog or raw fish spread on a clean mat, or on some fresh ferns, will doubtless constitute your Thanksgiving repast." Well, friends, I mean to take in good part this specimen of banter which I have supposed you might employ when hearing that the king and chiefs of Hawaii are so far adopting the customs of New England, as to appoint a day of thanksgiving and prayer to God, for His kindness to the nation during the past year. Nor will I deny that both chiefs and people are calculating somewhat largely on thrusting their fingers into the poi dish, and thence to their mouths, ere the day closes; nor do I doubt that many a fat and sleek animal of the canine species is now in an oven of hot stones remunerating in part the expense of feeding. I am not horrified in relating, and I hope you will not be in hearing, that dogs are often strangled and eaten by chiefs and people. Foreigners, generally, universally perhaps, cry out, *shame, shame*, at the practice. I know not that any of them, *knowingly*, eat of this dish, though I shrewdly guess that more than one gentleman from enlightened lands when dining with the chiefs of Hawaii, have eaten with a gusto from a creature whose vernacular was bow-wow, instead of baa, as they supposed. I know not as I have ever

tasted dogs' flesh. I have no particular desire to do so. Still, I see no moral wrong about it, nor do I feel like dissuading my people from such a practice. *De gustibus non disputandum est*, or let there be no disputing about tastes, is a maxim which is worthy of consideration. Most heartily do I wish that the men from our country would do nothing worse than eat dogs' flesh.

But to return to the subject of Thanksgiving supper, which seems to be a *sine qua non* in the idea of a Puritan Thanksgiving. I am glad that you feel a doubt of our ability to get up a supper on this occasion, which will at all compare with yours, as in laboring to remove this doubt, I shall be able to tell you of the change in our circumstances since March, 1828, when, as one of the second reinforcement, some eight years after the establishment of the mission, I landed at Honolulu.

At that time there were no Thanksgiving days appointed by the government, and had there been we could not have got up much of a supper. Our flour was very poor, sour, and often musty. Butter and cheese, fresh beef and mutton we rarely tasted. Salmon from Oregon we could obtain, but without Irish potatoes and butter, this scarcely relished. Molasses we used for our tea and coffee. We had an occasional fowl, but as we bought them of the natives, they were lean and unsavory. Of vegetables we had kalo and sweet potatoes—of fruit, bananas or plantains—also, melons. These were our facilities in 1828 for getting up a Thanksgiving supper. In 1829 no flour having arrived from Boston, there was much suffering in the Mission families at Honolulu, and the health of not a few individuals was greatly affected. Since that time there has been a gradual improvement in the means of living so that to-day, we can have a Thanksgiving supper purely Hawaiian, composed of the following dishes, viz.: Baked beef and lamb, both beautifully fat and tender, and good enough for John Bull himself; fine large and fat turkey and baked fowl; excellent mullet from fresh water ponds; roasted pig fed on milk, tender and savory; potatoes, both Irish and sweet; kalo, of which the poi is made, but which boiled or roasted is excellent; bananas or plantains cooked in almost as many ways as your apple, and, on the whole, an excellent substitute; bread fruit, onions, beans and lettuce, Indian corn, tomatoes and cabbage. To these vegetables, there can be added at some of our stations, turnips, beets and carrots. Bread, of course, at Makawao, must not be forgotten. This we have plentifully, made of coarse meal ground in our hand-mills or fine bolted at our steam mill at Honolulu. With these ingredients we can have chicken pie; also, custards, as sugar, eggs and milk are abundant; pumpkin and banana pies likewise. Butter and cheese, with fig, guava and ohelo—Hawaiian whortleberry—preserves. Pia or arrow-root puddings, Hawaiian coffee with cream and sugar. A part or all of these we can furnish for our supper this evening—also melons, oranges, guavas and figs. Or if our friend, Dr. Alcott, will sup with us, he shall have good baked potatoes and bread, pia, also, with figs and oranges. Please recollect, gentlemen, that I did not spread this table to cause a surfeit, but to show you what a change the blessing of God on

industry has wrought in our circumstances of living since 1828.

Evening.—I have just returned from the house of God, where I addressed our people on the goodness of their heavenly Benefactor during the year which is near its close. It has been, on the whole, a year of prosperity to the Hawaiian nation. Health has prevailed as a general thing. Peace has blessed the nation with its balmy influence. The earth has yielded her usual increase, so that to-day we may justly speak of the watchful care of a benignant Providence, and of the loving kindness of God to us all. In addition to the products of the earth purely Hawaiian, there have been sown and reaped a larger number of acres of wheat in this district than ever before, and though a good deal of this was destroyed by the caterpillar, still some 16,000 bushels were secured and sold, besides a good deal reserved for seed. Considerably many oats were raised, also corn and beans. Besides these essentials, the islands are fast developing their capabilities of producing fruit. Oranges are becoming increasingly plenty. Peaches, also, will soon become abundant. Figs have long been so, also guavas and custard apple. I have not a doubt that Hawaii will become famous as a fruit-growing country. In this prospect I greatly rejoice, and I am exhorting the people to turn their attention more to fruit-growing. Oranges and figs eaten freely would conduce much to the physical health and enjoyment of all classes among us. Some of them are beginning to think more favorably of this department of labor and enterprise. The growing of wheat, however, at present secures most of their attention. Though it is not a very profitable branch of enterprise still multitudes wish to try their hands at it, and as the Hawaiian Steam Flouring Company pay cash for wheat, an increasing number are thrusting in the plow, and scattering the seed over the furrowed fields. One benefit the people are certainly deriving from the introduction of wheat into their country,—they are forming habits of industry. In this I greatly rejoice. Of the success of their labors I will tell you in my next communication.

Yours with respect, J. S. GREEN.

For the New England Farmer.

THE APIARY--BEE HIVES.

MR. EDITOR:—In the *Farmer* of January 7 I noticed an article concerning bee hives, which has led me to give a description of a hive of my own construction. In the first place, make a simple box twelve inches square inside, and twelve or fourteen inches high, as the apiarian may determine. The top board should be fastened on with screws. The sticks to support the combs should run crosswise of the hive, and made a little shorter than the width of the inside, and fastened by nails driven through the sides of the hive, in such a manner as to be easily drawn with a hammer. Now whenever it becomes necessary to take out the contents, you have only to sever the comb from the inside of the hive, draw out the nails from the sticks that support the combs, and take out the screws from the top, then raise the contents all out whole, cleaving to the top board without injuring the hive.

Having explained the why and wherefore, I will go on with the construction. Now make a passage crosswise through the top board the whole width of the inside of the hive, one-half inch in width, for the bees to pass up into the boxes. Nail flat bars one inch in width on the under side of the top board lengthwise, or from front to back. To cause the bees to build in the centre of the bars, stick a piece of comb on to each bar by dipping it into melted wax, and applying it immediately.

I prefer the flat bars, because there is no patent claimed on them, and then it is less work to stick on the combs than to make the bevel bar of the Union Hive. And the passage through the top when the boxes are inverted, answers the purpose of the hollow roosts of the Union Hive. The boxes are made with holes bored in the bottom. I usually make two passage ways across the top of the hive, with a hole in each end of the boxes exactly over the passage. I prefer holes in the boxes to a long passage to correspond with the passage in the top board, because the queen will not be so liable to enter the boxes and deposit her eggs there, thereby converting the contents into brood comb. At the same time, the bees can pass up between all the combs into the passage way, thence to the holes in the boxes.

Now for a contrivance for your correspondent from Leominster. Bore two holes in the front of the hive under the top board, exactly in line with the holes in the boxes; to be closed by a button, and opened when the bees are at work in the boxes, and for purposes of ventilation.

The cap to cover the boxes is made to shut over the outside of the hive, and rests on cleats, and to fit the bottom as well as the top of the hive, for the purpose of wintering bees in the house; the cap should also have a ventilator. Now invert the cap and raise the hive from the stand; set it into the cap resting on cleats upon the outside of the hive, then carry it to some dark closet, open the ventilator and take off the boxes, and your bees will come out dry and clean in the spring.

N. K. L.

Otter River, May, 1859.

TO KEEP MOTHS FROM FURS AND WOOLLENS.—Shake and beat them well, then tie them up *tight* in a cotton or linen bag, and hang them in a dry place, or put them into a chest. Nothing else is necessary. This process is effectual, because the miller cannot get in to deposit its eggs. It shuns camphor, tobacco, or anything else of the kind, as much as a hungry boy would a good apple. We once deposited some nice furs in the centre of a cask of tobacco; but the moth cared as little for it as for a cask of rose leaves, and ruined our furs. Tie up the furs, and they will be safe.

WHEEL HOES.—Every person who has half an acre in carrots, parsnips, onions, &c., all told, ought to have a wheel hoe. He can raise ten bushels of carrots or onions as easily with one, as he can *five* without one. Wont that pay?

MOWING MACHINES.

The favorable weather of May and early June has brought the grass forward with wonderful rapidity, so that by the 25th instant many fields will be ready to harvest. Our friends will do well during the haying season to cut a portion of their grass quite early, and then in feeding it out during the winter, observe what the comparative value is of grass cut early and made into hay, and that cut when more mature. We have the impression that the early cut grass is much the most valuable; that is, cut in its early bloom. It is sweeter, less hard and wiry, and cattle, so far as our observation has extended, eat it with a greater relish than they do later cut grass.

Another query is, whether a large portion of our hay is not cured too much—that is, over-made, dried until it is almost juiceless, brittle, hard and innutritious. Grass cut just at night, and *well tended* during a bright July day, can be sufficiently dried to go in, by four o'clock in the afternoon—and if a gentle breeze is moving, even earlier.

Those whose lands will admit the use of a mowing machine, and who have not yet used one, have not realized the "aid and comfort" they may derive from the use of a good one. Ketchum's, we believe was the first introduced on our Massachusetts farms. This has been re-modelled and greatly improved, and one has been recently constructed for one horse, which we gave a cut of some weeks since. Manny's has been quite extensively used, has been much improved, and is now fitted for one horse, and seems to us calculated to do good work. We have not seen it in motion. Then there is Allen's, Russell's, the Buckeye, Wood's, Thompson's, Gore's, &c., of which we have no particular knowledge, and can give no opinion of them. Some of those already constructed, we feel quite confident, will work well enough to pay their cost in a few years, so that, although they may not be perfect, there will be no loss in purchasing and using them.

HORSE RAKES AND HAY TENDERS.

The prejudice against the use of Horse Rakes in haying has gradually yielded as they have been more generally brought into use. There are several kinds, the poorest of which are worthy of introduction, in preference to the sole use of the hand rake. The "Revolver" works clean and well, is cheap, not liable to get out of order, and requires little room when not in use. But it ordinarily takes two persons to use it, or, if only one, one of the best hands in the field, and is a hard and exhausting labor. The spring tooth rakes clean, too clean, usually takes two hands to work it, and is hard work for man and beast.

It is sometimes mounted upon wheels, so that the operator can ride, and in that form is said to be a good rake. We have not used it. The "Delano, or Independent Action" rake, when well constructed, rakes clean, is easy for the operator and the horse, and performs the work with great rapidity. A stout boy of fifteen or sixteen years, will rake after as many carts as half a dozen men can load at one time, and a skillful manager can do all the heavy part of cocking with one, after he has got the hay into winrows.

We understand that Messrs. NOURSE, MASON & Co. have in process of construction a *Hay Spreader* made in connection with a Horse Rake, so that either can be used at will. Those who are competent to judge, inform us that it will be a capital machine. We await its advent with some impatience.

For the New England Farmer.

VALUE OF CARROTS FOR MILK PURPOSES.

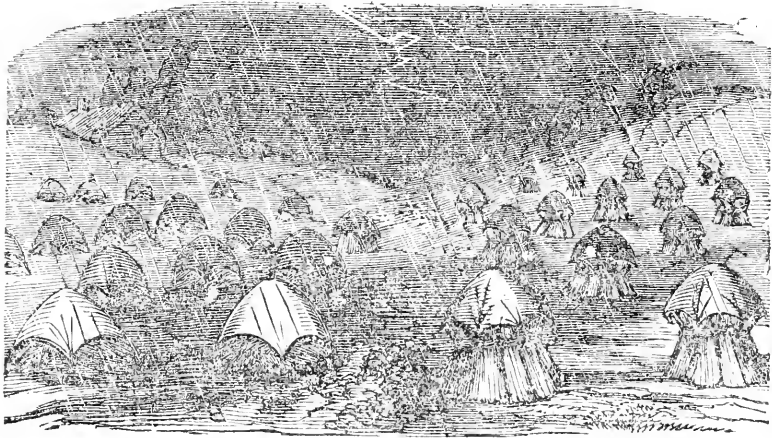
MESSRS. EDITORS:—I observe that the value of roots for stock is considerably agitated of late. A thorough discussion of this subject must comprehend three departments of utility, viz., their value in increasing the *quantity* of milk, their value in improving the *quality* of the milk, and lastly, in what *comparative condition* the experiment leaves the stock. As all neat stock is destined in the end for the shambles, no experiment can be fully satisfactory under either of the two first heads, that does not also state how far it promoted this end; still, as far as such an experiment goes, it has its value, but the limits of its teachings should be noted. Of the value of carrots for milk purposes, one of our enterprising farmers, Mr. MASON COURTIS, recently narrated to me the result of an experiment of his, which, as it was made with care, and the result made a memorandum of, at the time the experiment was made, appears to be well worthy of record.

On Christmas last, he began to feed four cows with cut carrots, of the orange variety, giving two pecks daily to each animal, which was continued until the 20th of March, as long as the carrots held out. During this period, the yield of milk from the four averaged forty quarts daily. Immediately after the carrots were gone, the cows fell off regularly and rapidly in their yield of milk, and in thirteen days had fallen off eleven quarts, when they yielded a constant supply for a fortnight, after which, being fed with a daily proportion of meal, they increased their yield.

In the whole course of the experiment, they were fed with second crop hay, the hay having been proportionally increased after the carrots were exhausted. They were regularly watered and always milked by the same person.

Marblehead, June, 1859. J. J. H. GREGORY.

There are six or seven generations of gnats in a summer, and each lay 250 eggs.



HAY CAPS.

Those of our friends who procure and use half a dozen Hay Caps, in getting their hay and grain the present summer, will be quite sure to treble or quadruple the number next summer. If the season should prove a "catching one," they will save their cost on their present crops. Never mind what disaffected grumblers say, who are determined not to "haw" or "gee" only as the antediluvians did,—but get a few and try them. Let old fogdom go to mill on a drag, if it pleases, while you sit on a well-stuffed seat and elliptic springs. You will find your grist none the less sweet, or coarser, for bringing a little art to your aid. But try the hay caps, for several reasons:

1. You can make hay much faster with them, even in good weather.
2. Your hay will be better partially made in the cock, under caps, than it would be made entirely in the sun. Persons who put up herbs for medicinal purposes, where it becomes necessary to retain all their virtues, never dry them in the sun.
3. As the haying season is short, you can have more grass down at once by the use of caps, and thus get through haying quicker.
4. The quality of your hay made under caps will be 10 per cent. better; it will be sweeter, brighter, less dusty, and go farther in feeding out, provided the season is unfavorable for making.
5. You will save their entire cost in obviating the necessity of cocking and spreading out again, quantities of hay which you can thoroughly make with their aid.

Something was said last summer of a patented hay-cap, and permission was given us by the inventor, Mr. Dinsmoor, of Auburn, N. H., to try them. We did so, and found them much superior to any we had before seen. The right to make and sell these is now entirely invested in Messrs. Chases & Fay, Boston, whose cut above, illustrates the manner in which caps are used. They also make caps from prepared cloth, which they say will not mildew.

CLEAN MILKING.—It is a matter of great importance that the milk should all be drawn from the cow's udder. Careful experiments made in England show, that "the quantity of cream obtained from the last drawn cup, from most cows, exceeds that of the first in a proportion of twelve to one." Thus a person who carelessly leaves but a teacup full of milk undrawn, loses in reality about as much cream as would be afforded by four or six pints at the beginning; and loses, too, that part of the cream which gives the richness and high flavor to the butter.—*Country Gentleman*.

REMEDY FOR THE STRIPED BUG.—Having but few boards at hand suitable for making frames, but plenty of old bricks, I took a wheelbarrow load of the latter, and stood four or five of them on edge around each hill of melons, etc., as soon as the young plants made their appearance; and in ten days' trial I have not found a bug inside these little pens, while some plants left outside were entirely devoured by them. The bricks also promote the growth of the young plants, by protecting from winds, and giving out heat at night absorbed during the day.—*Exchange*.

BENEFIT OF DROUGHTS.

It may be a consolation to those who have felt the influences of long and protracted dry weather, to know that droughts are one of the natural causes to restore the constituents of the crops, and renovate cultivated soils. The diminution of the mineral matter of cultivated soils takes place from two causes.

First. The quantity of mineral matter carried off in crops and not returned to the soil in manure.

Second. The mineral matter carried off by rain water to the sea by means of fresh water streams.

These two causes, always in operation and counteracted by nothing, would in time render the earth a barren waste, in which no verdure would quicken, no solitary plant take root. A rational system of agriculture would obliterate the first cause of sterility, by always restoring to the soil an equivalent for that which is taken off by the crops, but as this is not done in all cases, Providence has provided a way of its own to counteract the *thriftlessness of men*, by instituting droughts at periods, to bring up, from the deep parts of the earth, food on which plants might feed when rains should again fall. The manner in which droughts exercise their beneficial influence is as follows: during dry weather, a continual evaporation of water takes place from the surface of the earth, which if not supplied by any from the surface creates a vacuum, (so far as the water is concerned,) which is at once filled by the water rising up from the subsoil of the land; the water from the subsoil is replaced from the next below, and in this manner the circulation of water in the earth is the reverse of that which takes place in wet weather. This progress to the surface of the water in the earth manifests itself most strikingly in the drying up of springs and rivers, and of streams which are supported by springs. It is not, however, *only the water* which is brought to the surface of the earth, *but also all that which the water holds in solution.* These substances are salts of lime and magnesia, of potash and soda, and indeed, whatever the subsoil of deep strata of the earth may contain. The water, on reaching the soil, is evaporated, and leaves behind the mineral salts which I will here enumerate, viz: lime, as air slacked lime; magnesia, as air slacked magnesia; phosphate of lime, or bone earth; sulphate of lime, or plaster of paris; carbonate of potash and soda, with silicate of potash and soda, and also chloride of sodium or common salt: all indispensable to the growth and production of plants which are used for food. Rain water, *as it falls from the clouds*, would dissolve but a *very small* proportion of some of these substances; but when it becomes soaked into the earth, it there becomes strongly imbued with carbonic acid from the decomposition of vegetable matter in the soil, and thus acquires the property of readily dissolving minerals on which it before could have very little influence. I was first led to the consideration of the above matter from a perusal of a lecture of Professor Johnston, on this subject, and on a re-examination of some soils which were analyzed some years since, there was perceptible a larger quantity of a particular mineral substance than was first found. And as none had been applied in the

meantime, the thing was difficult of explanation, until I remembered the late long protracted drought. I then also remembered that in several of the provinces in South America, soda was obtained from the bottoms of ponds, which were dried in the dry, and again filled in the rainy season. As the above explanation depended on the principles of natural philosophy, experiments were at once instituted to prove the truth. Into a glass cylinder was placed a small quantity of chloride of barium in solution; this was then filled with dry soil, and for sometime exposed to the direct rays of the sun on the surface. The soil on the surface of the cylinder was now treated with sulphuric acid, and gave a copious precipitate of sulphate of baryta. The experiment was varied by substituting chloride of lime, sulphate of soda, and carbonate of potash, for the chloride of barium; and on the proper resolving agents being applied, in every instance the presence of these substances were detected in *large* quantities on the surface of the soil in the cylinder. Here then is proof positive and direct, by plain experiment in chemistry, and natural philosophy, of the agency, the ultimate beneficial agency of droughts.

We see therefore in this, that even those things which we look upon as evils, by Providence, are blessings in disguise; and that we should not murmur even when dry seasons afflict us, for they too, are for our good. The early and the later rain may produce at once abundant crops; but dry weather is also a beneficial dispensation of Providence, in bringing to the surface food for future crops, which otherwise would be forever useless. Seasonable weather is good for the present; but droughts renew the storehouses of plants in the soil, and furnish an abundant supply of nutriment for future crops.—GEO. TROWBRIDGE, *Camden, N. Y., in Ohio Valley Farmer.*

THE SEASON.

The promise is at present strong for abundant crops. The hot days which we had about the middle of May brought the plants forward with great rapidity,—but the cooler weather since has given them a desirable check, so that they have grown stocky and strong, instead of aspiring to reach the skies.

The apple blossom has been full in this region. The cherry blossom only moderate, while we have met only two farmers who have seen a peach blossom this spring!

A copious rain fell here on the night of the 31st of May, and the ground is well wet below,—so that if little or no rain should fall before haying, the grass crop will be an average one. Hay still commands a somewhat high price, however, in consequence, we suppose, of the high price of grain, as it brings readily in our market, from \$1,00 to \$1,15 per hundred pounds, according to its quality.

Planting was somewhat delayed by the north-east storm which occurred in the last half of May; but the crops were got in seasonably, not-

withstanding, and the grain crops are up and appearing well. Corn has come up promptly, and looks well, and so do many fields of potatoes.

Winter rye and winter wheat are of good height, and fine color, and have a fine start for rich harvests. Spring wheat also looks well.

As the season progresses, the fatal effects of the winter are more and more obvious. A gentleman informs us, that of one hundred peach trees that have been in bearing two or three years, not one is left to be of any value, while one hundred and fifty trees that have not yet come into bearing are not in the slightest degree injured. Grape vines, quince bushes, and various shrubs that have shown no signs of starting until within a few days, are now pushing buds, and possibly may recover from the palsy stroke which they received. Grass has been badly winter-killed, which leaves many fields with rather a leprous appearance.

What has been the cause of this widely-spread destruction? Who can tell us? Was it extreme and sudden variations in temperature, the great depth to which the frost penetrated, or did the impenetrable covering of ice, which, resting upon the surface during a good portion of the winter, cut off a certain aeration or breathing, necessary to the plants? Who will solve these mysteries for us, and enable us, by the exercise of enlightened art, to protect ourselves against future ravages of a similar nature? Surely, the farmer needs the best native ability, the most varied and abstruse learning, and the exercise of the ripest judgment, to penetrate the arcana of nature, and tell us how to avoid the losses which are perpetually occurring.

On Friday morning, June 3d, there was a brisk thunder shower in this region, the first of the season.

For the New England Farmer.

ABOUT PRUNING.

MR. EDITOR:—I had seen, in the *New England Farmer*, many articles on the pruning of trees. I believe it is time that the subject, and the discussion of the subject, should be pruned. As you and your May number appear to be almost cloyed with the subject, I feel some hesitancy in undertaking it, with my dull tools. But in doing it, I pledge myself that the sap shall not flow very copiously from my head, nor from my pen.

The object of pruning is to rid the tree of its superfluous branches. The right time of pruning is, when the sap is gone up, and is elaborating, by vegetable process, in the formation of a pulpy substance, (*cambium*), which becomes wood; and adds one grain to the tree. If a limb be cut off at this time, the new wood forms between the bark and that part of the limb which remains. Thus a covering begins to be formed over the naked wood, where the am-

putation was made; and this process goes on from year to year, till the whole is covered; the wound is healed.

If it be asked, when does this pulpy substance between the bark of the wood commence in fruit trees, I shall not answer by giving the date; for there is more than three weeks' difference in different seasons. But I am prepared to say, it takes place about the time the blossom bud is ready to open. Different kinds of trees require different times for pruning. The pine should be pruned about the middle of June. I make these remarks, not with the expectation of convincing any one who has expressed a different opinion, but to relieve my own mind of an item of knowledge, which I have had on hand, and in hand, many years.

Now I recommend it to any one, and to every one, who feels interested in the subject, to make the following experiment. At the middle of each month in the year, take a limb from the same tree, or from trees of the same class, and notice definite and minutely the result. Knowledge gained in this way is one's own knowledge, and it is as much better than borrowed knowledge, as earned capital is better than borrowed capital.

Milford, N. H., May 24, 1859.

H. M.

For the New England Farmer.

"RUTA BAGA AND CORN CROPS."

I fully concur with Mr. Brigham, (in your paper of the 28th of May,) in relation to the culture of the ruta bagas or any of the turnip tribe. From a long experience in the cultivation of the soil, I am convinced that the turnip is one of the most exhausting crops that the farmer cultivates. I say exhausting, for it takes a longer time and costs more to renovate the soil after raising a crop of turnips, than any other erop I cultivate. My experience is similar to Mr. Brigham's in the succeeding erops. I think the deterioration is fully one-half. Many argue that the turnip erop is not exhausting, as the broad leaves receive their nourishment from the atmosphere and the dews. If that be the case, and the food of plants is not imbibed by them in undue proportions, then I would suggest that they draw from the atmosphere poisonous substances and impregnate the soil with its deadly exudations. All I ask is, let the sticklers of the turnip crop make a fair experiment, (as Mr. Brigham has done,) side by side with other erops, and I opine they will abandon its culture as a field crop. I trust the day is not distant, when all prudent farmers will abandon its cultivation, for as the Hon. Mr. Brooks very truly says, "It costs too much to raise ruta bagas to justify their cultivation in this region."

There are other root crops less exhausting or less poisonous to the soil, and as easily cultivated, containing more nutriment, and more palatable to our stock, viz., carrots, mangold wurtzel, beets, parsnips, &c. &c., that the farmers may find it for their interest to raise, and without any perceptible exhaustion of the soil. I think it would be wise in our legislators to withhold the bounties of the State from those county agricultural societies that offer premiums for the turnip erops.

The individual may think he can plant an acre of turnips with impunity, and never realize his

loss by deterioration of his soil, nor care for its effects, so long as he reaps a bountiful harvest and present profit, but let him not "lay the pleasing unction to his soul," that it is an honest operation, for he must surely feel some twinge of conscience to leave to his progeny an exhausted and barren soil (as an inheritance,) made so by the avarice of their progenitor.

Therefore, I submit, that the evils of turnip culture (in a moral or pecuniary point of view,) are far greater than the equestrian performances of the ladies at our agricultural fairs. C.

North Pembroke, Mass., May 30, 1859.

For the New England Farmer.

SCIENCE FOR FARMERS.

MR. EDITOR:—We poor ignorant clodhoppers, who, away out in the country, plod over our farms, have little time to study the profoundly wise sayings of those who write big books and agricultural articles in the newspapers. We are in the habit of believing everything we find in these big books, when we have time to read them. But we are sometimes a little puzzled, when these wise writers disagree, to know which to believe. We desire, in all humility, to believe both sides, but cannot always reconcile the statements made so as to make that possible. What shall we do in such cases? Must we be at the trouble of using a little common sense—if we happen to have it? I suppose you will say, "Use your common sense." But have we no right to demand that those who pretentiously made statements with scientific gravity, should be careful to declare only that which they know?

The getter-up of the agricultural department of *Harper's Weekly* for May 14th, has given his readers what he calls an analysis of the grain, leaves and cob of the "white flint corn." He says:

"An analysis of the grain of white flint corn will give, of

Phosphates.....	about 35 per cent.
Potash.....	" 25 "

"The leaves will give, of

Silex.....	about 53 per cent.
Phosphates.....	" 19 "
Lime.....	" 6 "
Potash.....	" 12 "
Soda.....	" 9 "
Chlorine.....	" 10 "

"The cob will give, of

Silex.....	about 13 per cent.
Phosphates.....	" 23 "
Potash.....	" 35 "
Soda.....	" 5 "

"We give the above figures of some the most important elements for those who are curious in relation to the composition of the Indian corn plant."

Now, this looks a little, a very little, like a statement made by a person who, ignorant of the subject on which he writes, undertakes to prepare himself by "reading up" for the occasion, but does not do it carefully. There must be some mistake about it, or else some of us put a good deal of *potash* into our stomachs in the course of a year. I believe I average not far from a pound of Indian meal a day, taken in some form as food. Do I then eat *four ounces of potash* each

day—or over ninety-one pounds in a year? that would be enough to make four barrels of good strong soft soap. I humbly trust I am not so full of *lie* as this would make me.

Then again, to think that the leaves of the corn plant contain 53 per cent. of silex; one might well imagine that our cews' teeth would soon wear out, if called upon to grind much of it. As to the cobs, too—35 per cent. of potash in them! Why have not soap-makers used them instead of ashes? More than one-third potash! How rapidly, too, the potash would be taken from the soil at this rate. A crop of 50 bushels to the acre, reckoning the potash at this rate in the grain, leaves and cob, would use up not far from 1400 pounds. The agencies that decompose and dissolve the rocks would have to be pretty busy in order to keep up a supply, at this rate of consumption.

I have no reliable analysis of the grain or leaves of Indian corn now, by me; but on reference to Dr. Jackson's analysis of the cobs of several different varieties of corn, it appears that in his specimens the percentage of potash varied from 2581-10000 to 6430-10000 of one per cent. The analysis given by the writer in *Harper's Weekly* was no doubt that of the ashes of the different parts of the plant, instead of the whole substance of those parts. My attention was drawn to this statement more particularly from having recently seen, in Liebig's Agricultural Chemistry, Indian corn classed with plants that "contain either no potash, or mere traces of it." This appears to be, at best, a careless statement; for, if Dr. Jackson's analysis is to be relied upon, (and I have never heard his accuracy called in question,) the cob analyzed by him averaged nearly a half of one per cent.; while dry, hard wood, according to an authority quoted by Dr. Dana, in his Muck Manual, contains but a little more than a fourth of one per cent. of potash and soda united.

This is a matter of much importance to us farmers, as a knowledge of the constituent elements of plants may guide to an economical use of fertilizers; and as few have either the ability or the means to make chemical analyses ourselves, we must depend on those who have, or ought to have, both; and we have a right to demand that what is told us shall be reliable—have we not?

Slackville, May 25, 1859. J. DOOLITTLE.

REMARKS.—Good, Mr. Doolittle. You live anywhere but in "Slackville." Some of the "big papers" of our land are recently attempting to enlighten their "rustic" readers in scientific matters relating to agriculture. We often notice in them the most inconsistent statements, as well as the most extravagant nonsense. Such "loose expectorations" are better suited to the gatherings of certain zealots, who love their country terribly just before an election! "Shoe-maker, stick to thy last," is an old adage, and is a good one. Some of our cotemporaries would do well to treasure up its sentiment.

DRAINING.—Some people think that it is all a matter of useless expense to drain land. But

it is probably not so. Col. Whipple has dug, stoned and covered some two hundred rods of drains on his land; one effect of which was shown last season in the fact that he cut twenty tons of hay on six acres of land where formerly only a small crop was produced.—*N. H. Democrat.*

EXTRACTS AND REPLIES.

ON RAISING MILLET.

Can you give me any information in regard to raising millet? Is it a good fodder for milch cows? Will it do to sow it upon green-sward and sow grass seed with the same? How much seed will it take per acre, and when should it be sown? What soil is best adapted to raising it?

Bedford, 1859.

J. O. D.

REMARKS.—Millet makes a good crop for green or dry fodder, and may be fed to milch cows with advantage. It may be put on sward land if it has been deeply-plowed and well pulverized—but it grows too thick and rank to allow grass seed to do well with it. Any good corn land is suitable, and eight quarts of seed per acre is enough. Sow from first to middle of June.

POTATO BLIGHT.

In going from Hartford to Waterbury, in 1846 at the time of the blight, there was only one field that looked healthy, and that one was over-topped with buckwheat, so that if the blight came from the atmosphere, that it kept it from the potato. One farmer informed me that a day or two before the blight he kept his wagon in his potato field, and a few bundles of straw were thrown out of the wagon upon the potatoes, and remained about a week, when he dug the potatoes. Those that were covered were not diseased, and the remainder of the field would not pay for digging. I think that early potatoes and early planting will be more successful than late planting, as far as my experience goes.

I will give you a receipt for curing a ring-bone, as it was given to me by one that told me he had cured quite a number by this application.

Take a pair of scissors and cut the hair from the bone, or around the hoof, then apply the oil of ambre, let it remain about two hours, then apply the soap palm-oil; this do once every day, and in 3 or 6 weeks the bone will disappear.

ROSE-BUGS.

June, the month of roses, will soon be along, and, as is usual, I expect to see rose-bugs come in large numbers; they not only spoil the roses, but the grape vines also suffer by their eating the blossoms. I know of no way to get rid of them. Who can tell? HENRY M. FALLS.

North Wrentham, May 30, 1859.

A LAME COLT.

Can you tell me what will cure the stiffness of the fore legs of a colt that was caused by standing in the stable and eating too much grain? It appears to be in the joints. H. M. A.

Charlestown, N. H., 1859.

VALUE OF RUTA BAGAS.

I noticed in one of your papers a piece from Mr. OTIS BRIGHAM, of this town, on root crops. It was answered by a gentleman, the next week, who did not exactly agree with him. He thought that ruta bagas were as profitable a crop as any. I have raised them until I am satisfied that they are not worth the trouble of raising. You can raise, on good land, from 600 to 1000 bushels per acre, but what corn you can raise on the same land will be worth four times as much for feed to cows, as the turnips. They will make milk enough, but it is good for nothing after it is made. The turnips taste in the milk, butter and cheese, and even the pigs turn their noses up when it is fed to them. Besides this, they injure the land so that you can raise nothing on it after them. J. L. T.

Westboro', May, 1859.

PREMIUMS.

Abstract of premiums awarded in the several towns in which exhibitions were holden in 1858:

Essex, Danvers.....	\$291.53
Middlesex, Concord.....	242.00
Middlesex South, Framingham.....	295.61
Middlesex North, Lowell.....	355.37
Worcester, Worcester.....	340.50
Worcester West, Barre.....	240.99
Worcester North, Fitchburg.....	329.44
Worcester South, Sturbridge.....	408.00
Hampshire South, Northampton.....	216.00
Hampshire, Amherst.....	152.63
Hampden, Springfield.....	264.82
Hampden East, Palmer.....	195.75
Franklin, Shelburne.....	205.00
Berkshire, Pittsfield.....	344.50
Housatonic, Great Barrington.....	251.00
Norfolk, Dedham.....	135.00
Plymouth, Bridgewater.....	314.75
Bristol, Taunton.....	350.75
Barnstable, Barnstable.....	360.75
Nantucket, Nantucket.....	157.00

\$5149.44

The whole amount awarded is believed to have been about \$12,000. Truly there is something in locality, where 20 towns out of 300 get nearly half the whole amount awarded. These facts present matters for deliberate consideration.—Conclusions are left to those disposed to make them. P.

June 1st, 1859.

TO PREVENT THE YELLOW STRIPED BUG FROM DESTROYING WATERMELON VINES.

Take feathers from a hen's wing, or take sticks and split them and put in cotton, which is about as good, dip them in spirits of turpentine, and stick them into the hill in an oblique or slanting position a little above the vines; two or three will be sufficient for a hill, and as often as it loses its strength, dip them over, and after every shower. I have taken boards five inches wide, made boxes and covered them with mill-net, and put them over the hills; the vines would run up tall, like growing in the shade, and come to take the boxes off they would not do well; but put spirits of turpentine around the hills, and they will do well. H. S.

East Thetford, Vt., 1859.

TRANSPLANTING WHITE PINES.

If your correspondent, "Oak Hill," will give me his address, I will write and inform him

when and how I have succeeded best in transplanting white pines and other evergreen trees. I have now growing about my house some forty pines and one very fine hemlock, the latter measures $9\frac{1}{4}$ inches in circumference and over 20 feet high. This is the second year since transplanting, and it is "coming out" finely.

SAMUEL RAYMOND.

North Andover, May 21, 1859.

PINES—RASPBERRIES—GRAPES.

What is the best season for transplanting the white pines? Should the top be cut in? Where can the Ohio Ever-bearing Raspberry be obtained—and what are some of its prominent characteristics?

Is it ever desirable to shorten lateral grape vine shoots while growing, in order to strengthen fruit buds at their base for the succeeding years?

AN ATTENTIVE READER.

New Bedford, May, 1859.

REMARKS.—Transplant the white pine in June. Take up the sod with the roots, and keep the roots from the sun and wind. Do not cut the tree anywhere.

We know nothing of the "Ohio Everbearing Raspberry."

It is quite a common practice to shorten lateral grape-vine shoots after the fruit is partly grown, in order to benefit the fruit, but not to our knowledge, so early as to strengthen the buds.

APPLE ORCHARDS.

If apple seeds are planted, and the young trees budded or grafted where they are permanently to remain, the orchard will be worth twice as much as though it were managed in the usual way. The trees will live as long again, and bear twice as many apples, which will be larger, fairer, and will keep altogether better, especially if they are gathered as soon as they have got their growth, but before they are fully ripe. They will be fine-flavored in June and July, and consequently be valuable.

Apple trees grafted from scions that are two years old will bear every year, as a one year old scion has only half come to maturity, and consequently bears only half the time.

Corn for planting should be selected from an equal number of male and female ears, shelling and mixing them together. Plant in drills and let the spears stand six inches apart, and the yield will be three times as much as to plant in hills, with the manure in the hills.

S. P. BAKER, now 83 years old.

Ipswich, Mass., 1859.

REMARKS.—These statements are worthy of being tested.

TO STOP COWS FROM KICKING.

Put her into the stanchion and put a rope around her horns and over the top of the stanchion, and draw her head up so that her back will be hollow; fasten the rope, and she cannot kick.

East Thetford, Vt., 1859.

H. S.

RING BONE.

Can your readers give me information through the *Farmer*, what will cure ring bone, or the appearance of one, coming on a yearling colt?

Mason, N. H., May, 1859. S. H. WHEELER.

For the *New England Farmer*.

THE SPIRIT OF PROGRESS.

MR. EDITOR:—Among the great discoveries in our day are the *steamers* which crowd their way through stormy seas, the *railroads* which bind whole continents together, the *telegraphic wires* which run their electric network through the air; these are the great nerves of human sympathy, and are destined to the high office of uniting the whole human race in one common brotherhood, if not to the greater work of revolutionizing the whole world.

Surely, this is an age of progress and improvement; and no power on earth can arrest its onward march. Our country is already dotted all over with improvements. No undertaking is too difficult, no obstacle insurmountable, no sacrifice too great for the enterprising spirit of the age. Directed by the skill of human genius, steam and electricity already cross our rivers and climb our mountains; and our railroads will soon extend from the Atlantic to the Pacific; and with the telegraph, holding hourly conversations with the different extremes of the Union, from sea to sea. This spirit of progress, this onward march of science and improvement, of civilization and freedom, can not be arrested; for the people who are engaged in this movement will roll on the car of civilization and improvement, till the whole American continent forms one vast Republic.

This onward march of the spirit of improvement is destined ere long to produce equally great and important results in our agricultural pursuits. It has already brought forth its mowers, its reapers, its threshing-machines, its horse-rakes, its stump-pullers, its seed-sowers, its horse-hoe, its harvesters and its corn-shellers; and it will soon introduce the *steam-plow* into all our great valleys, into the cotton fields and rice fields of the South, and into the great prairies of the West; and thus it will supersede, in a great measure, the use of slave labor, and cause the shout of freedom to be heard throughout the American continent; because one *steam-plow* can do more and better work than a hundred and fifty slaves; so that these United States will soon be as greatly distinguished for their agricultural pursuits, as they are now for the means of inter-communication.

Tell me not, that two-hundred and seventy-five thousand slave-holders will put their veto upon my steam-plow; for I know better; because I know, that they understand their own interests too well to do this. Tell me not, that the ignorant and the wicked, fearing the effects of all these improvements upon their own daily labors and income, will combine together as they have done in some instances already, and burn down all our steam-bakeries and machine-shops throughout the land, and thus burn their own fingers, put out their own eyes and starve their own families; for I will not believe, that, in this land of light and progress, of churches and schools and mis-

sionary efforts, any considerable number of persons can be found, so ignorant, so short sighted, and so vicious! No; the great mass of the people are right upon this subject. Their course is onward and upward. Their progress, if not so rapid as could be desired, is still in the right direction. "Having put their hands to the plow, they will not look back," but will press forward in the work of improvement till every mountain, hill and valley shall be improved and beautified; every field rendered productive; and every human dwelling shall be pleasant to behold, neat, beautiful and attractive. JOHN GOLDSBURY.

PRUSSIAN SHEEP.

The Merinoes were introduced into Germany, about the middle of the eighteenth century, and the advantageous change they effected everywhere they were introduced, could not be disputed. Notwithstanding this, Mr. Fink—to whom Germany owes much in regard to sheep-culture—unwilling to give up altogether the native breeds, purchased in 1768 some Saxon Merinoes, and though his breed was much improved, yet his object did not seem accomplished, and in 1778 he imported some pure Merinoes from Spain. He took as the guide of all his experiments, that which is now received as an axiom among breeders, that the fineness of the fleece, and to a great degree the value of the carcass, too, are far more attributable to the inherent quality of the animal than to any influence of climate or soil. Uniformly acting on this fundamental principle, and being most particular in the selection of the animals from which he bred, he improved his own native flocks to a considerable extent, and he succeeded to a degree which he dared not anticipate, in naturalizing a still more valuable race of animals. His success attracted the attention of the Prussian government; and Frederick II., in 1786, imported one hundred rams and two hundred ewes from Spain. Mr. Fink was subsequently commissioned by the government to purchase one thousand of the choicest Merinoes; agricultural schools were established, and at the head of one of them was placed Mr. Fink—the most competent of all persons—the first improver of the Prussian sheep. The following was Mr. Fink's mode of management:

He properly maintains, that free exposure to the air is favorable to the quality of the wool, and therefore, although the sheep are housed at the beginning of November, yet whenever it freezes, and the ground is hard, even although it may be covered with snow, the sheep are driven to the wheat and rye fields, where they meet with a kind of pasturage exceedingly wholesome, and while they feed they are likewise benefiting the crop. Nothing is more common than to see a flock of valuable sheep scratching away the snow with their feet, in order to arrive at the short wheat or rye beneath. When the weather will not permit their being taken out, they are fed on hay, aftermath, and chopped straw of various kinds. The kind of straw is changed as often as possible, and wheat, barley, and oat-straw, and pea-haulm follow each other in rapid succession. The oat-straw is sparingly given, and the pea-haulm is preferred to the wheat

and barley-straw. Oil-cake, at the rate of six or seven pounds per hundred sheep, and dissolved in water is also allowed when the flock cannot be turned on the young wheat.

Three or four weeks before lambing, an additional allowance of hay and straw is given to the ewes; and while they are suckling, a little oatmeal is mixed with the solution of oil-cake. When the weather will permit the turning out of the ewes, the lambs are still kept in the houses, and the mothers brought back to them at noon and night; after that the lambs are not permitted to graze with the ewes, but are turned on the fallows or the clover of the preceding year; for it is supposed that they unnecessarily fatigue themselves by running with their mothers, and almost incessantly trying to suck, and that on this account, they refuse the herbage on which they are placed, and take less nourishment than when quietly kept on separate pastures. A few barren ewes are, however, placed with the lambs for the purpose of guiding them, and perhaps teaching them to select the best and most wholesome food. More lambs are saved than are necessary to keep up the flock, and when they are two years old they are inspected—one-third of the best of them are kept, and the remainder sold. The lambs are never shorn, in order that they may be better able to endure the cold and rain of autumn.

The Prussian sheep-dogs, like almost all on the continent, are trained to obey the shepherds, and are skilful in guiding the sheep, but they never worry or bite them. There is no natural necessity for it anywhere; and if flocks are occasionally wild and intractable, bad management and bad treatment have made them so.—*Youath*.

For the New England Farmer.

THE MAGGOT IN ONIONS.

FRIEND BROWN:—I am pleased to see, by your paper of this date, a further explanation of Mr. Emerson's theory of the destruction of the onion maggot, by the application of guano. I find no fault with his facts, but with the inferences he draws from them, and beg leave, respectfully to say, that his facts do not warrant his conclusion.

I repeat, what I have before stated, that no method of destroying, or even checking the progress of the maggot, has yet come to my knowledge; and that I have no confidence at all that this can be done by the application of guano. Such is the opinion of many practical men of sound judgment, who have had a hundred times as much experience, in the culture of onions, as Mr. E. has; who have grown thousands of bushels annually, for the last twenty years; and who now discontinue the culture, by reason of their fearful apprehension of the ravages of this destroyer.

I am pleased to know that the Secretary of the Board of Agriculture is directing his attention to this subject. I would not have impugned Mr. E.'s assertions, if he had not unnecessarily commenced the attack. I commend his spirit of inquiry, but caution him not to think he knows as much about the culture of onions, from the growing a small bed in his garden, as those who

have grown acres, annually, for many years. I know one gentleman, of Marblehead, Mr. H. Ware, who last year grew ten acres, yielding, fit for market, more than 4000 bushels. Messrs. Buxton, Huntington, Watson, Bushby, Osborn, and others, cultivated in like manner—all of which crops came under my observation.

J. W. PROCTOR.

South Danvers, May 21, 1859.

N. B. I thank you for the just notice taken of our annual publication. Mr. Secretary Dodge is entitled to much credit for the compilation.

For the New England Farmer.

ONION CULTURE, MAGGOT, &c.



PUPA.

FLY.

GRUB.

ONION FLY.—*Anthomyia Ceparum*, (greatly magnified.)

“The male of this fly is of an ashy color, roughish, with black bristles and hairs; the eyes are contiguous and reddish, the face silvery white; horns black; there are faint lines down the trunk, and a line of long blackish spots down the centre of the body, more or less visible in different lights. The female fly is of an ashy grey color, clothed with black bristles and hairs; the eyes are reddish and remote, with a light chestnut stripe between them; face, yellowish white.”

MR. EDITOR:—This vegetable, worshipped by the ancient Egyptians, and the want of which was so lamented by the Israelites in the wilderness, has within a few years, in many localities here, been almost entirely destroyed by the maggot, or grub of the onion fly, so called by one of the best entomological writers of England. He says, “The common onion fly, *Anthomyia Ceparum*, attacks the plants in their young state, and continues feeding on them during the whole summer; sometimes they attack the crop generally, causing a total failure, at other times attacking them in patches only, the effects being most observable in dry weather, the leaves turning yellowish, and the plants at last falling over and decaying. On removing the outer coating or skin of the plants destroyed, the cause will be discovered in the presence of a small grub, which eats its way into the very heart of the onion. The eggs of the fly are deposited on the leaves when in a very young state, and close to the earth; as soon as the maggots are hatched, which takes place about the time the plants are the size of a small quill, they bore their way through the outer leaf and penetrate the onion at its base, feeding chiefly on the bottom part of the bulb, causing it to separate from the root, and occasionally, a mass of mouldiness familiar to every cultivator.

These grubs generally attain their full size in about fourteen days, they then descend into the earth to undergo their transformation, when they become a reddish brown pupa of an oval form.

The means hitherto employed for subduing these, are, laying soot over the beds, or incorporating it with the soil, applying salt in the same manner, watering with lime-water, gas tar, stale soap-suds, soot water, stale urine and old tobacco water. Their power of reproduction is so great, that unless they are destroyed the moment they are discovered to have attacked the crop, (which is known by the drooping and yellow leaves,) their total eradication becomes next to impossible; all other means except carefully pulling up every diseased plant and burning it, can only be regarded as exceedingly superficial in their effects. Deep trenching, and frequently turning over the soil, are of great advantage, in the one case, burying the pupa too deep for its again reaching the surface, and in the other, disturbing it during its transformation, and probably preventing that change from taking place.

Sowing onions year after year, on the same ground, is a very certain way of multiplying these insects, and might be carried to the extent of literally stocking the ground with them. Insects peculiar to any plant, seldom attack the crop during the first year, after being planted in land not previously occupied with the same kind of crop, because the soil has not yet become furnished with the pupa of the insect peculiar to the plant; hence some advantage arises from sowing onions after celery, and *vice versa*, cabbages after potatoes, &c.

Spirits of tar is of great use, if applied in sufficient quantity to the soil immediately after the crop is removed. The following has been applied to an onion crop, even after the insect has commenced his work:

To 20 gallons of water, 1 peck unslacked lime, $\frac{1}{2}$ peck soot, 2 gallons of urine, 1 pound soft soap and 2 pounds flour of sulphur. After the above mixture is settled, it is then sprinkled over the bed through the nose of a watering pot. “Powdered charcoal has been used, but is not found so efficacious as soot. Brancounet has shown that a watery infusion of soot is eminently antiseptic, preventing the rotteness to which the onion is extremely liable when attacked by the grub.”

J. M. IVES.

Salem, June, 1859.

For the New England Farmer.

WHITE SPECKS IN BUTTER.

MR. EDITOR:—I noticed in the *N. E. Farmer* last week, your theory about churning to prevent white specks in butter. Having devoted my whole time, for the last five years, in the manufacture and sale of the Fyler churn, and spent much time among the dairies of Vermont and northern New York, I venture to differ with you in theory on that subject. You say as soon as the butter begins to come, scrape carefully down all the cream that is thrown to any part of the churn, and has escaped its share of churning. I say *never* scrape the cream down into the churn after it begins to come; if scraped at all, scrape it into the cream pot and save it for a new churning, and not into the churn to form those very specks you wish to avoid. Those white specks are usually caused by uneven churning.

The true principle of churning is, to have the dasher of the churn so adapted to the inside of

the cylinder as to act on all the cream alike, and if so adapted, and the cream has been properly cared for, and you churn quite slow till it is perfectly mixed, and then faster, till the sacks containing the butter begin to break, and then will scrape what is on the lid into the cream pot, you will not be troubled about those white specks that spoil one-half the butter made in this country.

To carry out your theory, suppose you try an experiment; churn, say nine quarts of cream on my principle, and see how much butter, then take the same quantity and churn till it begins to come, or until you have churned one-half the time required; now put in another quart of cream, and I will be bound, you will either have plenty of white specks, or your buttermilk will be enriched with about the value of one pound of butter.

HENRY HOLMES,

Proprietor of O. R. Fyler's Butter Working Churn

Grafton, Vt., May 30, 1859.

REMARKS.—We have no doubt that the practice which our correspondent suggests, is the true one—although careful butter makers seldom experience any trouble in scraping the cream down, as we suggested. We have the Fyler churn in constant use, and after having tried several other kinds, do not hesitate to say that it is the best churn we ever used. We hope all butter-makers will adopt the practice of our correspondent, rather than ours, for in that no risk whatever is run. He has our thanks for his prompt and timely notice of the matter, and we hope to hear from him again on the important subject of butter-making, packing, and keeping.

A REMEDY FOR POISONED SHEEP.—Give them a table-spoon twice full of weak lye, and it will raise them in fifteen minutes after given. One morning I found fifteen or twenty sheep poisoned by eating ivy the day before. Some of them when found were flat on their sides; others frothed at the mouth, grated their teeth, and staggered about badly from the effects of the ivy. Those that were not found sprawling were cured by putting a gag in their mouths, which would keep the sheep from swallowing the poison, but let it rise and run out of their mouths. After I had lost three out of six, that could not hold up their heads, and appeared lifeless, one of my neighbors recommended weak lye as a sure cure; it was given them, and in ten minutes one of the sheep was eating rowen. It had the same effect on the other two, and the whole three are now as lively as any of the flock.—*Virginia Farm Journal*.

WALKING AND PURE AIR.—Anaximenes taught that air is mind. Some one else says air is the hidden food of life. Plutarch seems to incline to Anaximenes' opinion, remarking that perhaps the reason why there is a sympathy of feeling on various subjects, arises from breathing the same air. Air is an exhalation of all the minerals of the globe; the most elaborately finished of all the works of the Creator—the rock of ages dis-

integrated and fitted up for the life of man. All classes of men affirm this. Sydney Smith says to public speakers, that if they would walk twelve miles before speaking, they would never break down. In English Universities, boat races, horse-back rides, and ten-mile walks are a part of the educational means for physical development.—Plato says a walk in the open air will almost cure a guilty conscience.—*Emerson*.

LADIES' DEPARTMENT.

HOW THEY MAKE COFFEE IN FRANCE.

A cup of French coffee seems to have the effect to put Americans into ecstasies; yet few of them are thoughtful enough to obtain from their French brethren the process by which the delicious beverage is decocted. Of this few is a Buckeye writing from Paris, under date of Nov. 9th, who supplies the desired information:

"While at Mr. Moriols, his good lady kindly initiated me into the art of coffee-making. In the first place it is scorched in a hollow cylinder, which is kept constantly revolving over a slow fire, and not a grain of it allowed to burn. Secondly, it is ground very fine, and thirdly, when it is to be used, a portion of this is placed in a finely perforated pan or cup, which exactly fits into the top of the boiler, coffee-pot, or any vessel you wish to use. Boiling hot water is then poured on, and it percolates gradually through, carrying with it all the essential principles of the coffee. As soon as percolation is completed, the pan is removed containing all the grounds, and then boiling hot milk is added to the infusion, and your coffee is made. It is brought on the table in bowls, with a knife and spoon, and a little willow basket of bread. The servant then places by your plate a tea-dish, on which are two or three lumps of white sugar always of a certain size, and you sweeten to your liking. In no instance is your coffee boiled, and this is one reason the *café au lait* and *café noir* are so much admired by those who take them. If you try this mode, I am sure, in a few experiments you will succeed in getting it right, and possess yourself of a luxury which will add very much to a breakfast on a cold morning—try it."

A LADY OF THE OLDEN TIME.—Mrs. Troupe, the accomplished wife of a captain of the British navy, gives a lively account of a call she with two other ladies made upon Mrs. Washington, who, like her husband's mother, was distinguished for her management of household affairs. "As she was said to be so grand a lady," says Mrs. Troupe, "we thought we must put on our best bibs and bands. So we dressed ourselves in our most elegant ruffles and silks, and were introduced to her ladyship. And don't you think we found her *knitting, and with a check apron on!* She received us very graciously and easily, but after the compliments were over, she resumed her knitting. There we were, without a stitch of work, and sitting in state; but General Washington's lady with her own hands was knitting stockings for her husband."



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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CALENDAR FOR AUGUST.

"The Dog-Star rages."



AUGUST, like every other month in the year, has its distinctive peculiarities. JULY may have been hot, but now the pavements seem to glow with an intense heat, the rows of brick houses throw back the rays of the vertical sun, unre-

lieved by a single shadow—the trees are covered with dust, and you breathe in an atmosphere which seems to arise from some fiery furnace. The omnibus horses, which never have a vacation, still plod along, looking dejected and unhappy, and you are inclined to believe

that in this form, some poor human soul is working out its second probation. Saving said omnibus horses, business men, and the dwellers in lanes and back streets, the city is well nigh emptied of its inhabitants.

Let us follow the multitude, and flee into the country. Even here the freshness of summer has departed. The grass which was waving so gracefully a few weeks ago, is lying in heaps, while the hay-caps scattered over hill and valley, look like the tents of a Lilliputian army. The sun sinks down in the West, and rises again in the East, with the same lurid glow. He is entirely shorn of his beams—a mere red ball of fire. Listen, and you will hear the grasshopper singing from morning to night, as he vaults gaily about among the short grass. He enjoys himself, and would not give a fig to have it cooler. The rob-

in and the thrush still sing in the woods, but the whippoorwill, whose plaintive note is the sweetest of all, we shall hear no more till another summer. He only comes out in the night, and there is a superstition that he foretells death or misfortune to any household he may visit. Like most other superstitions which are handed down from one generation to another, it is difficult of proof—for we have known him to serenade a whole village night after night—enough to have foretold a pestilence at least, and yet nothing unusual seemed to follow.

Down in the meadow and by the brook, you will find the cardinal flower, which takes its name from its brilliant scarlet blossoms,—and the clematis now trails its vine over the alder bushes by the way-side. The May flower, the June pink, the cinnamon rose, the damask and the blush, have all had their day. The apple tree hung out its blossoms, and the horse-chestnut put on its thick, green leaves and gorgeous flowers, grew furiously for a few weeks, and then settled quietly down for the remainder of the summer—so that even now, while this glowing heat is upon us, there are many voices that tell us summer is going—sad voices they are too—who ever listened to them,

"Nor cast a longing, lingering look behind?"

A few words about the horse-chestnut, by the way. It is in reality a hardy tree of rapid growth, but it has not the aspect of a citizen of New England. When in full bloom, it has the appearance of a huge bouquet of tropical flowers. It is, moreover, even when in its proper place, standing alone on some hill-side, or open place of an extensive lawn, entirely ornamental, its fruit being bitter and uneatable. Fifty years ago, in some portions of the country, every house had its row of poplars, but either from the fact that it is naturally a short-lived tree, or because our climate did not agree with them, they began to die out, and to look ragged and old. Now you will scarce-

ly find a solitary specimen any where. In their places are elms, maples, horse-chestnuts, &c. People say the poplar is not a graceful tree. True, it has a firmness of aspect not in accordance with modern ideas of expansive luxuriance, but how perfectly it seems adapted to the early days of New England, when little children were duly washed, whipped, and catechised every Saturday night—were taught to make courtesies to passers-by, and, tradition says, to say “yes sir,” and “no sir,” to their elders! Then ladies wore skirts without gather or plait, and bonnets that actually covered their heads. But a time of greater latitude in dress, manners and morals came about, and the old tree fell out of place, and quietly stepped out, with the good old grandmothers who used to sit under its branches. It may be a precise, puritanical tree, but there are some in whose eyes it will always be beautiful—to whom it will tell more tales than the fabled leaves of the Sybil. South of us, on some of the old estates of Virginia, the poplar may still be seen, broken and decayed, fitting monuments of the old aristocratic families who planted them.

Doubtless, the march of improvement is onward, but it is not without a pang that one sees the ancient land-marks removed. It is astonishing how quickly, now-a-days, customs are transferred from the heart of life and business to the extremities of the great body of humanity. We have in our mind a certain village away up among the hills of New Hampshire. The nearest railway station is six miles distant, and the steam whistle comes softened and modified through the forests, till it loses its harsh, business-like sound—here the very birds are suffered to sing nothing newer than “Old Hundred” or “St. Martin’s,” and from time immemorial the same white houses with green blinds have gleamed picturesquely among the abundant foliage; but this summer we took a look at this conservative spot, and behold, the old tavern-stand, which had stood a hundred years, looking meekly out of its dormer-windows upon the world below, has come out in a new fawn-color suit with dark trimmings! Should the ghost of its builder, who lies near by, come out to view his possessions, some moonlight night, what a surprise awaits him!

“O! tempora, O! Mores,” won’t they leave us a spot anywhere “sacred to the memory” of old associations! Must civilization go ruthlessly striding over our hills and valleys, building up and levelling down till the world is all made after one pattern?

Bayard Taylor says—“Pianos in Lapland, Parisian dresses among the Lofodens, billiard-tables in Hammerfest—whither shall we turn to find the romance of the North!” Already the “glowing fireside” has become a tradition, and

the “chimney corner” and the “old arm-chair” only pleasant figures of speech.

With the loss of some things which seem poetic and picturesque, however, we have, undoubtedly, many comforts of which our fathers never dreamed. There is a greater attention to the beautiful in-doors and out, and with increased facilities for performing mechanical labor, we must find more time for its cultivation.

It is not wise to hamper one generation too much with the notions of the preceding—for, to close in the same spirit with which we commenced, “Every dog must have its day.”

For the New England Farmer.

IRON OR METALLIC BARRELS.

A few nights since, while nearly all the people were in their deepest slumbers, fire was discovered in an eating-saloon, No. 25 Ann St., New York, caused by ashes put into a wooden barrel, the day or evening previous. My attention of late has been called to several instances of the same kind. To my mind, many subjects of less importance are brought before the public, while this is left unnoticed, although of the utmost consequence to the safety of our lives and property. Why should we suffer such a devouring enemy as fire to moulder and feed among the ashes contained in a vessel suited to its element, ready to break out in the stillness of the night, and threaten such fearful consequences? Have we not learned to confine the lions and tigers in iron cages, and with iron chains, where they cannot gnaw and break away? Should we not then do so with that monster who serves us well when controlled, and is so destructive when allowed to reign?

I have often noticed, when walking through the streets of New York and Boston, good coal and ashes together, set out for the city carts, in wooden barrels and vessels of a combustible nature, with now and then an iron barrel, made so thin and weak, without being guarded and strapped, that it will not sustain its own weight, while being emptied over the rave of the cart. In such a city as this, subject every moment to conflagration, we ought to have every means of safety and good order preserved. Suppose every person be provided with a good iron barrel, with name and number printed on it, and they keep their ashes in nothing else, how long would it be before a handsome dividend would be remitted from their insurance policies? Please inform us where such are made, and the best kind of sifters suited to them.

A FRIEND TO SAVING LIFE AND PROPERTY.

MELONS, CUCUMBERS, ETC.—These are materially improved by pinching off the runner bud after the third rough leaf has been formed. This practice will always insure a number of young shoots instead of a few, and the fruit sets early and near the centre of the hill so as to perfect itself, instead of giving small results at the ends of straggling long vines.—*Working Farmer.*

For the New England Farmer.

LETTERS FROM MAINE--No. 1.

As the *New England Farmer* is fast growing into favor among the farmers of Maine, I wish to make it a medium of communication for some facts—the result of experiment and observation—which may be both interesting and useful.

I will begin with some observations more particularly applicable to the latitude of Maine, than to that of Massachusetts, but the facts I shall record may suggest a test of certain theories and principles relative to fruit culture, which would be more likely to escape notice in a warmer latitude, and which may still be of essential importance to the fruit culturist in the location of milder winters.

The last winter has proved to be a disastrous one to fruit trees in the interior of Maine. Not that the average coldness of the winter was in any sense peculiar or remarkable, but from the fact that on the intervals, and generally in the valleys, in all the central and northern parts of the State, on one occasion, the mercury sunk to the point of congelation, 40° below zero.—This circumstance affords an opportunity to test the capacity of different varieties of fruit trees to resist the effects of climate. It may likewise enable us to decide what varieties may be generally ventured upon with safety.

The past winter has proved that the Baldwin is the most tender variety of the apple yet introduced into general cultivation in Maine.

Some ten or fifteen years since, the universal popularity of the Baldwin apple induced its widespread introduction into the State. It was introduced by grafting on the tops of trees that had attained maturity, and the first observed results seemed to promise unlimited success. Nor has this part of the experiment, up to this time proved a failure, for immense sums of money have been brought into Maine, for Baldwins exported which have been produced on new tops furnished to old trees.

But notwithstanding the measure of success which has attended this experiment, orchardists have suffered material loss by the winter-killing of one after another of the branches, and occasionally of whole trees. This has been generally attributed to too hard pruning. And undoubtedly thousands of valuable trees might have been saved if more science had been called into requisition in pruning; but the past winter has proved that no care in this respect can prove an absolute security for the Baldwin in our high northern latitude. Excessive pruning always endangers the winter-killing of the tree, and in proportion to the coldness of the climate. A tree in New Jersey will receive no injury from the pruning that would invariably prove fatal in Maine, and one of the lessons I wish to impress upon the reader, is that less interference with nature must be practiced as the fruit culturist approaches the north. A much larger amount of leaves are required to mature the sap for resisting the frosts of high northern latitudes, than is found to be necessary where frosts are less severe. Hence in all attempts to cultivate less hardy varieties of fruit in colder regions, much caution must be used in pruning so as to reduce the quantity of leaves.

Another fact, proved by observation is that the

Baldwin is less liable to winter-kill when grafted at a considerable height above the ground, and on the slowest growing trees.

In fact all attempts to raise new orchards from Baldwin trees grafted at or near the ground are likely to prove failures in all parts of Maine. The last winter has destroyed tens of thousands of Baldwin trees in our state, and swept off almost the whole Baldwin departments of nurseries, while many other varieties have escaped in the same locations, bidding defiance to the temperature that causes mercury to congeal.

Money enough has already been squandered in the attempt to raise young Baldwin orchards in this State, and we must either seek a substitute in some hardier variety, or lose most of the benefit to be derived from the crop second only in importance to one other of the crops of our latitude.

In my next I propose to detail some observations upon the relative capacities of different varieties of fruit trees to resist the extreme temperature of winter.

SANDY RIVER.

For the New England Farmer.

THE SEASON---ONIONS---STRAWBERRIES.

MR. BROWN:—*My Dear Sir,*—The last week of May and three days of this month, the 1st, 3d and 4th, have been abundant in rain, with chilly east winds, and on the night of the 3d and 4th there were two drenching thunder showers, the lightning frequent and vivid, and the thunder powerful. Yesterday, the 5th, required overcoats out doors, and fires within. The thermometer at 4½ o'clock this morning, 6th June, stood at 35° and white frost was seen on the top boards of fences, but vegetation has here been uninjured. The prospect for grass and spring grains, thus far, is promising.

Accidentally I have found strawberries flourish best upon a stony, gravel bed, south of a stone wall terrace. The adjacent ground was cleared of pebble-stones, thrown and raked up to the wall, and then levelled for a walk of two feet in width. Finding that a row of strawberry plants might be inserted at the foot of the wall, I placed them in that unpromising position, to take care of themselves, if they would, but hoping little from them, stones alone being their companions. They took root and produced some fruit, and from year to year extending their runners, they formed new plants among the stones by sending down roots from the joints of the runners, in the interstices of the stone-pebble walk, till the surface was nearly covered. No grass or weeds interfered with their growth, and the size and amount of the fruit now exceeds that which I can raise, upon the same area, elsewhere upon my premises, and it matures a week earlier than in other positions. The ground cultivated, above the terrace, with roots and peas, descends gently to the terrace wall, and rains wash rich, manured soil in some degree into the pebbled bed below, and this doubtless feeds the strawberry roots. Yet I am satisfied that if a gardener has such an amount of pebble stones that he hardly knows how else to dispose of them, he may, by a moderate intermixture of rich earth, form them into productive strawberry beds. The propagation of the plants by the runners whose roots *will get*

So little was known of the operations of this Society, that at a public meeting at the State House, in Boston, on the 5th of February, 1857, for taking measures to form a new State Agricultural Society, one gentleman said of it, that "it had a respectable existence, he believed, in State Street, and was likely to be a money-making concern. The State paid it \$600 a year, and some said it was spent in good dinners!" A very brief discussion, however, dispelled all such delusions, and it was unanimously voted inexpedient to form a new society. A decent respect for the dead, as well as the living, seemed then to demand of the Society some exposition of its transactions, and we have in this little volume, in a simple statement of facts, a vindication of its course, alike creditable to the present and former members of the Society, and to the country.

For nearly seventy years, men of the highest social and political position, in aristocratic Boston, and neighboring towns, men whose time and business talent could coin them money in all departments of life, have laid aside their everyday cares, and met regularly, to take counsel together, for what they rightly deemed the great and fundamental interest of their country. Among the great names of early members of this Society, we find SAMUEL ADAMS, JOHN LOWELL, FISHER AMES, THOMAS RUSSELL, CHRISTOPHER GORE, JAMES SULLIVAN, MARTIN BRIMMER, THEODORE LYMAN, THOMAS L. WINTHROP, AARON DEXTER. In 1805, JOHN ADAMS, ex-president of the United States, was chosen President, in place of Gov. STRONG, and DUDLEY TYNG and JOSIAH QUINCY were elected trustees.

In 1821, Rev. Mr. COLEMAN delivered the address, and the next year, Col. TIMOTHY PICKERING rendered the same service. In 1828, Hon. THOMAS L. WINTHROP was elected President, and Col. THOMAS H. PERKINS a Vice President. Further on, we find among the officers, PETER C. BROOKS, Dr. JAMES JACKSON, DANIEL WEBSTER, ELIAS PHINNEY, J. P. CUSHING, JOSIAH QUINCY, Jr., Dr. JOHN C. WARREN, ABBOTT LAWRENCE and EDWARD EVERETT. GEORGE W. LYMAN was President in 1858, and CHARLES G. LORING and ROBERT C. WINTHROP, Vice Presidents, THOMAS MOTLEY, Jr., Treasurer. It is doubtful whether the records of any agricultural society in the world can show a list of more distinguished names among its officers. And its records of what it has done, are worthy of the names of its members. An article by the editor, in the monthly *N. E. Farmer* for March, 1859, gives a list of some of its more important premiums, and notices its valuable importations of live stock of approved breeds, from time to time, commencing with Merino sheep in 1802, including Hereford and Alderney cattle.

In 1820, it appears that a stallion of the breed known as the Suffolk Punch, bred in England, was presented to the Society. Of this breed of horses, we had an excellent opportunity, while in England, to form an opinion, which has been already expressed in this paper. Our belief is, that the world does not afford another breed of horses, so well adapted to farm labor and general purposes of heavy draft, as the Suffolk Punch, and we have some curiosity to know what has become of the posterity of this horse.

Verily, there is nothing new under the sun. In this record, in 1801, we find a proposition for holding market fairs "on Cambridge Common," in May and October, and this seed has just vegetated, after fifty-eight years, into market fairs in Essex county, which will now spring up everywhere, with great advantage to the farmer.

In 1800, a seed-sowing machine was exhibited to the trustees. In 1812, the model of a double plow was ordered to be procured.

In 1827, a letter was received from N. BIDDLE, Esq., of Philadelphia, describing a mowing machine.

In 1820, a *pistol* was exhibited, so constructed as to discharge seven balls successively, with once loading and priming, but the committee say that they do not deem themselves authorized to recommend any premium for it, "it not being an instrument of use in agriculture, and having no certificate of its having been used and improved by any practical farmer!"

Corn-shellers, straw-cutters and threshing machines were shown and discussed nearly a half century ago, in this Society, and a hay-making machine was presented to the Society in 1823, an implement which we have seen at work in England, and which should, and soon will, be found on every hay farm in our country.

There is hardly a new implement that has been introduced, or a valuable breed of animals, or a new and valuable plant or root or seed, or a hint as to a plan for aiding the interests of agriculture in any way, that may not be traced back to the influence of this Society.

From time to time, men who are "tired of hearing Aristides called the Just," have cried out against its members, as book farmers, and gentlemen farmers, and as an aristocracy, and nobody can deny that all these appellations belong to them. For ourselves, we have no antipathy to books or gentlemen, and only wish the aristocracy of learning and benevolence and public spirit could be largely increased in numbers.

The commonwealth of Massachusetts is the model State of the world, at this moment. Nowhere is she excelled in the general edification of her people, in the true spirit of freedom in the hearts of her citizens, in the equal and just

administration of law, in liberality towards the poor, the blind, the deaf, and the unfortunate of every class, or in general prosperity in every branch of business. In fostering the interests of agriculture, she stands at the head of the States of our Union, doing for the rest what less ability or enterprise prevents their doing for themselves.

Long may the old Massachusetts Society continue to prosper, diffusing, through the press and the quiet example of its members, the light of science by which alone all progress is securely made.

For the New England Farmer.

SANDY LANDS--MUCK--THE "SKINNING" METHOD OF FARMING.

In what is called the Connecticut valley, between the Connecticut and the gneitic hills some ten miles to the east, is a large tract of light, plain land, about which, and its management, I propose to say a few words, especially that in this State, south of the green-stone range of Holyoke and its sister mountains. Geologically, it is drift, overlying new red sandstone, which sometimes crops out, or is within a few feet of the surface. The soil is naturally thin, and the timber principally pine, except along streams and occasional hills, where the ground is more moist, and the subsoil a red, hard-pan. Dryness at all seasons of the year is a characteristic of this soil; and in summer, after a rain or a heavy shower, the farmers can resume their hoes within a few hours, with but slight inconvenience from moisture; but notwithstanding this, no land is found that suffers less during a drought.

These plains are generally divided into farms of seventy-five to one hundred acres, and devoted largely to the raising of grain, rye and corn; thirty acres in each crop being not unusual, with the larger farmers. The yield is not large; from five to twelve bushels of rye per acre and fifteen to twenty of corn; but the land tills easy; so that a man can easily hoe from one to two or three acres a day; at least it is passed over, but, perhaps, sometimes "hoed at" rather than hoed.

The present condition of these light plains, under their present management, does not present a very flattering prospect for the "rising generation." "Money" not only "makes the mare go," but with the New England Yankee, is, to a far too great extent, the great incentive of life. Under this spur, the high price of wood in this vicinity for the last five or six years, has induced the cutting off of hundreds of acres of wood every winter, until the market became clogged with the article; but not, we are sorry to say, till the greater part of the woodland has been cut over; nearly all the old growth; and now the effects of the north-west wind, as it sweeps across the knolls, is seen in bare sand-blows, which every fall and spring are increased in size. The land where the wood was cut, not being allowed to grow wood again, because it requires time, is broken up, and two, three or more crops of rye, and one or more of corn or millet, are successively taken off, when it is permitted to rest a

few seasons. The older land is now much worn, and when too poor to grow corn and rye profitably, is devoted to buckwheat. We see no reason why, eventually, the whole of these plains, will not be reduced to near barrenness, if this system of improving them (rather misimproving) is continued; namely carrying away the crop, and returning nothing to the land, which well deserves the epithet of the "skinning system." The grain is sold, and generally but little more stock is kept than is necessary for convenience, so that manuring extensively is out of the question. These plains are happily interspersed, however, with brooks, runs, and low flats, besides now and then a hill, with the hard-pan subsoil before mentioned, which furnishes all the mowing-land, and accordingly receives the manure.

There are generally taken from the plain-fields two crops in every five or six years, which, of course, draws severely upon the natural resources of the soil, originally scantily supplied with vegetable matter, and nothing is done to restore it again. This land, on account of dryness of the surface, is hard to stock with clover, or the grasses, and unless the season is unusually wet, the seed sown is generally wasted. Hundreds of acres I have in mind, which, when not in crops, are covered with weeds, wild, useless herbs, and the low briars, (*rubus canadensis*;) these, decaying on the ground, are all the nourishment received by the land.

That this system of farming "pays," as a present investment, is not doubted by those engaged in it; but that they do not sometimes think of what it must lead to is quite improbable; still, guano is often applied, and though it generally produces larger crops, undoubtedly draws the harder upon the land.

It seems to be a settled fact in people's mind, at least hereabouts, that manuring on dry, sandy land hardly pays, and though it works quick, and produces satisfactory crops, immediately after its application, it does not seem to last in the land. And again, such a large surface of land is improved each season, that it is next to an impossibility to manure it all; but doubtless it would be better, taking into account the continued cropping to which the land must be subjected, to commence the business of permanently improving these soils, and raise more grain on half the ground.

Nature has supplied the necessary means, in large reservoirs of muck, in pond-holes, conveniently interspersed, and accessible, either by drainage, or in dry weather, and large beds of peat, in many of the swamps. Some farmers here, we are happy to say, are beginning to appreciate these mines of wealth, and have commenced the application of muck to their sand-knolls, but generally, merely as experiments. One hundred and fifty loads to the acre, on the poorest of these sandy fields, would produce a good soil, that would produce double, and even treble the crops it now does, and last, probably, with judicious management, ten or a dozen years, without further outlay, or good crops of grain, every season, for five years. The muck can be drawn at any season of the year, when there is leisure, by a little calculation before hand. According to the old saying, "Where there is a will there is a way;" but if where there was a way

there was a will, in this matter of muck versus sand-blows, two or three acres might be thus improved by almost any farmer, every year.

In conclusion, I will briefly give a history of an experiment in this line, though I cannot give as precise data as I would like. Some six years ago, in converting an alder-swamp into mowing-land, I had occasion to bog considerably, taking off the whole crust an inch or two in depth between the bogs. This crust, consisted, in part, of grass bogs, but principally of loose hammocks, abounding in brake roots, or "nigger-heads," as commonly called. An acre of meadow was treated in this manner in August, and the bogs packed into heaps, and in the following winter, were drawn to a sand-knoll, some thirty rods distant, covering about the same surface there. In the following spring, the bogs were plowed under as well as possible, and the land planted with corn. The crop was more than treble the usual yield of the land, and the succeeding rye crop was bountiful, far exceeding the yield of the remainder of the piece, which, before treatment with muck, was much more fertile. After resting one year the bogs were sufficiently rotted to knock to pieces easily, and the piece was again plowed, and planted to potatoes, the Mercer variety. The neighbors thought it foolish to think of raising potatoes in that dry sand; but the yield in the fall, though less than on moist, manured ground, surprised them. A fair crop of oats followed, and this spring we have planted the same piece to corn.

I am confident that peat alone, after a year's exposure to the weather, will increase the crops of light land two or three fold, if bountifully applied.

J. A. A.

Springfield, May, 1859.

FRANKLIN COUNTY AGRICULTURAL SOCIETY.

The report of this Society for the year 1858, is an interesting document, and is prepared with the usual ability of Mr. GRENELL, the accomplished Secretary. The thousand head of stock on the grounds must have made a magnificent show. There are no finer cattle to be found in the State, if in the country, than the Short-horns and grades of the hill and river towns in Franklin. The hills afford sweet, rich grass for the summer, and the intervalles abundant crops of good hay for the winter. We have seen some samples of their four year olds, weighing 4000 pounds per yoke. They are splendid animals, and the cows look as though this county should be the very focus of good butter.

There are some very fine flocks of sheep in the county. Mr. FIELD's South Downs and Cotswolds are hard to beat, and together with his ox weighing 3,200 pounds, shows that he knows how to make good stock.

The show in the other departments was highly creditable to the society.

The address, by Dr. LORING, was both able and interesting, and the services in the hall

entertaining and instructive—and with the presence of such men as Mr. GRENELL, Mr. FAY, of the Massachusetts society, Dr. LORING, Mr. DAVIS, of Plymouth, and Gen. WHITNEY, they could not be otherwise.

This comparatively young society is in the hands of practical, energetic men, and is doing much to develop the agricultural capacities of that portion of the valley of the Connecticut.

For the New England Farmer.

ON WORKING OXEN.

Read before the Concord, Mass., Farmers' Club,

BY CHARLES A. HUBBARD.

Till oxen are four years old, they are usually called steers, afterwards oxen. The signs of a good ox for work, according to my experience and observation, are these; long head, broad and level between the eye, and the eye full, keen, and pleasant. Such marks indicate ability to receive instructions, and a willingness to obey. An ox with very large horns near the head, is apt to be lazy, and he will not endure heat well; forward legs straight, toes straight forward, hoofs broad, not peaked, and the distance short between the ankle and the knee; these properties enable an ox to travel on pavements and hard roads. If the ox toes out, the strain comes on the inside claw, and when travelling on hard ground, he will be lame at the joint between the hoofs and the hair; when the toes turn out, the knees bend in, and an ox with crooked knees is apt to become lame by holding heavy loads down hill; full breast, straight on the back, round ribs, projecting out as wide as the hip bones; these are signs of strength and a good constitution. The best colors are brown, dark red and brindle. When an ox has completed his eighth or ninth year, he should be fattened.

TRAINING OXEN.

A word on training oxen. I have found that by far the best time to train steers is when they are calves, say the first winter. Oxen that are trained when quite young, are much more pliable and obedient, and this adds much to their value. Steers that run until they are three or four years old, are dangerous animals to encounter. They are always running away with the cart or sled whenever there is a chance for them, and often serious injury is the result. I would not recommend working steers hard, while young, as it prevents their growth; there is a difference between working them and merely training them. I have observed that very little attention is paid by our farmers to train their steers to back, but as they become able to draw a considerable load forward, they are often unmercifully beaten on the head and face, because they will not back a cart or sled with as large a load as they can draw forward, forgetting that much pains has been taken to teach them to draw forward, but none to teach them to push backward. To remedy the occasion of this thumping, as soon as I have taught my steers to be handy, as it is called, and to draw forward, I place them on a cart where the land is a little descending; in this situation they will soon learn to back it. Then I place them

on level land, and exercise them there. Then I teach them to back a cart up land that is a little rising, the cart having no load in, as yet. When I have taught them to stand up to the tongue as they ought, and back an empty cart, I next either put a small load in the cart, or take them to where the land rises faster, which answers the same purpose; thus in a few days they can be taught to back well, and know how to do it, which, by a little use afterward, they will never forget. This may appear of little consequence to some, but when it is remembered how frequently we want to back a load, when we are at work with our cattle, and how convenient it is to have our cattle back well, why should we not teach them for the time when we want them thus to lay out their strength? Besides, it often saves blows and vexations, which is considerable when one is in a hurry. I never consider a pair of oxen well broke until they will back with ease any reasonable load, and I would give a very considerable sum more for a yoke of oxen thus tutored than for a yoke not thus trained.

MANAGING AND FEEDING WORKING OXEN.

The following is from the *Yankee Farmer*. Oxen working on a stone-drag, on the foot of a plow, on the sled-tongue, cart spire, or twitching stones or timber, should carry their heads well up, as this will enable them to do this work much easier; those that work as leaders, forward of other oxen, should carry their heads low, and have the yoke the right length, let the bows suit the neck; the yoke and bows to the leaders should set a little snugger than to the nib oxen. Never use the whip but from necessity. When about to strike the young steer or ox, ask yourself, "Will he know what I strike him for?" Let each ox have a name, and be sure he knows his name. Never speak a word to an ox without meaning; have a particular word to start your team by, that all may pull together. Never hurry your oxen while riding behind them, lest they learn to haul apart. Oxen should be shod with a broad shoe, to travel on hard roads; the shoe on the fore foot, should set back at the heel, nearly half an inch further than the hoof bears upon it. Oxen are frequently lame by reason of short shoes. The best feed for oxen at hard work, is to give to each two quarts of meal, wet, mixed with good chopped hay, three times a day, and as much hay as he will eat; this is the highest feed working oxen ought to have, and on this they will work every day.

SIZE OF WORKING OXEN.

A word as to the particular size of working oxen. A yoke of oxen weighing twenty-eight hundred pounds, I consider heavy enough for all practical purposes. It depends something on what a person wants to use them for, but for travelling on the road, or for most any part of farm labor, cattle of this size are heavy enough. There is a prevailing opinion among farmers who use oxen, that they must have a very large, heavy pair, in order to get along well; but as a general thing, large, heavy cattle are very apt to be slow of motion, and much more liable to be lame, besides more expensive in keeping. Two or three years ago, I had a heavy job of work on hand, and thought I must have a heavy yoke of oxen

to do it. I accordingly purchased a large pair of Durham cattle which weighed thirty-six hundred pounds, paid a great price for them, and put them at work, and a more miserable yoke of oxen I never owned. If they did a day's work, it took them three to get over it. I then purchased a pair of medium size, which weighed about twenty-six hundred pounds; they proved well, went through the job in good shape, and were ready for another.

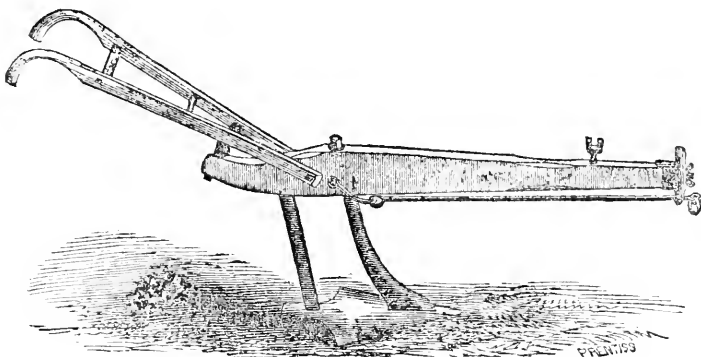
As to the particular breeds of cattle for work, I know of none better than our native race. The Devons make very pretty workers, but as far as my experience goes, they are generally a little too high-strung. The Durhams, on the contrary, I believe to be rather slow of motion as a general thing, and want high keeping. The Ayrshire, Hereford, and various other breeds, I am not at all conversant with.

MASSACHUSETTS SOCIETY.

The attention of the reader is called to an article in another column, by Judge FRENCH, upon the "*Massachusetts Society for Promoting Agriculture*," in which he glances at the operations and influences of the society, since its foundation. The Judge has our thanks for this timely and just notice of a society whose life has been crowded with good deeds. We have personal acquaintance with very few of its members, and speak of it entirely from what we know of its works. Its published Transactions we have read from their commencement, with care, and have been instructed by them, and whenever the society has been assailed, have said whatever we could to make its past action and its objects better understood. We hope it will keep on its accustomed course, form "no entangling alliance" with other associations, and continue to promote the interests of agriculture in the future as much as it has promoted them in the past.

FARM DRAINAGE.—The above work, a handsome volume of 400 pages, will be sent *post-paid*, to any subscriber to the *N. E. Farmer* who will send \$1,00 to this office by mail or otherwise. The author is Judge FRENCH, our well-known Associate, and the book gives practical directions for draining land with stones, wood and tiles, in the cheapest and best manner, with 100 engravings of implements, &c. It should be read by every farmer who has an acre of land to drain.

PROFITABLE SHEEP.—I will give you a statement of a little flock of sheep that I have raised in two years. I bought three ewes, two years ago this spring—two of them had four ewe lambs; and last year six of them had eight ewe lambs, making in all fifteen ewes; they have never had a buck lamb. I consider it a pretty good increase. I had \$14 for the first purchase, and the wool has about paid for keep, and I have just sold the flock for \$75.—*Country Gentleman*.



For the New England Farmer.

THE LITTLE SUBSOILER.

BY JUDGE FRENCH.

When we plant early, and heavy rains follow, the earth packs down so hard between our rows of corn, potatoes and roots, that we frequently repent of our haste in putting in the seed, and declare that we will never be guilty of such folly again.

My friend, Professor Hoyt, now Chancellor of Washington University, at St. Louis, once employed a man to fork up the earth between his potato hills. His land was sandy, and had set like the sea beach, as hard as a very soft grindstone. The professor said he knew the potatoes could not breathe in so tight a place as that. Often we see gardeners loosen the earth round their plants with a spade or trowel, after a hard storm, and every man of common sense knows that in general, the more freely plants are supplied with air, heat and moisture in the natural soil, the better they thrive.

Now we have an implement (figured above) that supplies the want thus indicated, in the shape of a small subsoil plow drawn by a single horse or mule. The use of a subsoil plow is to break up and loosen the subsoil, without bringing it to the surface. I have used the little subsoiler with great satisfaction; the present season my corn was planted May 25th, on land drained with tiles, part of it heavy clay; it came up well, although the season was wet. As soon as the rows could be well traced, on the 13th June, the little subsoiler was put through twice in a row, about ten inches deep, which raised up the soil as light as if just plowed. Then came the rain, and as every body knows, it has kept raining ever since,

but down goes the water to the depth of this cut, instanter, and the drains are doing their best below, and the water is out of sight, though the three-inch drains often run full.

On the 19th we finished hoeing it, and my man James, and I, think we saved the cost of the little plow on this one and one-third acres of corn. On our mangolds, three-fourths of an acre, we have also used it, running between the drills as soon as the rows are visible, and we are ready to recommend it without hesitation for general use in corn, potatoes, mangolds, turnips, carrots, and the like.

Prof. Mapes, I think, is entitled to the credit of introducing the use of the subsoiler in this way, and the pattern of the best subsoil plows in use was furnished by him, and he calls it a *soil-lifter*. Send to Nourse, Mason & Co. for subsoil plow No. 0. It is of steel, and well made, and the price \$8. After the little subsoiler has gone through, use the best kind of cultivator. Reader, do you know what is the best kind?

James says that "at home," that is, in Ireland, they use a small plow with the mould-board removed, running between the potato drills, to loosen the soil before turning the earth up to the potatoes with the common plow, and he joyfully recognizes in the use of this little implement the process there so familiar.

Exeter, N. H., June 22, 1859.

PRATT'S PATENT SELF-VENTILATING COVERED MILK-PAN.—One of these pans was left with us a week or two since, and was at once transferred to the dominions of the women, where it was put to a practical test, and pronounced a good article, but not one adapted to the dairy-woman's use. It is not broad enough as milk

should be set shallow, in broad bottomed pans. It would require too much time to adjust the cover. It is too expensive. But for use in large towns and cities, where people set only a gallon or two of milk, and where rats, cockroaches, flies and other interesting vermin invade their eatables, it must prove an excellent article, and would not be too expensive. It is a capital ventilator and cooler.

For the New England Farmer.

HUNGARIAN GRASS.

MR. EDITOR:—When I was a lad, some fifty-five years ago, I distinctly recollect of hearing an old gentleman declare, (sportively,) that, the farmer who would make two spears of grass grow where only one grew before, and would make a yearling steer weigh as much as an ox, was entitled to much credit, and would most assuredly get a feather in his cap.

When I read the communication in the last *Farmer* from Mr. Richard, of Richmond, relating to his Hungarian grass, I was led to feel that he, too, was entitled to much credit, for he most positively declares that he prepared his ground, and between the fifteenth and twentieth days of June, '58, sowed thereon twenty-nine quarts of Hungarian grass seed; the product of which, he informs us, was seven and one-half tons of hay secured, and, moreover, from the hay he threshed out eighty-five bushels of well-ripened Hungarian grass seed!

If Mr. Richard, (in some future number of the *Farmer*,) will be so obliging as to give the actual measurement of the land from which he took so large and valuable a crop of grass and seed, the character of the soil, and the manner in which he prepared the ground for the seed, whether by top-dressing or otherwise, he will confer a favor upon every farmer who takes delight in seeing fat cattle upon a thousand hills, and all those who are most willing to learn the science whereby two spears of grass may be made to grow, (throughout the farm) where only one grew before.

A. BROWNE.

Dalton, Mass., June 13, 1859.

For the New England Farmer.

APPLES AND APPLE TREES.

In your paper of June 11, your correspondent, "S. P. Baker," says that apple seeds planted where they are to stand permanently, will be worth twice as much, and will live as long again, bear twice as many apples, &c. I consider his remarks partly true, but not wholly so. In my own mind, an orchard will do better to have the seed planted where they are to stand, as then the tap-root goes directly down, and on dry land the tree will stand the drought better, and will, I think, live longer; but to say they will live twice as long, and bear twice as much fruit, is, I think, a mistake. My opinion from long experience is, that the flavor of fruit is affected by the soil, and very little generally by the tree. Putting the Baldwin on a warm, dry soil, the flavor is richer and more melting. It ripens earlier, but will not

keep so long. On low land it does not ripen so early and the pulp is more firm, and the flavor not so pleasant to the taste.

From one paragraph of your correspondent from Ipswich I disagree wholly. "Apple trees grafted from scions that are two years old will bear every year, as a one year old scion has only half come to maturity, and consequently bears only half the time." I have grafted with my own hand and taken the scions myself from one year old, to two, three, and four, but more generally from two, repeated it every year, and the cases are very rare that the Baldwin will bear every year; there are some kinds of apples that will bear every year, but it is not, in my opinion, because the scions were one or two years old.

In consequence of a very fine apple that originated in Sherborn, where I lived seventy years, running out or failing to produce fair and handsome fruit, which was esteemed by every lover of good fruit, and was fit for the table from October to April, my father before me had grafted probably a hundred trees of that kind, and up to 1810 produced as handsome and fine fruit as I have ever seen. Since that year it has not been worth raising. That settles the question that some apples have and will run out. I tried every way I could think of to restore them by pruning and cultivation, but they grew worse by it. Some writers have supposed that the flavor of fruit is influenced by the stocks on which they are grafted, but I have thought more by the soil.

DANIEL LELAND.

East Holliston, June 13, 1859.

For the New England Farmer.

ONION AND TURNIP CROPS.

MR. EDITOR:—Mr. Proctor does not believe there is any remedy for the onion maggot. Has he tried the guano and did it fail him? If he will fix a little bed in his garden, and sprinkle the plants with guano when about three inches high, and again when they are setting for bottoms, and the maggot meddles with them, they will do different with him than they have done with me. I have now a little bed in my garden of about ten square yards of as handsome onions as I have ever seen at this time in the year. They have had two coats of ashes and one of guano.

I see I am not alone on the turnip crop. My experience has been the same as your correspondents, "C." and "J. L. T." I never had a good crop of anything after a crop of turnips till I had manured the ground.

ED. EMERSON.

Hollis, June 11, 1859.

THE SLAUGHTER WHICH SUSTAINS US.—When we ride we sit upon the skin of the pig; when we walk, we tread upon the skin of the bullock; we wear the skin of the kid upon our hands, and the fleece of the sheep upon our backs. More than half the world are human beings in sheep's clothing. We eat the flesh of some creatures, of some we drink the milk; upon others we are dependent for the cultivation of the soil; and if it is a pain for us to suffer hunger and cold, we should scrupulously avoid inflicting wanton misery upon the animals by which we are warmed and fed.

For the New England Farmer.

SHEEP SHEARING.

MR. EDITOR:—In your last number I noticed a remark on sheep shearing, where it says, "when the oil has been secreted after washing." In washing sheep in cold water the "yolk" or oil, cannot be started, it is only the filth and dirt, that can be washed away, and as soon as the sheep are dry they are fit to be shorn; two fine days is amply sufficient after washing, getting them under cover for the first part of the day for shearing.

Putting up wool for market is just the same as any other commodity. If wool is not washed well, either for the sake of gain, or through negligence, it will certainly diminish the price, or its real value, and make room for fault-finding.

PUTTING UP THE FLEECE.

In my practice of upwards of forty years, I find a great deal of wool bungled up, in the fleece, which much deteriorates its value. After the fleece is off, bring the wool outside up, then shuck it up as near its natural size as possible; then double the sides over (not roll) till about a foot wide, then turn the rump half way, and bring the head part to meet it.

Roll the fleece half way over, and then the other half. Have two strings, each two yards long. Use one around, and the other end-wise, bringing it up tight, and in good shape. As manufacturers of wool are scattered all over the New England States, sell your wool to them, and you will be more likely to get its real value, as many speculators don't have the practical knowledge in purchasing. JAMES TOWNSEND.

Marlboro', N. H., June, 1859.

ALLIGATORS.

You have heard of these interesting reptiles, in books, and perhaps seen a stuffed specimen in some cabinet of curiosities. You can behold here, on both sides of the road, *in situ*. They are just beginning to show themselves in considerable numbers. In summer they swarm by thousands. They lie on top of the logs sunning themselves, very much like mud turtles. There is one middling sized animal, perfectly sun-dried, and brown as the log he rests on, his mouth gently opened, with a most benevolent smile. His air is so meek and languishing, that he would not apparently hurt one of the thousand flies around him. They walk in, delighted with the apartment. Snap! those amiable jaws are only an ingenious fly-trap, enticing myriads of hapless beings to their undoing. But catching flies is only the pastime of the alligator. His tail is a handy bludgeon, with which he knocks over larger game. He is fond of pig, both "long" and "short," and if any of the stray shoats do not return at night-fall, the owner never thinks it worth while to look for him the next day. They seldom attack men, that kind of game not being particularly abundant in these parts.—*Letter from Louisiana in Hartford Homestead.*

A CERTAIN CURE FOR BOTTS IN HORSES.—When you find your horse complaining, and looking around at his side, and lies down pretty often,

and is not swollen, you may very readily come to the conclusion that he has the botts. Lose no time in giving him a quart of sweet milk and molasses, and just as soon as you let his head down, after he swallows the drench, slap him several times on the side of which he complains most, with a paddle about two feet long, six inches wide and one inch thick, striking him pretty hard; this process jars the botts loose from him, and they take hold of, and feed on the milk and molasses. In ten or fifteen minutes after striking him with the paddle, give him a quart or half gallon drench of strong sage tea; this accomplishes the object by killing the botts, and the horse is relieved.—*Livery Keeper in Ky. Farmer.*

For the New England Farmer.

RAIN AT THE WEST.

This is a fine country for farming in many respects, and though once in ten years a little too dry in summer, is also, some years, rather wet. The year 1857, to the first of August, was dry, and up to April 8th, 1858, was so beautiful that farmers could plow every month. The great rains began at that date, and abated June 10th, 30 inches having fallen. To this date wheat looked fine, and two weeks' good weather seemed likely to insure a good crop. But excessive heat and rain, showers and storms, like eastern dog-days, soon ruined the wheat by black blight, and farmers' hopes also. Great showers in July and August. From October 23d to December 6th almost incessant wet—at one time the sun was not seen for nine days. From April 8, 1858, to the same date, 1859, 84 inches of rain fell; of course the ground was wet, there being six inches in March. April had 11 storms, and twice when snowing there was thunder; in fact, electricity seems to abound, whether cold or warm—though there has been very little warm weather yet. There has been a great amount of thunder and lightning, sometimes of the most vivid and terrific character, for six or eight hours in almost constant succession. In view of all these things, and the fact that the soil is soaked, and that the sun shines but little, as my record will show you, what may be expected for crops this season? In this section we may be doomed to drowning, while at the East you are burning.

Last year, in eight months from the 8th of April, we had 72 inches of rain—nine inches per month; and this year bids fair to be about equal to it, as the month of May is very wet.

It is altogether premature to form an opinion of the wheat crop in the whole West; but one thing is certain, as Iowa sows but a little winter grain, and as that of spring is a small sowing, and as what there is stands thin, and is backward, this State will have little if any surplus this year. Considerable corn is planted, and some of it needs weeding, as New Englanders say, but the ground is so drenched with rain that it cannot be done.

In March last we had eight fair days, five part fair, four hazy and fourteen cloudy—rain six and one-fourth inches.

In April, eight fair days, five part fair, seven-teen cloudy, eleven stormy—rain three inches.

In May, ten fair days, six about half fair, fif-

teen cloudy, fifteen days rain—amount six and one-half inches. I could give you the direction of the wind every day for three months, but the range of the thermometer would be more than you wish to print, or your readers to peruse; though worth more than it costs to me. Though not a subscriber, I read your valuable paper, and appreciate it highly though not all adapted to this region.

June 1st, another smart shower.

With such an amount of rain and cloudy weather on your sandy soil in Massachusetts, you might cultivate the ground quite well; but here, on the rolling or flat prairies, with a fine adhesive soil, more or less clayey, and all limy, resting on a clay subsoil, it is altogether different, and allowance must be made to farmers, if in such excessively wet seasons we cannot pay all our debts.

IVERS TAYLOR,
A Bay State Man.

Denmark, Lee Co., Iowa, June 1, 1859.

EXTRACTS AND REPLIES.

A GOOD CALF.

I am now raising a heifer calf that is considered by myself and neighbors a very good one. It is ten months old to-day. When eight months and a half old, it weighed 700 lbs. Think it would now weigh 800. It is five feet and two inches in girth, and is, according to its length and weight, proportionally small where measured for the girth. It is of the no-horned breed, and of a bright Devon color. Until within a few days it has had the milk of one cow, and has been fed some besides. Yours, &c., B. F. FLETCHER.

Derby, Vt., May 25, 1859.

REMARKS.—We suppose the writer means by "no-horn breed," what are termed "Polled cattle," by graziers. Ayrshire and Dumfries, in Scotland, with two or three other places, once formed the ancient province of Galloway, and the polled, or no-horned cattle, were natives of that province. By "Devon color," he means the dark mahogany color which always distinguishes the true Devon.

WHITE SPECKS IN BUTTER.

I would say in answer to "T." of Felchville, Vt., that white specks in butter are caused by getting sour milk in with the cream when skimming, which becomes hard like cheese; to prevent white specks in butter, stir the cream thoroughly after skimming, and should there be specks then, rinse in cold water.

Ludlow, Vt., 1859.

MRS. L. E. II.

OIL SOAP FOR BORERS.

MR. EDITOR:—I saw in one of your papers within the last six months—I do not now remember the date of it—a communication in which the writer stated that he had, for several years, used oil of soap to prevent the depredations of borers in apple trees. I would like to know if it is the oil of soap such as is used by fullers in scouring; and, if so, what is the time of applying it? What quantity is used, and in what manner is it applied? If you, or some of your sub-

scribers, will give me the desired information through your columns, it will greatly oblige

SAMUEL PARKS.

Rock Bottom, Mass., June 4, 1859.

REMARKS.—Perhaps the person who recommended it may give Mr. P. some information—we have never used oil soap for that purpose. We suppose it is the common whale oil soap.

KICKING COWS.

Place the animal by the side of a stall or partition, and confine her head with a rope, so she will not be able to step back, and then put a bar the other side, having a place beside her head to put one end of the bar in, and fetch the other end of the bar down as low as you can conveniently; milk under the bar, and make it so tight that she cannot change her position. If she should kick she can do no hurt, and she will soon relinquish her old trick. I have tried it with good success.

E. E. ROBINSON.

Sunderland, Mass., 1859.

I have just lost a valuable South Down buck, and on examination, found worms in his head, which probably caused his death. Can you, or any of your correspondents, tell me the cause and cure? Where can I obtain another pure blood South Down buck?

N. P. RINES.

Concord, N. H., June 6, 1859.

REMARKS.—Worms in the head of sheep are caused by the "gad-fly." Read "Morrell's American Shepherd."

TO PREVENT A COW FROM KICKING.

Having noticed in the *Farmer* of this month a plan suggested by "J. Y. N." for the purpose of curing kicking cows, allow me to suggest one which is, perhaps, equally as good. Take a rope long enough to go round the cow, commencing at her forward legs, and tie it over her shoulders. Now take a stick, and twist the rope tolerably tight, which will prevent her from using her hind legs; she cannot stir them an inch.

Boston, June, 1859. A BELMONT FARMER.

SCARE CROWS.

This is the time of year for our corn-fields to exhibit all sorts of artistic ingenuity, in the shape of old clothes statuary, and a very odd and expressive tableaux, as well as a great extent of never-ending twine—glittering pieces of tin hung on poles, by ever twisting and twisting strings—old coffee pots, and dilapidated hats; all to intimidate that very sable, but sagacious bird, the crow. Mr. Crow generally laughs in his sleeve at all this expenditure of cast-off toggery, and takes what corn he wants before the farmer is up, or in the house at his meals, or gone to meeting, or absent from the premises from any other cause. The best mode that we ever adopted, to keep this inveterate old preacher from pulling up our corn, was to surround him with assailants of his own kind. Make bird fight bird. We once set up a couple of martin-boxes on poles in our corn-field. These were occupied by families of

martins; and woe fell upon every crow's, poor devoted head that dared to show itself anywhere near the premises. They were out as early as Mr. Crow himself, and ready to give battle all summer, or, until their young had flown, and they got ready to migrate South. There was many a battle fought over the field, but no corn was pulled up that year.—*Maine Farmer.*

“NEVER PUT OFF TILL TO-MORROW.”

Now is the time to be busy,
Now is the season for toil:
Work while 'tis Spring, and the Autumn
Will bring you the fruits of the soil.
Let's no time for work like the present,
Let idlers not lead you astray;
For "never put off till to-morrow
The thing you can do to-day!"

Be up with the dawn of the morning,
In time to your labor repair;
And though you do ever so little,
Be sure that you do it with care.
And should the world tell you to linger,
And join for a moment in play,
Mind, "never put off till to-morrow
The thing you can do to-day!"

So youth is the time for progressing
In wisdom's delightful road,
That age, at the end of the journey,
May find a repose with God.
Then remember, while youth is in splendor
(Not when you're old and grey,)
To "never put off till to-morrow
The good you can do to-day!"

For the New England Farmer.

GRAND DIVISIONS IN THE ANIMAL KINGDOM.

It seems to me that the greatest impediment to the diffusion of knowledge, by the press, or by scientific lecture, is to be found in the persistent rejection, by the farmer, of scientific terms. "But," I am frequently asked, "why not use common terms?" I answer, because in some cases we have no common or familiar term to express the idea, but more frequently we use the scientific, rather than the common term, because the common term is indefinite, and the scientific term is precise, in its meaning. If the lecturer use the common term to express his definite scientific idea, his different hearers will interpret it differently. I meet with men every day who use indifferently the words, species, order, class, genus, tribe and family, to express the same idea. These things ought not so to be. It seems to me a truism, that without precision of language, no definite idea can be conveyed. Is it not, then, the farmer's first duty to acquaint himself with the language of science? I do not propose to write a lexicon, but to give the proper idea to be attached to a few terms found in each of the departments of science in which the farmer must be interested. I shall dilute the article some, to keep it from being dry, but wish it understood that each scientific term, however frequently used, has but one meaning—the same in every place.

I commence with the animal kingdom. All animals have been formed by the Creator, on four great plans, as distinct as the Gothic, Ionic, Doric and Corinthian orders of architecture;

consequently, naturalists say, that there are four grand divisions in the animal kingdom. In the order of their rank, commencing with the lowest, they are the Radiates, Mollusks, Articulates and Vertebrates. The Radiates are so called because their organs, especially their nervous systems, are arranged around and diverge from a centre, like the spokes of a wheel. The star fish, (*Asterias*,) is the type of this style of animals. But in every division, the general plan is greatly modified, producing classes, orders, genera and species, and giving that beauty and variety in which the Creator seems everywhere to delight. This division mostly inhabits the sea, and is of little economical importance to the farmer.

The second division is that of shell fish. They are called Mollusks—the word signifying soft. Most Mollusks, though soft animals, are covered with a hard shell, as in the case of the clam, oyster and snail, and are said to be testacious.—Squids and slugs have no visible shell, only a rudimentary one under the cuticle. Slugs are often found under old logs and stones, and are thought to be snails, which have crept away from shells—a natural but a false notion.

The third division is said to be Articulate, because the animals, for the most part, have an external skeleton composed of rings articulated or joined together, as in the lobster and the wasp. The earth worm and the leech have no hard skeleton, but their rings are visible, and their style of organism of the articulate type, their nerves being distributed in two lines along the lower part of the body, with ganglia or modular masses at each ring. Insects, caterpillars and spiders belong to this division. The farmer's hopes and his fears, his success and his failures, are frequently intimately connected with these animals.

The fourth division is that of Vertebrates—animals with a spine or back bone. The plan of this division reverses that of the last. The skeleton of this is on the inside and the muscles on the outside. The nervous system is on the upper side of the body, and contained in the back bone. The jaws work vertically—those of the articulate work horizontally. In this division are included fishes, snakes, turtles, lizards, alligators, monkeys and men. MORE ANON.

Wilbraham, 1859.

REMARKS.—Excellent. You point out a path in which thousands of our readers ought to tread, and take observations.

For the New England Farmer.

BOTS IN HORSES.

MR. BROWN:—I noticed in a recent number of the *Farmer* an account of the sick colt, written by "O. T. Willard." He called the disease bots, which I thought was impossible, although his description answered to a case recently before me. But my colt was so far gone when friend Willard intimated that it was bots, that it seemed useless to doctor for them. I had been told if my colt died and I examined him, I should not detect the cause, for all horses have some bots. My colt died this week. I got my brother, and into the examination we went, expecting to find the trouble in the spinal column. But if it was

there, its traces were so delicate that we could not detect it.

In the region of the heart and lungs there appeared serious trouble; they were very dark colored; the lungs swollen to a monstrous size; as we had got our hand in, we thought we would look in to the stomach or maw, and entrails. On opening the stomach it seemed literally coated with bots. We commenced counting, scraping off, or cutting them from the maw, until we counted in round numbers, five hundred bots, as large as a bee; his maw was literally eaten out of him.

I have been thus particular in this case, hoping to draw some instruction from you or some of your correspondents. Have given this colt the past three months, while unable to stand, some laudanum, brandy and molasses, and a great quantity of new milk. I had supposed the bots to be a quick disease. Was it the milk and molasses that made him linger thus long?

Some one that knows, I wish would inform me how many bots, or how many hundreds of them, a healthy, full grown horse usually has in the maw? Was the number in my colt a common or an uncommon number? I think it uncommon. Friend Willard advised me to doctor for the bots, but I want a prescription for killing those five hundred bots, without injury to the colt.

WHARTON D. SEAR.

Southampton, June, 1859.

HOEING.

One of the most important items of business on the farm is hoeing. So much depends upon this particular process of crop-getting, that a farmer may cover broad acres of fertile land with manure and seed, work it in the most approved and careful manner, keep off all beasts and insects, and then, neglecting to hoe timely and properly, fail to receive anything like a remunerative crop. It is one of the weakest pieces of folly in which the farmer indulges, and is the next-door neighbor to cultivating and raising a fine crop with assiduous labor and pains, and then neglecting to harvest it. Another look at it, shows that the folly is even greater than this. Why?

A neglect in hoeing allows weeds to grow and perfect their seeds. These are annually shed upon his own ground, stocking it for years to come, and these annual sowings are so many annual accessions of new crops of rank weeds, to torment and exhaust the energies of the cultivator, in his attempts to make them give place to the plants which he wishes to rear. But this is not all the wrong he does.

Nature is always at work to hide her blemishes (as we look upon them) with something grateful and beautiful to our eyes—some drooping bell-shaped flower with large green leaves covers the otherwise bald roadside, where excavations have been made, or patches of fresh grass, or rushes, or sedge, or shrubs, cover the earth laid

bare by accident or by man. In order to accomplish this, she has given many seeds locomotive power, and they fly or float away, perhaps long distances, in vast numbers, to settle a new colony wherever they may alight.

Is it right, then, for one farmer to raise a crop of pernicious plants and perfect their seeds, that they may invade the premises of another, and cause him years of painful labor from which he derives no profit? It certainly is not right, and the good husbandman will consider well what his duty is in relation to this matter.

Hoeing has other advantages beside that of keeping the weeds down. It has something the effect of thorough draining. Well drained land becomes light and porous, is prepared to receive the air and warmth of the sun's rays, and the fertilizing properties contained in rain water and in the dews. Lands well hoed are placed in a condition much like this, and will produce a much larger crop than lands left unhoed. Neglected hoeing brings—

1. An unsightly, slovenly field, which is a shame to its possessor.
2. A hard, unyielding soil, that makes what hoeing is done doubly expensive.
3. Tons of weeds to rob the soil and deprive the crop of its natural source of support.
4. Crops of seeds that perpetuate the evil, and an infliction of wrongs upon others that we have no right to inflict.
5. Loss of reputation as a good farmer and an upright man.
6. Loss of labor, loss of crop, and what is more than all, loss of that heavenly feeling of *duty done*, that approbation spoken by every well-tended tree and plant and flower, "Well done, good and faithful servant, thou shalt have thy reward."

Better neglect *haying* than hoeing—better neglect *planting*, even, than hoeing! But it is too hot to say any more about it now. It is cooler and more pleasant to *hoe* on such a day as this sixteenth day of June, than to sit at the desk and write about it.

SALT AND ASHES FOR COWS.—On turning my cows to pasture, in the spring; I provide several small tubs, and having fixed them firmly in the soil to prevent them being overturned, put into each tub one quart of salt and three quarts of sifted wood-ashes, previously well mixed by stirring. The cows partake freely of this mixture. It prevents injury from the sudden change from dry to green food, and has, besides, a most invigorating effect upon the general system. Some assert that salt should be given only as often as once a week, as its more frequent use would be injurious. But when supplied in this way, no apprehension need be entertained.

For the New England Farmer.

A SIMPLE PLOWMAN.

MR. EDITOR:—I noticed in a late number of the *N. E. Farmer* a diagram and description of a "New Plowman," to take the place of one of the sons of the Emerald Isle, which I have no doubt will do the work full as well as he. But it is a privilege which the Yankee farmer highly prizes to purchase that which is simple and cheap, rather than that which is more complicated and expensive, provided it will do as good, or better work. Hence, I propose to give you a description of an implement designed for the same purpose, which the farmers in this vicinity have been using for some years past. It is manufactured, and I suppose was invented, by H. STRICKLAND, Esq., a plow manufacturer, at Bradford, Vt.

It is simply a wheel, fixed to a cast-iron bow, similar in shape to those commonly used for holding plow-wheels, which is fastened to the land-side of the plow by bolts. There is a mortice through one end of the bow, so that the wheel can be raised or lowered at pleasure. On land that is comfortably even and free from stones this wheel will hold the plow more even and steady than most men.

In order that a machine of this kind should work perfectly, it is necessary that the surface of the ground where the wheel and plow runs should correspond; for if the wheel drops into a hollow, it will run the plow off; or if it rises over a knoll, it will run it to land. Hence, I should think this wheel would work better than the Plowman, inasmuch as the ground would be more likely to correspond at a distance of only three or four inches from the furrow than it would as many feet from it. The description of the Plowman does not give the length of the triangle, but by the diagram it appears to be as long as the distance from the colter to the end of the beam, which must be nearly three feet, which I should think would not only render it useless, but somewhat troublesome, when the land was nearly finished, and when plowing back furrows near a fence. S.

Fairlee, Vt., June 7, 1859.

For the New England Farmer.

STATE BOUNTY.

MR. EDITOR:—In the tabular statement of premiums awarded from the funds given by the State for the encouragement of agriculture, it appears that nearly half the whole amount is paid and distributed in the towns in which the shows are holden. This will do in those counties where there is a rotary plan of exhibitions, but in those where the exhibitions year after year are stationary in the same place, it seems to be a limited and partial use of the bounty of the State. Without doubt, the purpose in giving it is, that the benefit shall be generally diffused through the whole community; and not that a few individuals, who regulate the shows, should so manage the same, as to pocket near all the bounties.

Would not this difficulty be in a measure corrected by awarding more for farm management, or experiments in culture, instead of animals exhibited? or might it not be done by having committees to examine such claims, as may be en-

tered in every section of the district, within the limits of the Society? These hints are thrown out, if possible, to bring forth a more equitable and less exceptionable distribution of this bounty, which is admitted to be quite liberal. P.

June 10, 1859.

REMARKS.—Glad attention is called to the subject. We do not think, however, that the premiums are awarded in the town where the show is held, by any management of "those who regulate the Shows," but because, it being convenient, so many more persons contend for the premiums when the show is to be in their own town. We believe the records of every society in the State will show that a considerable portion of all the premiums are awarded to the people of the town where the exhibition takes place, or to persons from towns in its immediate neighborhood.

For the New England Farmer.

THE WEATHER OF THE SPRING MONTHS, 1859.

March came in rather roughly, with disagreeable winds and low sunrise temperatures, but after the first few days the weather was uniformly mild, and the whole month much resembled what April usually is. The frost left the ground very early; the snow disappeared on the plains during the first ten days, and from the mountains before the close of the month, and by the 20th, the roads were quite dry. The ponds were early cleared of ice, and on the 22d, the frogs croaked merrily. Many of the early spring birds came in the fore part of the month, the blue birds arriving on the 6th, and large flocks of wild geese passed over on the 10th and 11th, and other flocks followed on the 15th and 25th. The thermometer frequently indicated 50° in the shade, and there was every indication of a very forward season. The last week of the month was very fine, though there was remarkably strong north-west wind during the last twenty-four hours.

But the most remarkable feature of the month was the large number of heavy rain storms, and consequent heavy floods. The highest water in the Connecticut was on Sunday, the 20th, when the river at Springfield was twenty and one-half feet above low water mark, and at Hartford twenty-six feet above, while the water was *thirteen* feet deep on the Holyoke dam. Many of the bridges over the Connecticut and its tributaries were carried away, and a large amount of other serious damage done, the flood ranking in height as the *fourth* of the century, falling but two inches below that of 1845, a foot below that of 1801, and two feet one inch below the *great flood* of 1854, the highest ever known on the Connecticut.

April followed, with the first week cold and rough, there being out of the first nine days *eight* of strong north-west wind. About the middle of the month, there were several cold rain storms; while it rained here, snow falling on the mountains and at the north; but generally the weather was very even, and marked by no severe extremes. The latter part of the month was uniformly mild, and generally fine; and at the close

of the month, vegetation was considerably advanced, rye being several inches high, mowing lands and pastures green, and the buds on the trees just bursting into leaves, even then some poplars and birches being quite green. During the last few days, swallows, brown thrushes, chickadees, whippoorwills, and a host of warblers and fly-catchers, made their appearance.

May, though warm and generally favorable for vegetation, and consequently for the farmer, was divided into about three distinctly marked sections of fair weather and rainy weather. The first eight days were remarkably clear, and exceedingly warm for the season, thermometers ranging from 84° to 94° in the shade. The weather about this time for nearly two weeks was very dry; fires raged in the woods in various quarters, and a dense smoky haze threw a disagreeable aspect over the landscape, hemming in the view to a few miles in extent, and veiling everything distant in a forbidding indistinctness. On the 9th, after great heat in the forenoon, a great change in the weather, in consequence of thunder showers, occurred, the temperature falling *thirty* degrees in eight hours. Heavy rains followed on the 10th and 11th, and the weather was more or less cloudy, excepting perhaps one or two days about the 15th, with indications of rain, and more or less of rain fell, till the 22d, a cloudy term of six days, during which the sun hardly shone, ending on the 22d. There was heavy rain on the night of the 18th, and more or less on the 19th, 20th, 21st and 22d. The remainder of the month was clear and fine, with rather too cool nights, however, and a heavy fall of rain on the night of the 31st.

In short, the spring opened very early—the ground being in condition for plowing in the latter part of March, continued very forward, and as a whole was very fine. The trees “arrayed themselves in green” with more than usual rapidity; cherry trees were in full bloom on the 9th, and apple trees by the 18th, at least, a week in advance of last year, ten days ahead of 1857, and three days earlier than the average for the last half century. Much planting was done quite early, and at the close of May, corn and potatoes were several days in advance of what they usually are at the same date.

The mean temperature of the spring months was 45.8°; of March, 37.14°; of April, 42.94°; of May, 57.31°. The mean temperature at sunrise was 39.86°; at noon, 51.35°; and at sunset, 48.35°; of March, at sunrise, 34°; at noon, 41.71°; at sunset, 39.51°; of April, at sunrise 38.4°; at noon, 47.73°; at sunset, 46.05°; of May, at sunrise, 47.2°; at noon, 65.52°; at sunset, 59.49°.

The warmest day was the 8th of May, the mean temperature being 72.5°; the coldest was the 2d of March, with a mean of 16.17°. The warmest day of March was the 18th, with a mean of 49.67°; of April, the 30th, with a mean of 55.17°; of May, the 8th, with a mean of 72.5°. The coldest day of March was the 2d, with a mean of 16.17°; of April, the 5th, with a mean of 32.5°; of May, the 11th, with a mean of 43.17°.

The highest temperature was 86° (by my Fahrenheit thermometer, well adjusted,) though some thermometers indicated 94° at two P. M., on the 8th of May, and the lowest was 4°, at sun-

rise on the 2d of March. The highest in March was 54°, on the 28th; in April, 71° on the 30th; in May, 86°, on the 8th. The lowest in March was 4°, on the 2d; in April, 27°, on the 10th; in May, 35°, on the 16th.

The spring months were 2.2° (two and two-tenths) warmer than in 1858, and 4.58° warmer than in 1857. Only two frosts occurred in May—on the morning of the 16th and 22d—and both were generally light, doing but slight injury to crops.

Of the ninety-two days of spring, twenty-two were clear, twenty-two tolerably clear—the sun shining the greater part of each day—twenty-eight cloudy, and twenty others in which the clouds predominated, as follows; in March, four clear days, eight tolerably clear, *twelve* cloudy, and seven quite cloudy; in April, six clear days, nine tolerably clear, seven cloudy, and eight quite cloudy; in May, *twelve* clear days, five tolerably clear, nine cloudy, and five quite cloudy.

Rain fell on twenty-six; on nine days in March, including five heavy falls; on five days in April, and on eleven in May.

The only snow storm, save a few squalls in the fore part of April, occurred on the 3d of March, with a fall of five inches; but frozen rain or sleet fell about the middle of April, and snow at the same time on the mountains.

The only thunder shower occurred on the 9th of May.

There were fifty-three days of wind from a northerly quarter, and thirty-six from a southerly; as follows: Twenty-seven from the north-west, twenty-three from the north-east, and three from the north; eighteen from the south-west, thirteen from the south, and five from the south-east. In March, ten from the north-west, five from the north-east, one from the north, four from the south, eight from the south-west, and three from the south-east. In April, *fifteen* from the north-west, seven from the north-east, two from the north, one from the south, three from the south-west, and two from the south-east. In May, but *two* from the north-west, eleven from the north-east, eight from the south, seven from the south-west, and three in which the wind was light, and there was no steady current from any point.

There were *eleven* haloes; six in March, three in April and two in May. Four displays of Northern Lights were noticed; two each in March and April. Three rainbows were observed in May, and one on the 19th was attended by the unusual phenomenon of *supernumerary* bows.

Springfield, June 8, 1859.

J. A. A.

RAISE FRUIT AND EAT IT.

This is a fruit country. Nearly all farmers may raise their own fruit. Strawberries, raspberries, currants and gooseberries grow or will grow almost everywhere. They can be canned, and so preserved the whole year. Apples, pears, peaches, cherries, can be raised on most farms. There is no good reason why fruit should not be as plenty as corn or wheat.

This is a bilious country—that is, the people who live here are especially liable to bilious diseases. There is perhaps, no better preventive of

bilious diseases, than the constant use of fruit as a part of the diet. It corrects the acids and juices of the stomach, and assists digestion. It keeps the bowels properly active, and prevents that sluggishness and torpidity, which promote bilious derangements. Fruit, to do its best office in the diet, should be cooked and eaten as a part of the regular meal. Thus used, how delicious it is! How it adds to the pleasure of a meal to have it enriched with so delicate and agreeable an article of diet! And how chaste and elevating is the tendency of such a diet, compared with one of solid meat and bread. So it is. The best diet is really the pleasantest. Therefore let fruit grow on all our farms, and adorn, and make pleasant all our tables.—*Valley Farmer.*

NEW PUBLICATIONS.

HINTS TO HORSE KEEPERS, A Complete Manual for Horsemen; embracing How to Breed, Buy, Break, Use, Feed, Physic, Groom, Drive and Ride a Horse. And Chapters on Mules and Ponies. By the late HENRY WILLIAM HERBERT; with additions, including "Barey's Method of Horse Taming," and Baucher's System of Horsemanship;" also, giving directions for the selection and care of Carriages and Harness of every description, and a Memoir of the Author. Beautifully Illustrated. A. O. MOORE & Co. 140 Fulton Street, N. Y.

One of the fine books of this celebrated publishing house. It has a full index, which will refer you to all you will ever wish to know about the horse. The type of the book is large and fair, and its mechanical execution is every way attractive. In speaking of the importance of the mare that is to be bred from, one of the off-hand dashing paragraphs, of which the book is full, is as follows:

"We now come to another, and by no means, secondary part of the business; that is to say, to the choice of the mares. And here we say that the first thing to be looked for is, not blood nor performances, but size and symmetry, accompanied, as a matter of course, by constitutional and structural soundness. Blood from the sire, beauty from the dam, is the golden rule of the breeder. We know it is commonly said by farmers, concerning some miserable, undersized, ew-necked, cat-hammed wretch of a mare, broken-winded, ring-boned and spavined, 'O, she will o to raise a colt out of!' So she will! But what will the colt be? The breeder had better, for all purposes, have shot her at once, for the colt will not be worth the mare's grass."

The twenty-second chapter of the work is devoted to Veterinary Homeopathy, and gives it much value. The merits of the book will abundantly justify any lover of the horse to pay its price for it, \$1.25; and its faults, if it have any, we leave for the reader to find out for himself.

COUNTRY LIFE. A Handbook of Agriculture, Horticulture and Landscape Gardening. By R. MORRIS COPELAND. Boston: John P. Jewett & Co.

This is a book of over 800 pp., on fine paper, elegantly printed, and embellished with numerous engravings. The complete index shows that scarcely a topic embraced in the subjects an-

nounced in the title page, have been omitted. The author is an acute observer, a deep thinker and an ardent votary to the useful art. The work, indeed, is a library in itself, upon the subjects which it discusses, and the most uninformed could scarcely fail of finding in it all that is necessary for his guidance in any of the departments of farm management, or in the more attractive pursuit of landscape gardening. Pressing duties have not permitted us to examine all the principles laid down, or all the practices which are commended,—but we have seen sufficient to make us admire the fine taste and great industry of the writer, and to induce us to wish that each of our readers may have a copy of this book on his table.

WELLS'S NATURAL PHILOSOPHY; for the use of Schools, Academies and Private Students. Introducing the latest results of Scientific Discovery and Research; arranged with special reference to the practical application of Physical Science to the Arts and Experiences of every-day life. With 375 Engravings. By DAVID A. WELLS, A. M. Fifteenth edition. New York: Ivison & Phinney.

This is not only a suitable book for schools and academies, but is a capital hand-book for the family—that is, reference to its pages would afford explanation to a thousand queries such as are always arising in the minds of an intelligent family. If such queries go unanswered, there is little if any progress in scientific knowledge,—but if such a book as this is often referred to, and its subjects are under frequent discussion, the family using it will soon be distinguished for its valuable attainments. The book is printed handsomely, has a full index, and ought to be upon the shelf of every person who cares to know anything of *natural* philosophy.

COUNTRY SCHOOL-HOUSES: Containing Elevations, Plans, and Specifications, with Estimates, Directions to Builders, Suggestions as to School Grounds, Furniture, Apparatus, &c., and a Treatise on School-House Architecture. By JAMES JOHANNOT. With numerous designs by S. E. HEWES. New York: Ivison & Phinney, 321 Broadway. Chicago: S. C. Griggs & Co.

Every town in New England, about to rebuild its school-houses, ought to be in possession of this book. It will afford so many suggestions, and point the way, step by step, so closely, as to make any intelligent committee, master of the subject they have in hand. It is an important point gained in building, to know, ourselves, what we want, and how, and for what prices, it ought to be done. The work is handsomely illustrated with numerous designs, and floor-plans, together with the furniture of the school-rooms, inkstands, book-cases, &c. The book should be in every town library in the State.

BOOKS IN JAPAN.—Whoever walks through the streets of a Japan town or village, will be surprised to notice the number of books exposed for sale in almost every shop. On looking inside he will probably find one or more of the atten-

dants, if otherwise disengaged, busily reading, or listening to something being read by one of the company. In walking through the outskirts of the town, it is not unlikely he will come suddenly on a knot of children, seated in a snug corner out of the sun, all intensely engaged in looking through some story-book or other, they have just bought at a neighboring stall, and laughing right heartily at the comical pictures which adorn the narrative. The conviction is thus brought home to a man's mind that the Japanese are a reading people.—*London News.*

For the New England Farmer.

LETTER FROM THE SANDWICH ISLANDS.

MAKAWAO MAUI, HAWAIIAN ISLANDS, }
FEBRUARY 12, 1859.

MESSRS. EDITORS:—*Gentlemen*,—Dec. 30th being our Hawaiian thanksgiving day, I wrote you giving some account of the increase of our comforts for the physical or outward man since I took up my residence at the islands in 1828. Let me now speak of other things pertaining to the agricultural interests of the islands up to the present time, beginning at Hawaii, the most southern of the group, and ending at Kauai, the most northern, as you will see by looking on a map.

Hawaii is much the largest of these islands. I have resided on that island and, have travelled around it. But for its being the seat of Pele's dreadful reign, it would be the most important island, having the largest forests, the loftiest mountains, most extensive fields for cultivation, the greatest variety of climate, and spacious bays. But we have some fears on account of the late eruption of the volcano on Mauna Loa. In 1855 we trembled when intelligence from Hilo reached us lest one item should be that that beautiful village had been destroyed by the rivers of molten lava which rolled their burning waters till some six or eight miles only remained between them and Hilo. Had they reached this village, they would have disgorged themselves into Byron's Bay, destroying probably the most spacious harbor on the islands. God spared our friends their village and harbor, seemingly saying to the burning liquid, "Thus far shalt thou go, but no farther, and here shall thy proud waves be staid."

January 23, only about three weeks ago, our friends of Hilo were again startled by the sight of the burning lava gushing from the same place apparently as in 1855. It was at first supposed that it would pursue the course of the former one, and make for the Bay of Hilo. But it is now well nigh certain that the flow is toward the west or Kona side. But more of the doings of Pele at some other time. I am to tell you of the agricultural interests of the island.

At Kau, the southern district of the island, at the station occupied by Rev. Mr. Shipman, the people have during the year engaged in the business of wheat raising. A few hundred bushels have been produced and sold, and the hopes of the farmers are raised that the product thus gathered will be profitable. From my recollections of this district, from having once passed through it, I should say there is a wide field for this enterprise. I am now writing to Mr. Ship-

man, making various inquiries respecting the extent of this district, and the prospects of wheat-growers, and I may speak to you again respecting this portion of Hawaii. Other than this commencement of wheat growing, I have heard of no new agricultural enterprise on that island. There have all along been many important native productions carried to Honolulu, such as Pia, or arrow-root, Olona or Hawaiian hemp, suitable for fish-nets and rope, Pula, a material much used for bedding, potatoes, yams, coffee, oranges, &c. The latter fruit of an excellent quality is rapidly increasing, and it is said that American apples are being raised on that island.

On Maui, wheat is becoming one of our staple productions. In my former letter I told you of the number of bushels raised the past year. Much more land is being sown this year, and unless the cut-worm shall destroy more than in ordinary years, the amount of wheat will be much larger than ever before. We have a small mill at length, at Wailuku, some ten or twelve miles distant from our wheat fields, where we can procure grinding for toll. This is a favor. Other things of an agricultural nature on Maui are much as they have been for many years. But for the cut worm the labors of agriculturists would rapidly increase; but the ravages of this insect are most discouraging, and we know of no remedy. For a while we cherished the hope that frequent and thorough cultivation would do the business for this implacable enemy of wheat, corn, beans and garden vegetables; but such is not our experience. Can any reader of the *Farmer* tell us how we can escape this scourge?

The best gardens on the group are at Lahaina and Honolulu. I know not how gentlemen there protect their tender-spring vegetables from the ravages of insects; but I am glad to report the raising by them of fine beets, turnips, and other comforts, such as New England gardens furnish. I am confident that our island home will, ere long, abound in fruits of an excellent quality. Last year I had in my garden alone some ten barrels of peaches, and there were as many more in three other gardens in the neighborhood. We abounded, also, in figs, had a few oranges, guavas, citrons, chirimoya or custard apple and water lemon. As yet, I have not succeeded with the American apple, and much fear that this fruit will not do well on Maui. Still, we shall not give up the hope without further trial. I am hoping to see the orange and peach flourishing in native gardens. The orange and fig are both nutritive and exceedingly healthy. Just now there is nothing like wheat in the estimation of my people, but they will learn, ere long, that the cultivation of fruit is a cheaper method of obtaining a living. Oranges, too, can be exported to San Francisco, and will be profitable, I think. On Kauia the natives have made the raising of sweet potatoes, for a few years past, quite profitable. They have exported them to San Francisco, and have had very fair returns. Sugar and coffee have been exported from this island,* but these are produced by the capital of foreigners, and I do not take them into account in this report.

In my letter of Feb. 11, 1857, which you gave your readers in the July monthly *Farmer*, I re-

* So on Maui, largely.

ferred to my old neighbor and associate, Mr. Bailey, of Wailuku, whom I had requested to write you. On seeing it in print, I fear that either Mr. Bailey or his friends will mistake my meaning. I spoke of his having developed a state of mind which forbids, I think, all hope of his writing for any periodical. I should have alluded to the cause, failure of health, which affected his mind, and I should have qualified my hope of his writing for any periodical, by adding, unless his health shall be restored. Just as I write of my own excellent wife at the present time—she has developed a state of mind which forbids her writing to her own relatives. With Mr. Bailey I have lived many years on terms of affectionate intercourse; and I utterly deny having written the paragraph from a wish of casting a reflection on him as a man or a Christian; no such thought entered my mind. He has lately visited the United States, and I hear he is returning to his island home in renewed health. This I rejoice to hear, and I hope he will be spared long to labor for his people and to aid in developing the resources of the country. If you think these letters worthy of being published, please give your readers what I say of Mr. Bailey in this closing communication, and greatly oblige your unseen friend at Makawao.

J. S. GREEN.

P. S.—I will give you, if spared, something more ere very long, concerning Pele, and the effects of the late disturbance on Hawaii from the outpouring of the molten floods. Many from Oahu and Maui had gone thither to gaze on the wonderful displays of divine power now being there exhibited. With respect yours, J. S. G.

For the New England Farmer.

LITTLE THINGS:

OR, A WALK IN MY GARDEN....No. 18.

I have been transplanting some tomatoes today from the house to the garden. It has been quite a little study with me to ascertain the best method of starting different plants in the house, and then transplanting them to the garden without disturbing their roots. I have hit on a plan partly original with me, or else I have forgotten how I came by my knowledge of

TRANSPLANTING PLANTS.

Take common saucers, and fill them just full with rich earth; then cut circular slices of turnip an inch in thickness, but not quite so large over as the top of the saucer, cut a hole an inch in diameter through the turnip, lay it on the earth in the saucer, fill the hole with the same soil as in the saucer, plant your seeds in the hole, water the earth by pouring it into the saucer; capillary attraction will carry the water to the plant.

Now for the beauty of the thing; when you wish to transfer to the garden, prepare your hills, and slip all the contents of the saucer with a case-knife into the hill, slice down the turnip on two sides, and let it remain, or take it away, as you please. Squashes, cucumbers and melons can be transplanted in this way without being checked at all in their growth. The whole process is so simple and so effectual, that I recom-

mend it with entire confidence. The turnip serves to prop up the plant, while it prevents the evaporation of the water. You do less injury to the plant by pouring the water into the saucer, than by pouring it on the plant itself, while the fibrous roots have so incorporated themselves with the earth that it may be slid out of the saucers in a mass. Try it next year.

SPROUTING POTATOES.

I accidentally learned a new lesson the past spring in sprouting potatoes. I put them into a cask, and placed some earth on the top of them, but did not mix it with them, and poured on a little water and set them in a warm room. They sprouted in a short time, and when ready to plant, I sawed off the hoops and let the potatoes out, when I found that although the sprouts were quite long, the rootlets had not started at all, so that I could place them in the hills without breaking the sprouts, as is very apt to be the case when they are sprouted in earth, where they form a perfect matting of roots.

PEAR AND APPLE TREES.

While walking in my garden the other day, I was led to notice a half-dozen pear trees of as many different kinds, that stood the winter perfectly well, while several seedling young apple trees in the same situation were killed to the ground. Why this in favor of the pear trees, I cannot tell.

GRAFTING.

Apple trees that I grafted on a warm day, before the snow was off the ground, have taken finely, while those I grafted the last of April, seem to have been affected by the extreme warm weather the first of May. I believe there is no danger of grafting apple trees, (I speak of large trees,) as early in the spring as possible, provided there be weather sufficiently warm to make the wax adhere to the trees. Such has been my experience for ten years past. N. T. TRUE.

Bethel, Maine, 1859.

For the New England Farmer.

AN UNUSUAL PHENOMENON.

Thursday, the 19th of May, was cloudy and very threatening, a little rain falling at ten in the forenoon, and at sunset. At sunset, there was a very beautiful rainbow, the primary bow continuing unbroken and very bright for about fifteen minutes; but the secondary was quite dim. Within the primary, were two distinct arches of red, with a green one visible between them at times. These arches, called in meteorology supernumerary or supplementary bows, extended the greater part of the length of the primary bow, and were visible for ten minutes, even till after the sun had passed below the horizon.—This phenomenon is spoken of as occurring very rarely by meteorologists. I have observed it but twice before. On the 14th of August, 1857, there was the most beautiful rainbow I ever witnessed, occurring after a thunder shower. At about ten minutes before sunset, these supernumerary bows appeared, one after another, till five were visible in the highest part of the arch, within the primary bow, continuing till after the sun was just below the horizon. Those nearest the primary bow

were broadest and brightest; the others successively fading, shortening in length, and becoming narrower. These were red, the first and second vieing with the colors of the primary bow, with a green arch between them. I never saw them when the sun was more than ten or fifteen minutes high; and its nearness to the horizon probably has something to do with its formation.

Springfield, May, 1859.

J. A. A.

For the New England Farmer.

LABOR-SAVING MACHINES.

MESSRS. EDITORS:—I believe no industrial class in the world is capable of more real enjoyment and independence than the farmers of New England, and yet many farmers among us avoid an agricultural journal, or a labor-saving machine on their farms, or in their farm-houses, as if of no possible use.

Now, brother farmers, why do we so? Can any of us really afford to do without the agricultural experience of our best and most enlightened cultivators of the soil? I am one of those who are obliged to study economy, and have to ask concerning this or that new thing, which is crowded into public notice, "Will it pay?" It is not always easy to distinguish between a good thing and a humbug. Thus, for instance, when the mowing machine came into notice, I doubted a year or two, then purchased a Ketchum's; it paid well, (though others may be better.) I get more grass, get it quicker, and get it better. Delano's Independent Horse Rake has frequently nearly paid for itself in one day just before a shower or rain storm. Then in the house! How much annoyance from green wood, want of conveniences, want of suitable implements, &c. &c.

Now, then, in the house, he who regards his wife's strength, health and comfort, let him procure a metropolitan washing machine, and on Monday, when he comes home to dinner, wash-tubs, soap-suds, a cold dinner and ill-humor will be among past recollections. If that implement does not pay in saving labor and saving clothes, I do not know what will. In this I speak from nearly two years' experience. Have any of your readers ever purchased ready-made clothing, and soon after found by inspection that it was only very nicely basted together? Have they ever heard their wives say, "I find it very difficult to do all my sewing." Do they sometimes sit up very late at night to accomplish it?

A year ago, I examined all the machines for sewing, which stand in favor, and after much consideration bought one of Wheeler & Wilson's, and made a very fortunate selection; it pays well. It sews any thing, from a muslin to a bed-quilt, and a stitch alike on both sides. It is the admiration of the household, and male and female alike use it successfully. For those of moderate means, the \$50 cheap style are probably most desirable, as they do the same work with the same speed. All inferior machines will eventually find a place in one corner of the garret. Therefore, if you desire to please your wife, either get a good "Wheeler & Wilson," or a "Singer," or a "Grover & Baker;" but for family sewing, we prefer the Wheeler & Wilson machine.

Middlefield, Ct., 1859.

P. M. AUGUR.

TRANSACTIONS OF THE WORCESTER NORTH AGRICULTURAL SOCIETY.

The first remark suggested by looking over this report, is, that the statements are full and particular, and contain many practical suggestions by men competent to make them. The statements upon Plowing show that the importance of this leading operation of the farm is fully appreciated. The statements of the competitors upon stock and poultry are full and distinct. That by JOHN BROOKS, Jr., upon feeding stock, is the marked feature of the report. His experiments were obviously conducted with care and accuracy, and the results are of much interest to all feeders of milch cows. We are glad to see such experiments encouraged. The society deserves praise for offering a premium for this object. We hope many such experiments will be made in all parts of the State. The plan pursued by Mr. Brooks is a model for others to follow. We should judge that there must have been a fine exhibition of fruit, and are glad to see that the flowers were not forgotten. Seven dollars and fifty cents were awarded for flowers, and we had ocular proof at the time of how much they added to the pleasure of the show, and tended to give a stimulus to this most delightful branch of garden culture. The most strenuous objector to women's rights, certainly cannot object to her right to cultivate flowers, and exhibit them too.

The report of the committee on farms and the statement of Mr. HARTWELL, respecting the cultivation and products of his farm, are valuable papers. The report of the committee on orchards, and the statements of C. C. FIELD, JABEZ FISHER, the President, and JOHN MINOTT, show what may be done in this department. We commend these papers to all engaged in cultivating the apple.

We are particularly pleased to see that numerous and liberal premiums were awarded for grain crops. The statements upon these subjects are valuable, and encouraging, showing, as they do, that large crops of corn, rye and wheat may be raised by proper care and attention. The offer of premiums for the same objects for the next year, show that the society duly appreciates their importance. The report shows the society to be in a prosperous condition.

POTASH--SAND--PHOSPHORUS.

No vines can produce fruit without potash. Dye-woods and all color-giving plants owe their vivid dyes to potash. Without it we cannot have a mess of peas. Where it exists in a natural state in the soil, there we find leguminous plants growing wild, and in such places only we find wild grapes. All the cereals require potash, phosphate of magnesia and silica, which is dissolvable in a solution of potash. It is this dissolved sand that forms the hard coat of stalks, and gives

them the strength to stand up against the blasts of wind and rain while ripening. It is this substance that gives bamboos their strength, and beards of grain and blades of grass their cutting sharpness. No cereal ever came to perfection in a soil devoid of potash, silica, phosphate of lime, carbonic acid and nitrogen.—*Maine Farmer.*

For the New England Farmer.

VALUE OF RUTA BAGA—THE ONION CROP AND THE MAGGOT.

MR. EDITOR:—A correspondent in your paper of the 11th of June says that he has raised ruta bagas until he is satisfied "that they are not worth the trouble of raising." This is truly a sweeping condemnation of a root, which is considered the most important one raised in Great Britain, the failure of which for a single year in that country, would, according to a very high authority, be a greater calamity than the failure of the Bank of England. I would suggest with all due respect, whether such an article should find a place in an agricultural newspaper, without a simultaneous comment from the editor; a word of caution, at least, to the unreflecting. We all know that many believe, and are influenced in their belief, by any statement they see in print. Ink in the form of type is gospel to many readers. I should like to have had you say, "The remarks of our valued correspondent on the subject of ruta bagas are startling and novel; they conflict with the experience of half a century, and with the recorded wisdom of our most scientific agriculturists. We should like to have our correspondent furnish us with the data which has led him to the conclusion that this "root is not worth raising."

Your esteemed correspondent, J. W. PROCTOR, in the same paper, in speaking of the maggot in onions, says that no method has yet come to his knowledge of checking its progress. Now there are some secrets in agriculture as well as in trade; and perhaps it may be that some growers are successful, because they have discovered, but have not divulged the reasons for their success—they may not be aware themselves, why it is that they do succeed. Permit me to offer a remedy; it will do no harm to try it. Soak the onion seed for thirty-six hours before sowing, in strong soap suds, and I do not believe a single maggot will be found in the plants. It is not too late to try the experiment the present season, though too late to plant for a crop. I do not speak positively; at the same time, if I had ten acres of land ready for onions, I should plant the whole of it, without fear of the maggot, soaking the seed as I have suggested. ESSEX Co.

REMARKS.—We adopt, with pleasure, the language suggested by our correspondent. We often refrain from remarks upon the articles of our friends, because we do not wish to present the appearance, even, of being an infallible teacher. We stand in doubt, every day, in regard to some things, and earnestly desire not to be over-positive in any assertion. But that ruta bagas can be raised with permanent advantage to most of our farmers, *we have no doubt.*

EXTRACTS AND REPLIES.

EFFECTS OF FROST.

After the last frost, June 5th, I observed that a row of corn next my wheat piece, and parallel with the same, was completely killed, while other portions of the field, even near the water, were hardly damaged. Can you explain why this is so? N. DEARBORN.
Deerfield, Me., June 11, 1859.

REMARKS.—The water, near the corn, having stored up heat from the sun's rays during the day, was warmer than the atmosphere. The warm evaporations from the water were probably carried over the corn plants, and kept the temperature just above the freezing point. We have observed this result several times during the present month, on the banks of a stream. Near the stream and on the low grounds, there was a mist or fog and no frost, while on contiguous land, a little higher, vegetation was frost-bitten.

CROPS IN MAINE.

The weather here has been warm and delightful since the first of May; grass and grain look extremely well, just rain enough to suit all round, and but four cloudy days in the last six weeks. The farmers have got in a very large quantity of oats, potatoes, barley and other spring crops, which are all up finely. I have corn up and as forward as I used to have it in Massachusetts. This is truly a fine grazing country, this is a good country for farmers of all classes, either rich or poor, soil cheap and productive, climate healthy, water the best in the world, timber cheap, and everything to make home pleasant and happy. The pastures are dotted with cattle, sheep and horses, the fields and meadows with waving grain, and the woods with evergreens, and the lakes with trout, red sides and blue backs.

Rangleley, Me., June, 1859. J. CROWLEY.

CULTURE OF THE FRENCH TURNIP.

I am in want of some fertilizer for French turnips. Which shall I use, guano, superphosphate, or pourette? How much to the acre to produce a good crop by sowing it broadcast; and also, whose make? Where I use a machine for sowing the seed, must the land be plowed, cultivated or harrowed in order to get the manure near the roots? I find when the manure is near the surface they are apt to be spongy and ugly shaped things. S. DENHAM.

South Hanson, June 4, 1859.

REMARKS.—After a liberal dressing of barn-manure well mixed with the soil, we have found good superphosphate of lime, 300 to 500 pounds per acre, more advantageous than anything else for a turnip crop. Prof. Mapes manufactures a good article, so does Coe, and perhaps others. The land should be well pulverized and the seed sowed on ridges of eight or ten inches in height, —but that must depend upon the nature of the soil.

A NEW TRANSPLANTER.

I forward for your inspection an instrument I have invented for transplanting vegetables or flowers without disturbing the earth around their roots. A gentleman in this city removed over 100 strawberry plants in full bloom the other day, and he says they did not wilt at all. If it meets with your approbation, you will much oblige a constant subscriber to your valuable monthly by a friendly notice of it in your paper.

JOHN BURGUN.

Concord, N. H., June, 1859.

REMARKS.—Certainly, friend Burgun, you shall have a friendly notice, or rather the "Transplanter" shall, because it is a labor-saving, as well as plant-saving, and very convenient article. The house you mention is a good one to sell for you.

PROSPECTS FOR FRUIT.

The peach crop is an entire failure this year. Apples now look well, and I hope were not injured by the frost of the 5th inst. Pears look well. Strawberries, (now ripe,) in abundance. A fine prospect for a large crop of Lawton blackberries. Currants and gooseberries full. Grapes were somewhat injured by the winter—about half a crop. We have had a fine spring for the growth of all crops, and the prospects are good for the farmers.

SYLVESTER.

Lyons, New York, June 8, 1859.

A COLT'S HIND FOOT.

I have a yearling colt which has a bunch on the fore part of hind foot, between fetlock joint and hoof. It appeared March 1st, has increased to three fingers' width, and extends nearly round the foot.

Can you or any of your correspondents suggest a remedy?

E. P. CHASE.

Deerfield, Me., June 11, 1859.

CISTERNS.

I wish to inquire through your excellent paper the best and cheapest way to construct a cistern for the purpose of watering farm stock. I think you published an article about a year since, in which the writer recommended digging in the same manner as wells are dug, and then simply lining it up with cement, putting on two or three coats. Can one be made in that way and be durable, or will it be necessary to brick it up and then cement on to them?

Haverhill, Mass., June, 1859.

N. P.

For the New England Farmer.

WINTER-KILLING OF GRASS.

On all hands, I learn, the prospect for a crop of grass is good, where it was not winter-killed. What is to be understood by this phrase? Is it simply, where the ice had so formed as to adhere closely to the grass, and in this way to destroy the vegetating power of the plant, or is it some other operation or process?

I have witnessed this effect on fields of rye, to a considerable extent. I have a strong suspicion

that what is sometimes called winter-killed, proceeds from causes that operated before the commencement of winter.

This is no trifling effect on some fields, extending to a quarter or more of the expected crop. I should be gratified, Mr. Editor, if you, or some of your experienced correspondents, would explain this matter. As has been before remarked, the farmers of this county realize more money from the hay they send to market, than from any other product of their farms. Whatever, therefore, diminishes their prospect of income one-fourth part, becomes an essential consideration in their farm management.

ESSEX.

June 13, 1859.

For the New England Farmer.

THE BEST MOWER.

MR. EDITOR:—Permit me to avail myself of the medium furnished by the columns of your useful and impartial agricultural sheet, for the purpose of saying a few words to the farmers, to whose homes it makes its weekly visit, concerning mowing machines.

Our little town was all astir yesterday, with excitement occasioned by an exhibition and trial of mowers, on the farm of Capt. LAMBERT LAMSON. Though your correspondent intends to speak principally of this occasion, he would say that he has often witnessed the operations of some of the rival mowers used in this section of the country, and consequently whatever opinions he may advance, are not based entirely upon the proceedings at this trial.

The machines put upon trial were Ketchum's improved patent, 1859, mower, both one horse and two horse, manufactured by Nourse, Mason & Co., Boston and Worcester. Manny's patent mower, also one and two horse, made by Alzirus Brown, Worcester, and a one horse Ketchum mower, made down in Connecticut. The trial was first between the one horse machines, each of which cut two swarths on the side of the field. The Manny began, followed by a Ketchum machine from Connecticut, and then by the Ketchum machine from Nourse, Mason & Co. The Manny mower did its work well, but its swarth lacked the evenness and smoothness of the Worcester Ketchum's when raked. It cut a swarth three feet six inches wide. The Ketchum (meaning always the Worcester machine) cut a swarth four feet wide, and its work was satisfactory to all the spectators. I understand that this machine, cutting four feet, was strictly a two horse mower, but placed upon trial as a one horse machine by the proprietors, in the complete confidence of success. The regular one horse mower, I was told, cuts three feet, six inches. Another circumstance worthy of notice, is the fact, that the horse used with the Manny mower was taken fresh from the barn, and harnessed to the machine, whereas the horse used with Ketchum's had cultivated corn all the forenoon at Worcester, and had been driven ten miles since one o'clock, and was harnessed to the machine at two and a half o'clock. Yet, notwithstanding its advantages in shortness of cutting-bar, and freshness of horse, the Manny mower was inferior to the Ketchum.

After the different one horse machines had each cut two swarths on the side of the field, it was proposed that they should cut a double swarth, and the Ketchum immediately entered the middle of the grass, and performed its work in such a manner as to render its superiority still more striking. Nothing can exceed the beautiful manner in which this perfect little mower accomplished its task, and by the almost unanimous consent of the unprejudiced portion of the spectators, it was acknowledged to be the best and most complete one horse machine on the field, or in the market. Although, for many important reasons, the trial of the two horse mowers was an event of less interest than the trial of the one horse machines, still I would not deny to them their just amount of attention.

Whatever superiority the one horse Ketchum mower may have possessed over its rivals, when I say that in less than five minutes, it was transformed into a two horse machine, cutting a swarth four feet, six inches wide, (the only change being the substitution of a pole for the shafts, and the longer bar for the short size) it must be evident to all, that the same superiority remained with it, and the superiority of the two horse Ketchum mower was no less apparent, and no less appreciated, than in the case of the one horse mower. In fact, would it not be a good idea for some of our farmers to have the machine arranged for one or two horses? I presume they could do so, cheaply.

But the greatest novelty of the occasion remains to be mentioned. The proprietors of the Worcester Ketchum, not content with the success of their one and two horse machines, desired permission to mow with one of somewhat heavier build, cutting a swarth six feet wide. The attempt was not only another success, but an agreeable surprise to the numerous spectators. I did not see that the horses labored much harder with this, than with the other machines of less capacity. It presented a truly noble appearance, as the tottering grass came tumbling down, and having finished its double swarth, the opening of twelve feet of cut grass presented quite a gap to the eye. I would sum my account of this trial, by saying that, upon the whole, its result was a decided triumph of the Ketchum improved patent mower of 1859, manufactured by Nourse, Mason & Co.

Permit me to consider now, for a moment, some particulars which it would be well for a farmer to notice in buying a mower. When he is unable to make up his mind as to which mower is best, he naturally inquires the cost, weight, draught and other characteristics of the rival machines, respectively. I was able to gather these facts concerning the machines exhibited, from the circulars and politeness of the proprietors of each.

The Ketchum two horse mower cuts a swarth of four feet, six inches wide, weighs 480 pounds, and costs \$85. The two horse Manny mower cuts a swarth four feet, four inches wide, (two inches narrower than the Ketchum,) weighs 750 pounds, (270 pounds more than the Ketchum,) and costs \$110,—\$25 more than the Ketchum. My experience teaches me that the Ketchum mower has the least draught. I was also impressed very favorably with the simplicity and

durability of its construction. Being entirely of iron, the parts are much lighter, at the same time stronger and more durable, than those of the Manny, which are principally of wood. In conclusion, I would confidently recommend to the farmers of New England, as the result of careful observation, the Ketchum improved patent 1859 mower, as the best in the market. Adding that these ideas, though well founded, are hastily put on paper. TRUTH AND JUSTICE.

Boylston, June 15, 1859.

For the New England Farmer.

A SICK COLT---STAGGERS.

MR. EDITOR:—In looking over the *N. E. Farmer* to-day I noticed a communication from "W. D. Sear," describing the case of his colt, which I understand to be what is generally denominated staggers, which arises from congestion of the brain and lungs, with loss of tone in the digestive organs and very unequal circulation of blood.

I had a work-horse badly affected this spring, and within the last eight years have seen perhaps a dozen in all stages of the disease. I have directed to keep the animal warm and dry, to rub the limbs twice a day with common spirit and cayenne pepper, and gave them a quarter of a pound of a deobstruent powder, to be given one teaspoonful in bran or oats wet, three times a day, or if the horse was down and would not eat, put the powder in a junk bottle of warm water and pour it down, saying, if it cures your horse, give me a dollar, and I have always got my dollar.

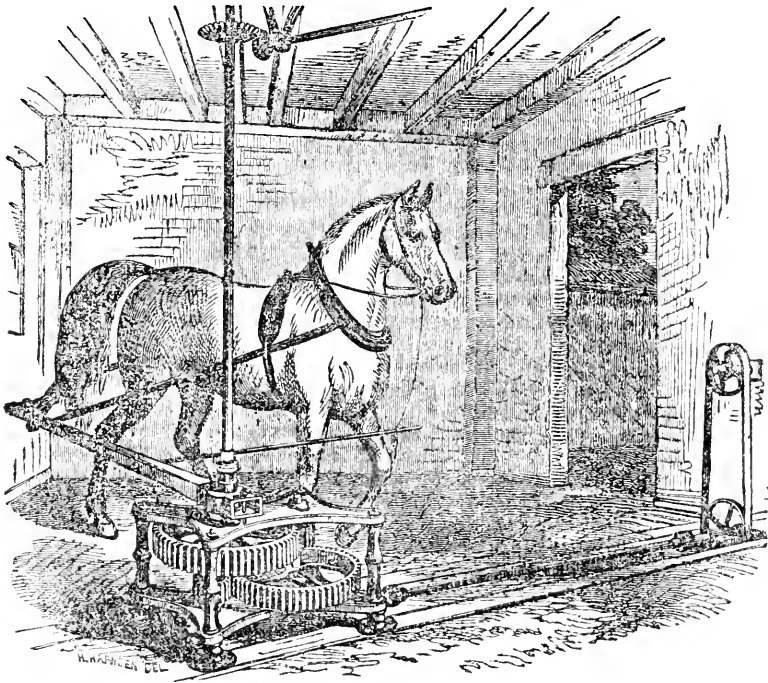
LAWSON LONG, M. D.

P. S.—A moderate bleeding from the nose is proper.

Holyoke, Mass., June, 1859.

RINGING THE GRAPE VINE FOR FRUIT.

The practice of ringing, or cutting off the bark of the branches of trees bearing fruit, for the purpose of enlarging and improving the quality of the fruit, is beginning to be better understood and more practised. At Bordeaux, in France, there was recently exhibited portions of a vine of the Chasselas variety, which had bunches of very unequal size and quality. The bearing shoots which had been left to themselves, had only bunches of grapes in the common condition, while the contiguous ringed shoots each bore a superb bunch of magnificent grapes, each twice as large as the grapes borne by the same piece of wood that had not been ringed. This was the case in every instance where one shoot had been ringed and the other had not. In the opinion of the exhibitor, the advantages of ringing, are a fortnight's earliness, finer berries, and better quality. The practice of ringing, consists in removing a ring of bark something less than half an inch wide, just below the insertion of the bunch to be experimented upon. The only difficulty to be encountered is the danger of cutting too deep. The time for ringing, is when the vine is about to flower. The shoots selected for this operation are those bearing ones which should be pruned off next season, as the ringing of course destroys the branch with the maturity of the fruit.—*Michigan Farmer.*



FIELD'S HORSE-POWER MACHINE.

For the New England Farmer.

FIELD'S HORSE-POWER MACHINE.

MR. EDITOR:—Knowing your deep interest in everything pertaining to the farmer, and especially in improvements which tend directly to lessen the labor of farming, I send for publication in your valuable periodical a few items in regard to a horse-power machine which is manufactured by Mr. William Field of this city. This machine is peculiarly adapted for doing the following kinds of work—threshing, shelling corn, sawing wood, grinding, pumping water, &c.

It might be useful also, in materially lessening the labor which usually falls to the lot of females on large farms. With the aid of a rotary washing machine a day's washing could be accomplished in an hour; and by a very simple and cheap arrangement the same power might be made to do the churning.

These machines are durable and compact, simple in their construction, and being made entirely of iron and steel, are easily kept in order. They can be operated by any number of horses, from one to eight, according to their capacity; size adapted to one or two horses, weight about eight hundred pounds; measures a little more than two by three feet square, and costs one hundred dollars, including either the horizontal or perpendicular connecting shaft and gear. The upright power is preferable when it is to be used

in a building where there are timbers overhead to which the shafting can be secured. For outdoor work the horizontal power is required. A space of twenty feet in diameter is required for the sweep of the levers and a travelling space for the horse. A shed divided into several apartments to accommodate the various kinds of work, and a horizontal shaft geared into the perpendicular shaft, (as shown in the cut above,) extending through the building, and connected by pulleys and belting with the machinery in each room would be a convenient arrangement.

Nearly every farmer cultivating twenty-five or fifty acres would find the horse-power a profitable investment, as he would be enabled by the above arrangement to accomplish in a single day the work of six days. This would enable the farmer to get his produce to market much sooner, in better order, and cheaper than formerly.

These last considerations have induced me to forward the above article. Yours,
Providence, June 25, 1859. B. D. BAILEY.

TO CORRESPONDENTS.—Thanks for numerous articles from correspondents. If some of them are delayed a little, it may be because others are upon subjects a little more applicable to the season. But most that are received will be forthcoming in good time.

For the New England Farmer.

POTATO ROT.

MR. EDITOR:—I have read with some interest the communication of "S. H. P.," in your paper of May 14th. The subject to which he refers, is still one of absorbing interest to agriculturists; and the various agricultural journals throughout this continent are discussing the question, so long an open one, of the cause, and for the remedy of this wide spread malady. In answering "S. H. P.," I believe I can place before your readers some facts, which will throw new light upon this subject. He says he never has seen "any statement of the symptoms" of the potato blight and rot. The "symptoms" that blight and disease will appear in the potato crop, are revealed first by the indications, and the fact that the eggs of the aphid are found in perforations in the epidermis of the potato, and in the eye socket and bud-part of the sprouts, at the time the potatoes are dug, and, as are easily seen, before the tubers are planted. He says, "The disease commences its ravages the last half of August, or from 1st to 10th of September." The causes of this disease, may be traced to the attack of insects. They begin their destruction of the vines, at the vital neck joint of the stalk, nearest to the seed tuber, under ground, and at such time, earlier or later, as influenced by the warmth of solar, or artificial heat, to sprout the tubers. This elementary action, animates the insect's eggs, when a living, active, voracious enemy commences sucking the sap, extracting the vitality and nourishment, which, if retained by the vines, (as was the case thirty or forty years ago,) would cause a continued growth of the plant, long beyond the "last of August, or 10th of September." This shows that the "mischief is not done very suddenly." A slow poison spreads from the point where these insects make their attack, and that is the remote cause of sudden decay, by cutting off the nourishment.

The insects, in their larva or grub age, (in their secluded position under ground,) communicate the "poison to the juice of the top," which poison is admitted by "S. H. P." He "theorises" for "poison." I point out the enemy, and tell where to find him while communicating the "poison." Let me here ask, if this fact of insect ravages is not far more reasonable to believe as the cause of the "poison," than to theorize about the "temperature at 70° to 80°," or southerly or south-west winds blowing briskly, or more or less rain, or heavy mist, or fog." Is it possible that, this "wind blowing briskly" can be seen on the potato or plant, so as to be recognized, definitely, as a "symptom" of disease?

What have these various influences which have always existed, to do *now* in causing the potato blight, that they did not exercise forty years ago? Why does this "atmospheric influence or epidemic," act so destructively upon the potato now, and leave the corn, beans, tomatoes and other vegetables in perfect health and vigorous growth, the same as forty years ago? You, and all must admit, that something acts upon this plant now, that did not seriously affect it previous to 1813. "S. H. P." asserts that, "if this poison in the top is correct, it upsets the bug

theory." I deny that there is any such thing as "theory" touching insect depredation, and the influence of insects, causing this malady. The ocular demonstration of their ravages at the roots dispels all "theory." Ocular facts set aside every idea of "theory."

The subject thus known and settled by facts, becomes definite, real, unanswerable. Therefore, no "theory" can be connected with the question. Neither speculation or argument can rebut facts. Ocular facts show that, the disease in the stalk commences at, and spreads from the point at the root where the larva aphid makes the attack; and no brown rust, or poison appearance, can be found on the stalk, or at the roots, except on vines where these insects are found subsisting.

By dissecting such stalks, at the more mature stage of their growth, commencing at the end next to the old parent tuber, a brown, rusty appearance is found, and a withered appearance of that end of the vine. From this point, the brown rust can be traced, with the natural vision, into the capillaries of the stalks, and thence the poison is re-transmitted through the stem to the growing tubers, and is imbibed in the latter, in proportion to the virulence of the attack. It mingles with the healthy, vital, life-sustaining element of the plant. Its progress and the result may be compared to a reptile's poison flowing from the spot where the poison fang is placed, through the veins to the vitals of the unfortunate object attacked. The blight in the plant follows the insect's attack. The vines above the ground and tubers at their roots sympathetically show the influence; the principle being the same as death to a human being from the poison fang of the reptile. The insects deposit their eggs in the epidermis, the sprout, or bud-part, while the tuber is very young and growing, and are firmly imbedded in the trunk or embryo of the vine for next year. In this nidus, they are hibernated.

When the tuber is planted, as before described, the insects start into life, and by the instinct of the parent, placed where surrounded by juice, or sap, they pump or draw it from the vine. Thus, while subsisting in a suctorial manner on their natural element, they poison and deteriorate the plant. The secret source of this malady is found here—these secluded enemies inherently transmit this world-wide disease from one generation of tubers to those of the succeeding year's growth. Microscopic research unfolds the mysterious works of the Great Creator. By thus viewing, with microscopic power, the minute particles of dust, (as seen by the natural vision,) we learn facts revealing His power, and showing our own superficial knowledge. Year after year, scientific men and agricultural laborers, have tasked their utmost talent and powers to little purpose in revealing the cause of this wide-spread malady. But more recently, the microscope has revealed the botanical condition of the tuber, showing clearly the entomological connection, and the cause, and thus pointing out the fountain from which this malady springs. The array of insects at the roots of the plants is an ocular demonstration, that no theorizing or arguments can repel. It is no "bug theory." There is a real aphid sucking the vitals of the plant. Their eggs and the definite embryo have been searched out, and made visible with the microscope, as be-

fore described, in the very skin, sprout and bud-part of the tubers.

Who ever doubts this assurance, or attempts to repel the fact, may as well attempt, at noon-day, to disprove the existence of the sun. I "advance" this fact of identity with "confidence," that ocular proof will baffle the exertion of those who may declare it a fallacy, or attempt its "overthrow."

"S. H. P.," says, "The advocates of this theory will ask, why the atmosphere did not affect the crop previous to 1843." I have previously referred to this, and I want "S. H. P." to answer it himself. I reply to his "Yankee-fashioned" question, that, the insects are doubtless descendants from the garden of Eden.

Natural causes and fixed facts, arising from changing events, in connection with our philosophical judgment, will furnish abundant answers as to the phenomenon why "such bugs" are now found on the potato. By inherent transmission, year after year, from tuber to tuber, these insects, by their extraordinary powers of fecundity, have multiplied, and become legion. They are so minute, when first starting into motion, as not to be seen with the natural human vision, on the point of a cambric needle, therefore their eggs are little indeed. A microscopic demonstration which I made on the 24th of April last, with six achromatics and other glasses united, revealed in a cavity in the skin of the potato—space, size of the head of a shingle nail—a spawn or roe appearance, and I counted distinctly more than four hundred eggs in this little cavity. This, in some degree, answers "S. H. P.," that "every effect must have its adequate cause," and "can so small a thing produce such effects as to cause thousands of bushels of potatoes to rot?" I reply, emphatically, that, these myriads upon myriads of insects, in their larva age, as found upon the roots of potatoes under ground, are capable of doing all this mischief. Week after week, they are sucking, poisoning and cutting off the sap, thus changing, gradually, the natural health of the sustaining element and life of the plant.

Carry out the acknowledged principle and statement of "S. H. P." which is a fact, that, from my own observations and experiments, I can corroborate, which was fully admitted by the Prussian government in 1854, after their three years' experiments,) that, "this poison in the top (or vine) descends to the tubers," and I show the cause that "produces this disease and decay." "S. H. P." speaks of animalcule. His allusion to that part of zoology has no connection whatever with this "bug," the aphid. The former, in its zoological order belongs to infusoria; the latter to entomology; and they are as widely different from each other as fish and fowl. One, as he says, "floats in the water;" the other inhabits the earth, and I know positively, feast in their larva age on the fresh sap of the roots of the potatoes and other plants, and in their pupa and imago ages move on their wings in the air. Animalculæ cannot be found upon, or in the potato. Atmospheric influence is not a predisposing or definite cause of this malady. The ocular demonstrations revealed by microscopic researches, clearly settles the question, that, myriads of entomological insects, by their ravages,

and voracious appetites, in their larva age under ground, are the secret, and heretofore hidden, predisposing or definite cause of the potato blight and rot. This fact cannot be repelled.

June 30, 1859.

THE FARMER BOY.

HIGH FARMING VS. INSECTS.

Speaking of the insects infesting the wheat crop in this and the old country, the *Mark Lane Express* thinks that the production of insects is greatly promoted by the defective system of agriculture in this country, remarking that "when the average produce of wheat in England was only two and a half quarters per acre, the ravages of insects were far more general and destructive than they are now that the average has risen to four quarters and a half. High farming is as destructive to vermin as to weeds, and it is rarely that the devastation committed on highly-cultivated land is very serious."

REMARKS.—We think other causes must be looked for, for the increase of insects, rather than the "defective system of agriculture." Increase follows supply in the insect world, as well as the vegetable. Feed the land well and it will produce abundant crops; so with insects. High farming produces an abundance of succulent and tender plants admirably adapted to insect wants, such as the leaves of beets, turnips, onions, cabbage, celery, tomato, parsnips, roses, egg-plant, &c. The leaves of our budded and grafted apple trees are far more tender and sweeter than those of apple trees in a natural condition, and probably more congenial to the tastes and habits of our predatory neighbors.

We are inclined to the opinion that on sterile tracts of land, one's squashes, cucumbers and melons would be much safer from the depredations of insects, than those in the midst of a highly-cultivated district. We kindly supply insects with the food they need, in the variety and richness of the plants we cultivate, so that they have a good time, and have little else to do but to multiply and replenish the earth with their kind.

Having brought the plants to a state of great perfection, it is the part of wisdom to devise the means of keeping off their invaders, so that a fair share shall reward the labor of the cultivator. This affords us an opportunity for the exercise of our patience and ingenuity, and as a general thing, is a blessing rather than a curse.

A TRAP FOR CATCHING SHEEP-KILLING DOGS.—Make a pen of fence rails, beginning with four, so as to have it square, and as you build it, draw in each rail as you would the sticks of a partridge trap, until your pen is of sufficient height, say five feet. In this way you will construct a pen that, when finished, will permit a dog to enter at the top at pleasure, but out of which he will find it difficult to escape, should he have the agility

of an antelope. All that you have to do to catch the dog that has killed your sheep, is to construct the trap, where a dead sheep is left, as directed, as soon as possible after an attack has been made on your flock, put a part or the whole of a sheep that has been killed, in it, and remove the balance to some other field. In a majority of cases, the rogue and murderer will return the succeeding night, or perhaps the next, and you will have the gratification next morning of finding him securely imprisoned.—*Southern Planter.*

For the New England Farmer.

CAUSE OF LOSS OF APPLE TREES.

DEAR SIR:—Will you allow me to say a word in answer to an article in your paper of the 21st of May, written by C. A. Hewins, West Roxbury? Mr. Hewins and yourself come to the conclusion that the underdraining of the land saved the apple trees. I believe the underdraining, if it proves anything, proves that the trees made a more vigorous growth where the land was not underdrained.

The occasion of the injury to the trees was, the land being too rich and the trees growing too fast. The fall of 1830 I suppose to be the warmest that ever was known in this country. Pumpkins and other vines were growing all October and into November, and we had no frost to stop the growth of anything until Wednesday or Thursday after Thanksgiving, and then winter set in, in earnest. I thought nothing of it until March, 1831.

John Lowd, who was then living, and engaged in cultivating trees, and a distinguished horticulturist, living in Roxbury, wrote an article in the *New England Farmer*, saying we shall have no more fruit for ten years to come. On reading the article I went into the nursery where I had peach, cherry and apple trees, and I believed, on examination, that it was true.

The result was, that trees that were growing fast were killed, thousands and thousands of them, while those that were making but little growth were not injured.

I was then in the nursery business. I took up two hundred handsome Baldwin apple trees, as fine trees as you will see, that were dead. I had sold to Joshua Seaver, of West Roxbury, I think, a lot of nice Baldwin trees, which he nursed finely, and every one was killed. It will, therefore, be seen that there is danger of making trees grow too fast. In the case before us the frost that came on the 10th of November did the injury.

The question then is, is there any remedy? In 1831 the injury was not half as serious as I expected at first. I went to many trees and found the bark started from the tree, but where it did not crack open to let in the air, the sap went up; but where the bark cracked open and let in the air, it was hindered, and did not get up. Trees have been dying from that day to this, as I now see trees almost dead that were injured that winter. I believe that had Mr. Hewins, if he saw it in January, taken a piece of old oil cloth and covered the crack, and wound it with rope yarn, so that the air would have been kept out, the trees would have lived. I draw this conclusion from what I saw in 1831.

Again, I have saved trees injured by the mice, by covering early with clay mortar, made soft so as to fit close to the tree, and then cover with earth to prevent the air from drying the tree. There are within forty rods of me three or four large trees capable of bearing four or five barrels each, that are spoiled and partly dead, and the remainder will die, by being driven too fast.

DANIEL LELAND.

East Holliston, June 14, 1859.

REMARKS.—Apple trees, as well as men, are quite often ruined by feeding them too fast. They become purient, gouty, burst, and die. We have often cautioned our readers against over-feeding fruit trees. The safe way with apple orchards is to manure highly, cultivate thoroughly, and take off a crop from the land every year, during the first fifteen years' growth of the trees. Such trees will not have the gout. We have seen an entire orchard of the finest trees, entirely ruined by high manuring and cultivation without cropping the land.

For the New England Farmer.

MOWING MACHINES.

MR. EDITOR:—I have noticed an article copied from the *Ploughman*, on farm work for June, in which the venerable editor of that paper says that it is but one-third of the labor of haying to cut the grass, and if the machine saves half the labor of cutting, it does not save but one-sixth of the whole labor. I think he has never had a good machine in practical operation on his own farm, or he would have mentioned another important item in hay-making, which is saved by the machine; that is, spreading the swaths and turning the grass once.

From my experience with a machine, I think that grass, where there are two tons to the acre, cut with a machine after the dew is partly off, will be as dry at two o'clock, P. M., as that which was cut with the scythe early in the morning, and the swaths spread at ten o'clock, and turned again at noon; here is a saving of labor just at the time when it is of the most value in the whole year.

He speaks of those who are bred on a farm, as delighting in mowing. I know there is something pleasing and exciting on a dewy morn in swinging the well-ground scythe through the well-grown timothy, and see the pollen rise at each stroke, and scatter its fragrance in all direction; but with me, the poetry is all gone, long before the field is mowed. Then comes the dull prose, and the sweating and sighing for some easier mode, and tired nature yields to the hot sun, and I like to hang my scythe where the farmer of Marshfield hung his, when in his boyhood his father told him to go and hang it to suit himself!

But the inquiry arises, can the small farmer afford to buy a machine? If to secure his hay, and do his other work upon the farm, he annually hires fifteen days' work extra in July, which will cost him in this county twenty-five dollars, by using the machine he can do his haying as well,

and his other work better than he would do with fifteen days' extra labor, is it not better for him to pay the interest of what the machine costs, and work his horse, than to pay out so much money annually for extra labor in haying time, which, my experience has taught me, is the poorest of all help if told to do anything but work at haying? He says that it is but one-third of the labor to cut the hay; this may be true, but on many farms it is difficult to get this third done; some have not the strength, and more have not skill enough to do it advantageously. He says, "good mowers will cut down two acres per day, and be pleased with the job." It is easy to tell what we can do at mowing, and what we have done when we were young, and what a man ought to do, but the most practical question is, how much do hired men mow, per day? I think the farmers in this county pay for more days' work at mowing than they mow acres.

Danvers, June 15, 1859. WM. R. PUTNAM.

REMARKS.—It is our opinion, that taking low land and high, thick grass and thin, the average ground gone over by the farmers of Essex county, or any other county in the State, does not exceed one acre per day. We never have, and never expect to hire men to mow, who will make a greater average than this, taking all kinds of mowing into account.

For the New England Farmer.

TRANSPLANTING WHITE PINES AND HEMLOCKS.

MR. EDITOR:—I have received letters from many gentlemen in your vicinity requesting me to inform them, or publish in your paper, my method of transplanting white pines, hemlock and other evergreen trees. After having tried and failed to a great extent in all other ways, I determined to try winter transplanting. I proceed as follows, viz:—Late in the fall of the year I drive a stake where I wish the tree to stand, make a circle around it five feet in diameter, take off the sod and lay it out of the way and cover the hole well over with refuse hay or straw to prevent freezing; it might perhaps be better to leave the sod on, as the grass affords much protection against frost. I then select such a tree as I wish to transplant, preferring those about 10 or 12 feet high, limbing close to the ground and thick in foliage, make a circle about it four feet in diameter, dig a trench outside of it the width of the blade of the spade, and about a foot deep, cutting down square and smoothly, fill the trench with leaves, hay or straw, leave until the ground is frozen five or six inches deep, (if any snow falls clear it off,) then clear out the trench. Apply a stout lever, and raise the ball of earth sufficiently to run under a couple of short planks, one end of which rest on a stone drag; apply the lever on the opposite side to free the ball there, pass a chain around it, and with the team slide it carefully on the drag, and unload in the same way. Be careful that no spaces are left under the tree; make a good pit and fill in the earth around the edges. If the situation is very much exposed, three or four large stones may be placed

about the tree, or what is still better, increase the size of the ball, and not only will the same object be effected, but the tree will suffer less by the removal.

In all operations of this kind it is important that they should be carefully and well done, and if possible, the owner should give his personal attention to the subject; having done so, I venture to assert that not one tree in fifty will fail to grow the next year.

The size of the hemlock, in my communication published in your paper of June 11th, is 9½ inches in diameter instead of circumference, and I find by measurement, that it is 30½ feet high; the frozen ball in this instance was 9 feet across.

SAMUEL RAYMOND.

North Andover, Mass., June 20, 1859.

For the New England Farmer.

APPLE ORCHARDS.

Thanks to S. P. Baker for speaking out on this subject, in the *Farmer* of the 11th inst. I have no doubt but his experience and observation will substantiate all he says. At any rate common sense, (which has become quite too uncommon a quality in our days,) is on his side. Common observation, also, will sustain him in the main declaration, that the seeds should be planted where the trees are to remain, to make healthy, long-lived trees. Transplanting and root pruning may help forward an early productiveness and shorten the life of the tree, which, in order to have durability, provides itself with just so many roots as it needs for its special benefit.

Many of the best and healthiest specimens of modern apple trees may be found in those that have sprung up from accidental planting by some wall, or in the corners of fences by the wayside. They sprung up by chance, and have grown by neglect, at least by letting alone. Their tap root has never been taken off. Their side roots have never been shortened. There they stand, firm as young oaks; if disease attacks them they have a constitution to baffle with it. The borer seldom takes quarters in them; worms may weave their web there, but these are easily destroyed. In old fields we see the same facts illustrated. How many thousand trees there may be in Massachusetts, scattered in a higglety pigglety way over meadows, we know not, but there are probably many more than there are in young orchards. We sometimes see them slow growing, shrubby things, and well they may be, for they stand in places where ordinary crops give labor but a poor remuneration—in exhausted, shallow soils, where they cannot grow, though they live on, and show a good disposition to do so. They are the offspring of neglect. Cattle browse there, still they live. The borer sometimes attacks them, but very seldom, for if it preyed upon them as it does on cultivated trees, thousands of them would long ago have been clean gone forever. I have looked upon the teaching of nature and have received instruction, and the deductions I make correspond with the suggestions of the man who has rounded his fourscore years. If we would have healthy trees, and leave them for posterity, we must plant the seed where the tree is to remain.

To raise trees from seed the ground should be well prepared, the soil made deep and well pulverized, thoroughly drained, and put and kept in as good condition as though corn, wheat or any other paying crop was put upon it. The seeds should then be selected from fair fruit, for I am confident that for grafting purposes a good, healthy stock is desirable. I know not why diseases and other objectionable qualities may not be hereditary in trees as well as animals. Select, then, the plumpest seeds from the best fruit for planting, and if half a dozen are planted where you wish a tree, no harm if they all start. Let them grow one season, and then select the most promising for the future tree, (removing all others,) and bud or graft it with the desired variety as early as may be. I have no doubt but an orchard may be raised in this way as cheap and of a great deal better, longer lived trees, than by any other course. It may require more care for a year or two than is necessary for trees started in the nursery, but in the end I firmly believe it will be better.

A tree, like an animal, is an organic being, and a perfect tree, like a perfect animal, has all its parts furnished by a provision of nature. Take away any of those parts, and you deprive nature of its perfection. Who would think of giving a drawing of a horse divested of its tail, mane or ears, or of a bird with its wings clipped, or of a man with either hand divested of a finger, or minus an eye? In such a case, the drawing would represent the object claimed, in perfection, but in a mutilated form, divested of a part essential to its perfection as the object represented, and necessary to its growth and healthfulness. We have no members we would willingly dispense with, none but what contribute to our success. They are all provided by the God of Nature for useful purposes. So with a tree; it has its parts and proportions adapted to its circumstances.

Of the thousands of apple trees that have been transplanted for the last dozen years, the number now living is discouragingly small, and those actually promising to make good and durable trees is still less. In most instances, these failures have been attributed to want of care in the cultivators, while the unfortunate purchasers have laid the blame to the localities from which their trees were originated. In some instances, probably, the failures have been justly given to right causes. But there are, no doubt, other and more tangible reasons operating collaterally with these. I have heard of a practice among some nursery men of dividing roots to an indefinite extent proportioned by the quantity of them, and grafting and making a tree of each of the parts. Of course, these would make but part of a tree and a sickly, short-lived part at that, for a piece of a root can never make a full root to sustain and nourish the plant. Another cause has probably been that very many trees have been sold by travelling agents, whose trees, to say nothing of their quality when standing in the nursery, are often, judging from the scantiness of root, dug with great haste and little care, and hurried off to their destination. If they fail, where is the responsibility? Not in the nurseryman. He fills the orders sent in by Mr. A. for so many trees. He has them of every quality, and like every one else, is anxious to dispose of his wares. There

are some poor trees, which he is not willing to lose—they must go with the rest. He does not know who will have them, so he is not responsible. Mr. A. has ransacked the country to sell trees, and agrees to furnish Mr. B., Mr. C., and so on, so many each. Each purchaser must sign the contract, but the vender of wares is left on his word to bring such a number of trees, the very best, of course. What arrangement he makes with the nurseryman I know not, but I have seen more than one sorry looking, almost rootless bundle of trees, brought on, and the purchaser must take them. It is not strange that they die.

When trees are purchased, it is better for the buyer to deal direct with the nurseryman. It will save the percentage that the middle man works for, and as we may well suppose, secure better trees; for what nurseryman will fill an order for reliable trees with an inferior article? No one who has any regard for reputation. I have sent orders to nurserymen direct, with cash accompanying, three hundred miles, and were as well accommodated as though I had been on the ground and made my selection and taken up the trees myself. I should not hesitate to do the same again, but I should hesitate, twice at least, before I purchased of a travelling vender, unless he gave me a warrantee, signed and sealed, that the tree should stand on the full roots of a seedling stock, carefully taken up and delivered in a good condition. WILLIAM BACON.

Richmond, Mass., June 20, 1859.

For the New England Farmer.

WHITE SPECKS IN BUTTER.

MR. EDITOR:—Your correspondent "T.," asks, "What makes the white specks in butter?" I answer, they are occasioned by the milk being "set" where there is a current of air, as from an open window, or by the milk-room being too warm, so that the surface of the cream in the pans before skimming becomes dry, and in the process of churning does not mingle with the rest of the cream, but remains in the butter and butter-milk in the form of specks.

In your "Remarks" appended to "T.'s" inquiry, you say that the white streaks in butter may be occasioned by some of the cream being more recently taken off, and not come so readily as that does that has been taken off longer. My theory is, that they are caused by the salt being imperfectly worked in at the time of salting, the white streaks are not so salt as the rest of the butter.

Since writing the above, I have read the communication of Henry Holmes. He says, "if you scrape what cream there is on the lid of the churn into the cream-pot, you will not be troubled with those white specks." The cream on the lid, or in the corners of the churn has nothing to do with the specks or streaks in butter, and had Mr. Holmes spent the last five years in person, churning, working, and putting down butter for market, or so much of the time as would have been requisite to taking care of a good dairy, instead of "manufacturing and selling churns," he would have learned that fact. H. BLAKE.

Hardwick, Nt., June, 1859.

For the New England Farmer.

TRIAL OF MOWING MACHINES.

MR. EDITOR:—*Dear Sir*,—I notice in your issue of June 25 an article on mowing machines, signed "Truth and Justice," in which the writer labors to convince the public that Ketchum's improved mower is the best machine in the market, and that it proved itself such at the trial of mowers in Boylston some ten days since. There are several statements made in that article which are erroneous. The first which I will notice, is, that "the work of the Manny mower lacked that evenness of cut which characterized the work of the Ketchum;" the opposite of this was evident to most who examined the work of the different machines impartially, especially in that of the Connecticut machine, whose swath, in many parts, was a complete wave. It was claimed for the Ketchum that it would cut closer than the Manny, that it would not clog, would cut lodged grass better, would start easier in heavy grass, and had less side draft than the Manny machine. These, I think, were refuted by the working of the Manny machine. "Truth and Justice" claims as a reason for the fatigued appearance of the horse which drew the Ketchum, (which, by the way, is from 200 to 300 lbs. heavier, and I should say quite a number of years younger than the Manny horse.) that he had been worked all the forenoon at Worcester, then driven ten miles and put on the machine. Admit this—but was that the case on another occasion when the writer saw the same horse on the common in Worcester, drawing the same machine, and exhibiting even greater fatigue than on the occasion in question?

The operation of the two-horse machines was quite as opposite in its results to what "Truth and Justice" claims, as was the case with the one-horse mowers. To the Ketchum machine, with a six-foot bar, were attached two powerful horses driven by one of the best operators of mowers in the State, and with this strong team it was with difficulty that the horses could draw the machine, and at the same time be kept clear of the standing grass, so great was the direct and side draft, the pole of the machine swaying against the off horse nearly the whole distance cut; this fact, perhaps, was not noticed by your disinterested (?) correspondent, "Truth and Justice," but it was noticed and spoken of, not only by the writer, but by many others in his vicinity, among them one or two of the most experienced operators of mowing machines in the country.

The fact that both Manny machines exhibited were sold on the ground, and that five or six have been sold since to parties who were present at this trial, proves that all the farmers there assembled did not form the same opinion as to the merits of the two machines, which "Truth and Justice" asserts that they did.

Since the above trial there have been trials at Georgetown, Lowell and Sutton, in all of which the Manny has proved itself to be the most reliable and practicable machine. At Sutton a trial came off on Friday last, although the weather was such that according to previous arrangement it should not have taken place. The machine was put into wet, heavy grass, and the Ketchum proved an entire failure, clogging and

slipping over the grass, cutting it anywhere but close to the ground. The Manny did its work well, cutting the wet grass closely and evenly. We are straining every nerve to supply our customers as fast as their orders are sent in, and at this time our supply of one-horse machines is exhausted, except what we are able to turn out from day to day.

With these statements of the truth of the matter I leave the public to judge which is the best machine, and how much consistency there is in your correspondent subscribing himself "Truth and Justice." ALZIRUS BROWN.

Worcester, June 27, 1859.

REMARKS.—We were somewhat reluctant to publish the article in our last signed "Truth and Justice," lest it might open a controversy not in accordance with the design of our paper. Knowing the writer however, not only to be what is called a fair man, but a man of the strictest integrity, a man of sound judgment, and of acknowledged reputation wherever known, and listening to his argument that the people ought to learn the result of such a trial, we admitted the article.

For the New England Farmer

KICKING COWS AND ORCHARDS.

MR. EDITOR:—In your issue of last week I notice two methods recommended to prevent a cow from kicking. Of course, it is not Mr. Beecher's bridle, "All Saint." "A Belmont Farmer" says: "Take a rope long enough to go round the cow, commencing at her forward legs, and tie it over her shoulders. Now take a stick and twist the rope tolerably tight, which will prevent her from using her legs." Query. Is the rope to surround the cow longitudinally or latitudinally? If the former, we don't see how it can be tied over her shoulders. If the latter, i. e., as a girl is put on a horse, we don't see how it can prevent the use of her hind legs.

We once had an awfully bad kicking cow. She kicked so badly that it really made us mad at her; and we foolishly, I allow, undertook to lick it out of her; but it was of no use; the more we licked, the more she kicked. O, we had a terrible time of it, at least the cow did. You can lick or choke a bad habit out of a horse, but out of a cow never; they don't know enough. But to the method to prevent kicking.

Take a rope, say a yard long, and with a single knot tie it in its centre, just above the hoof of the rear forward foot. Pull upon the ends of the rope a little, and she will raise her foot. Hold the foot up and tie the ends of the rope around the leg above the knee, which keeps the foot up, and she has to stand on three feet. If she flounders a little at first, never mind it; she will come all right soon. After doing this a few times, she will raise her foot as easily as a horse to be shod, and you can have simply a noose to slip over the knee as she doubles it up, and effectually prevent all kicking.

I have a few acres of apple orchard now, from seven to ten years old, and for a few years, trimmed it in the spring; as some writers on

trimming advise to trim at any season when you see a limb that needs cutting off. By so doing I found my trees to bleed badly, for two or three years, and to turn the bark black. I now trim not till after the trees get well leaved out; say the last of June or later, and they do not bleed. Is that right?
Crt.

Lowell, Mass., June 20, 1859.

REMARKS.—Certainly. If you must trim, do it when it will cause the least injury; and that is when the sap has passed up and is elaborated into the substance that increases the size of the tree. From the middle of June to the middle of July is a good time. It may also be safely done when the leaves have fallen in autumn, and the tree is in a comparative state of rest. Always cover the wounds with shellac dissolved in alcohol.

EXTRACTS AND REPLIES.

SEASON AND CROPS IN WESTERN MASSACHUSETTS.

Our season has some beautiful and some discouraging features. I never knew so severe a winter on fruit trees as the last—not from excessive low temperature, but severe and rapid changes. How can trees survive, when, as in January, the mercury falls 50° in twenty-four hours? Peaches may be considered used up; quinces have suffered badly; the last year's growth of the apple was in many instances killed, and some trees that just survived are very late in showing verdure, I have seen apple blossoms on such trees June 15. The pear was decidedly the hardiest tree, at any rate it suffered least.

We have had three frosts in June, neither of which, from my locality, has injured me, while a mile distant corn is cut down, potato tops nipped, pumpions and beans killed. We have frequent and heavy rains, giving grass and grains a fine appearance.
W. BACON.

Richmond, Mass., June, 1859.

THE SEASON IN NEW HAMPSHIRE.

The first half of the present month has been colder, here, according to the testimony of elderly residents, than the corresponding season of any previous year since 1816. From the first to the twelfth day of the month there were five frosts, doing great damage to corn and other tender field crops and to gardens. Much of the corn in low grounds is entirely killed. Farmers, in some instances, have planted again with an early kind; and some have plowed up their fields. In some particular localities and in some fields the corn has escaped, when in other fields but a few rods distant, and of a less northern exposure, it has been entirely destroyed. My attention was called to-day to a field which had been planted with corn, all at the same time, in part of which the corn had been almost entirely destroyed, while that in the other part appeared to have been but little affected. The field was level, and the line of division between the part that was destroyed and that which was spared was most distinctly marked and straight for several rods. What is

further remarkable in this case, is, that the part of the field in which the corn escaped was fully exposed on the north side, while the other part was sheltered by buildings. I should like to know how these facts can be accounted for.

R. M. FULLER.

Lempster, N. H., June 16, 1859.

THE CURCULIO.

Experimental knowledge is the most reliable knowledge in the world. Mr. WESTON, of Reading, told me that he had succeeded in ridding his orchard of the curculio by turning his swine into it in June, accompanied by his fowls. The swine ate all the diseased apples fallen from the trees, and the fowls acted as gleaners, following in the rear of the rooting pigs and devouring all the worms and other small animals which escaped the hogs in their rooting operations. He kept his hogs and fowls in his orchard till September, or till apples were ripe. He had an idea that hogs alone were not sufficient to spy out all the worms, and therefore their extermination required the assistance of the fowls.

SILAS BROWN.

North Wilmington, June, 1859.

WORMS IN HORSES.

I wish to inquire of you, through your paper, what the symptoms are of worms in horses? Also, a remedy for the same.
H. D.

Lisbon, N. H., June 14, 1859.

REMARKS.—Symptoms of worms are a tight skin and rough coat; the horse will sometimes stand with a sort of vacant look, and at others seek to rub the hind parts against the boards of the stall. Other symptoms are an irritation about the fundament, and small white lines of mucus around the anus. You will not be likely to mistake this symptom. An easy, and what we have always found a certain remedy, is to take clean, fine wood ashes, mix a gill of it with wet oats or cut feed, and give the horse every other day till these symptoms disappear.

CROPS AND WEATHER IN VERMONT.

We have had pretty sharp frosts this month, of the consequences you can judge—have had cool weather for nearly two months; our grass was very much injured by the severe cold last winter; it has been dry until about two weeks ago, and now we are having a wet time. Crops are looking middling well. The greater part of our corn had not shot out of the ground when the frosts came. We have few sheep compared with what we had twenty-five years ago. I think the farmers, generally, mean to get 45 to 50 cts. for their wool. We have more old corn on hand than is usual at this season of the year.
W. F. GOODRICH.

Middlebury, Vt., June 18, 1859.

PRESERVING CANS.

Our correspondent at *West Henicker, N. H.*, who inquires about preserving cans, may find

plenty of tin ones at Haynes & Foss's, Blackstone Street, Boston. If he do not like tin, take any glass jars, put the fruit in hot, or exhaust the air in some other way, then tie over a thin piece of India rubber or rubber cloth. There are various kinds of cans in the market.

WEATHER IN VERMONT.

The prospects of the farmers here are gloomy enough. The season, thus far, has been very dry and cold, with frequent frosts. Last Friday quite rainy, and to-day also. Much corn has been killed with frosts, and worms are injuring corn and other grains.

M. S.

Cambridge, Vt., June 13, 1859.

COW LEAKS HER MILK.

Can you, or any of the readers of the *Farmer*, tell what will stop a cow from leaking her milk? I have tried liquid cuticle, and a neighbor has tried white oak bark boiled down and alum, without stopping the leak.

E. H. W.

Charlotte, Vt., June, 1859.

CURE FOR GARGETY COWS.

I have found horse radish, cut and fed in potatoes the same as garget root, a good remedy for gargety cows.

E. P. CHASE.

Deerfield, N. H., June 18, 1859.

LETTERS FROM MAINE---No. 2.

In my last, I referred to the disastrous effects of the last winter upon young Baldwin trees, in Maine; and the facts stated seemed to me to prove that no reliance can be placed upon the success of the culture of the Baldwin, where there is a liability of the occasional sinking of the thermometer to the point of congelation of the mercury.

With us, whenever the mercury has approached within ten degrees of the point of congelation, almost all Baldwin trees which were grafted near the ground, or which were subjected to high culture, when grafted higher, have been entirely destroyed, or received irreparable injury.

Next to the Baldwin, the Tolman Sweeting suffers the most severely, and the Rhode Island Greening is unsafe with the thermometer thirty degrees below zero. The Spitzenburg is not safe in Maine. When severe cold may not kill the tree, it has an injurious effect upon the fruit. The New York Russet is nearly worthless with us. Too much dependence has been placed upon varieties of the apple which have proved valuable in the latitude of New York, while too little attention has been bestowed upon varieties originating in higher northern latitudes. Much has been said about the introduction of trees raised in New York nurseries into Maine, and it is now generally believed that trees from the South cannot be made to thrive in our latitude, but with me the variety has had more to do with the hardness of the tree than the location in which it was raised. While all investments in varieties of the Baldwin type brought from the Rochester nurseries have proved total loss, the Pomegris

brought from the same nurseries, seems to be proof against our coldest winters.

The Black Oxford, a native of Maine, a slow grower, a great bearer, and an excellent apple, received not the least injury from the winter, when the mercury freezes.

The past winter has proved fatal to the Black Heart Cherry when growing on its own root, but the heart cherries, when grafted on the wild or bird cherry stock, appear to be proof against the effects of frost.

Almost all the damson trees within the reach of my observation have been killed, and so have the Lombard plum trees, but the Imperial Gage proves hardy enough for our climate.

SANDY RIVER.

For the New England Farmer.

MOWING MACHINES.

Much disappointment was manifested at the late fair in Georgetown, at the imperfect exhibition of the power of these implements. I confess to have shared in this disappointment. Not that there was not a sufficiency of good machines on the ground, but at the combination of circumstances that tended to prevent their operating advantageously. First, there was no order in this movement, each one going into the field just when and where he pleased, and continuing more or less as he pleased, therefore affording no opportunity to compare the operations of the machines with each other. Second, the imperfect growth of the grass, it not being fit to cut. Third, the uncontrollable movements of the multitude through the grass in all directions. For these and other reasons, the committee acted wisely in not expressing any opinion of the implements presented. I was quite surprised not to find on the field our old favorite implement—the *Allen machine*. What has this done to be placed *hors du combat*? I had supposed the principles involved in the structure of all these machines, to be so simple and so common, that any one might use them as they pleased. This carrying *patent privileges* to an extreme, is not promotive of public good. Give us honest effort and sound common sense in all these movements. ESSEX.

For the New England Farmer.

ONION MAGGOT AND GUANO.

MR. EDITOR:—In reply to the inquiry of Mr. Emerson in your paper of June 25, "Has Mr. Proctor tried the guano, and did it fail him?" I answer, that I have not myself tried it; but my neighbors have tried it, viz., Messrs. Buxton, Wilson, Bushby, Bodge, Huntington, and others, all of them extensive cultivators; and each and all of them have assured me, since the publication by Mr. Emerson of his experience, that they have no confidence whatever in the curative qualities of guano. I have the same assurance from Mr. H. Ware, of Marblehead, who in the season of 1858 raised and sold *five thousand bushels* of onions; and who now has twelve acres planted with onions, from which he hopes to obtain *six hundred bushels* to the acre—provided their growth shall not be interrupted by the maggot or rust.

J. W. PROCTOR.

South Danvers, June 25, 1859.

For the New England Farmer.

HEAD OR HUB.

Every system which is self-sustaining is justly to be compared to a circle and a wheel. Such, if a system of farming, has its *hub*, or item of prime and indispensable importance. Men have their systems of farming which are successful, as systems of money-making; which ought not to be called self-sustaining, because the farmer's money is obtained by the exhaustion of the land. Such systems have a *head*—some leading and governing idea—but they have no *hub*.

He who makes himself rich by making the land poor, robs the next generation of the means of subsisting comfortably, by honorable industry, as farmers. Such a man is a great sinner against God who gave the earth, or soil, for a perpetual blessing to the cultivator; he heaps heavy burdens upon unborn generations; he is a scourge and curse upon the land, in his day, and leaves the blight of barrenness to those who may be born after he dies. His march through time is like that of the warrior. He makes money, and this is all his aim. Men give him the glory which they give a conqueror; because he has gotten to himself riches. But desolation fills his track.

God gave the soil to be fruitful, and to grow, more and more fruitful by continued culture, only enjoying its Sabbaths. Man must ever be dependent upon the fruitfulness of the soil for the means of a comfortable subsistence. Fishing may feed a few, hunting may abate some hunger, but the farm must feed the multitude.

How can the farm be made to produce more and more for home consumption, and at the same time more and more for foreign market? He who can strike that idea, in a true answer, will hit the hub of the wheel. He will know upon what part of his system everything else depends, and around which everything else revolves.

The man who only thinks to increase the contributions for market, without a proportional increase of consumption on the farm, will be found to swindle the soil.

Upon some farms a few cows will be the hub of the wheel in a self-sustaining and an improving system of farming. Cows produce calves; calves grow into cattle; cows produce milk; milk produces pork; milk produces butter; milk makes cheese. A prime article for the life and prosperity of man, is milk.

To a good, grass-growing farm, a cow is justly entitled to the crown as queen of the realm; she has proved, to many a man, the mother of money. Sometimes she has proved almost the mother of men; she contributes to the compost heap; she nourishes the calf that grows and contributes to the compost, also; she feeds the pig with her milk, while he grows at less cost, and adds by work and contribution to the compost heap. Thus does Mully make a threefold contribution to the compost heap; in herself, through her offspring, and through the thriving grunter in the pen. The size of the manure heap will mostly settle what is in future to happen on the farm, by way of corn-crops, clover-cuttings, handsome cattle, &c. She contributes a calf—the father of an ox or cow—too important a friend of the farm to be bailed to the butcher without hesitation. She contributes more for the growth of piggy than

could be gathered from a half-acre of poor corn. She gives a large portion of her value yearly in golden butter, or in nourishing cheese.

Now, it is a matter of some moment to the farmer, that the cows he keeps should be good ones. Such will cost no more care, no more keeping; and yet they will be worth more, and they will pay for more.

See, friendly farmer, if the hub of your wheel is sound. Your carriage will "go to smash," if it is not.

There is, as I believe, some just and proper system to be pursued on every peculiarity of soil, which shall at the same time prove a blessing to the soil and a source of profit to him who cultivates it. I do not believe that even in these material matters the governing law of a true system can be such that labor and life tend to destruction.

I have already spun this thread so long that I must cut it short at once.

Lee, N. H., 1859.

C.

For the New England Farmer.

AGRICULTURAL MARKET FAIRS.

BY WILSON FLAGG.

The agriculture of a State cannot be prosperous or productive in the highest degree, unless every district has an easy and ready access to a good market. It is the expected rule of one's prudence that urges him to raise more than he wants for his own consumption; and the hope of making his business profitable, stimulates him to acquire a knowledge of it, and to learn the best methods of rendering his lands productive. Good markets, therefore, exert more influence in the education of the farmer than is generally attributed to them. While their labor in the field teaches them experimentally how every process is to be performed, their observation at the market encourages them to increase their efforts, and to attempt new things. Let it be demonstrated to any young farmer of sober habits and intelligent mind, who occupies a farm which is badly situated for the sale of its produce, and who has neglected his business because he saw no chance of making it profitable; let it be made evident to him that in a new market lately opened, he could find a good sale for every thing his farm would produce, and he immediately becomes enterprising and industrious. Inspired with the hope of increasing his wealth, he feels a new interest in his occupation, and immediately sets his mind at work to learn all the valuable improvements in farming. He overleaps his prejudices in the ardor of his pursuit of fortune. He becomes more studious as well as more active, and takes a sudden start, like a healthy young tree, that has been transplanted from a dry and barren declivity to a deep soil and an open situation.

Whenever a body of farmers are unsupplied with good markets, as we observe in certain remote and isolated districts, they commonly unite their employment with some mechanical art; and under such circumstances the state of agriculture is low. The intelligent members of their community are better informed upon other subjects than upon agriculture, which offers them no opportunities of improving their condition. If the

construction of a rail-road through one of these remote districts suddenly creates a market for agricultural produce, or renders a distant market accessible, an immediate impulse is given to the agriculture of the place. The present inhabitants are stimulated to greater activity, and other individuals of superior skill and enterprise are induced to join them in the occupation of farming. Instances of agricultural improvement arising from this cause have been observed by all.

We will now suppose another example, in which the market was created, not by a change in the system of public travelling, not by what might be called an accident, but by a premeditated scheme, originating with the inhabitants of one of these isolated districts. The farmers of this section may be supposed capable of producing on their lands the value of half a million more than they now produce. Outside of it, the people of other occupations buy the products of distant parts, from which they can easily obtain them through the great thoroughfares. The farmers of the district above mentioned, having become aware of these facts, and led on by some capable individual, resolve to establish, outside of the district, a depot for all their productions, and they agree to send them to this place which is very accessible to the whole neighboring country, whose inhabitants are mostly non-agricultural. The consequence of such an arrangement, if the management of the business and the sales are conducted by an honest and capable body of agents, is an immediate change in the condition of the people. The inhabitants of the adjoining villages purchase many of their commodities at this depot, in preference to their former method of supplying their wants, because a near market, other things being equal, is always preferred to a distant one.

The farmers being urged, thereby, to raise more produce, are able to live in better style, to enjoy superior comforts, and gradually acquire additional wants. The manufacturers who buy their products find a ready sale for their own articles, for the children of the farmers who formerly went bare-footed now wear shoes; both men and women use better clothing, better household furniture and improved agricultural implements; they consume more luxuries, both in the parlor and the kitchen, at the table and the toilet. They become more liberal and ambitious, and both willing and able to support other occupations. Every branch of business receives a healthy and extraordinary impetus, by the voluntary establishment of this market. Yet this was the effect of a forced arrangement—of a combination of the inhabitants of a dull place, to resuscitate it, and to improve their circumstances by supplying a want, which was not supplied by the accidents of commerce. By means of it, they are brought into commercial intercourse with the rest of the world, and the intelligence of the farmers improves as rapidly as their prosperity.

The prosperity of agriculture must be dependent on the extent of the non-agricultural population that needs to be supplied with its products. But the farmers of a particular district, while surrounded by a large non-agricultural community, may still be unprosperous, if the wants of the latter are supplied from other sources. When, therefore, it is proposed to create new markets

for the farmer, one of two things must be accomplished. Either the non-agricultural population must be increased, or the present number must be induced to purchase of the farmers in their vicinity. The first is often done by the establishment of manufactories, and by opening new avenues of trade. The second object may be accomplished to a limited extent, by rendering the medium of communication between these two classes more easy and practicable, and by demonstrating to each the methods by which they could advantageously trade with one another. Each of these ends may be promoted by the establishment of markets and depots for agricultural products, and by making the farmers acquainted with the extent of their ability to compete with distant producers, who have formerly supplied the wants of the people. This knowledge they would soon obtain by observation and experience at the markets.

Markets may be regarded as of two sorts: first, those of a general nature to supply the miscellaneous wants of commerce; second, those established to accommodate the members of a particular branch of business. All great cities, towns and manufacturing villages afford markets of the first description. Markets of the second sort are commonly the result of agreement between the parties to be accommodated, like the trade sales among publishers and book-sellers. Such, also, are many of the agricultural fairs established in all parts of Europe, and which are attended by the farmers and peasantry, to save the trouble and expense of going to a general market to buy and sell. They are instituted chiefly for the benefit and accommodation of agricultural producers.

Agricultural fairs in this country are premium shows; they are not markets like those of Europe. They have not been without their utility, but they are attended with great expense; and though this expense is contributed for the improvement of agriculture, yet, if the same ends could be accomplished by another system, in which this expense would be avoided, so much money would remain to be usefully appropriated in other ways. Our annual shows are used to some extent as markets; but they do not bear this character, and no man attends them for the mere purpose of buying and selling. Regular agricultural markets are established throughout the kingdom of Great Britain. Some of these are monthly, others are semi-monthly or weekly. They are held in the most convenient places, and many of them were founded by the exertions of some wealthy land-proprietor, for the purpose of raising the value of his estates. In some places, it has been the landlord's practice to give a dinner to all purchasers who attended the market, and to afford all possible facilities both to buyers and sellers. So much expense would not be lavished, without reasonable expectation, at no distant period, of profitable returns. In these cases, the landlord undertakes, at his own expense, the work which, in one of our supposed examples, the farmers accomplished by associations for their mutual benefit. At different times, there seems to have been considerable competition among landlords in relation to these enterprises. Their efforts, in connection with other circumstances, have ended in the general establishment

of agricultural fairs in the British Islands.—It cannot reasonably be doubted that these local institutions have exerted the best influence on British agriculture. They have brought markets for the farmer up to his very doors; and they are so general and so frequent, that one seldom fails to dispose of his produce or his stock. If he does not sell his products to-day, at the market in which he has offered them, he immediately adjourns to the next fair, that happens to-morrow, in some adjacent town. It is unnecessary to enumerate any of these fairs; but we would remark that they are, for the most part, severally used for the sale of products or stock, of one description alone. There are fairs respectively for horses, for oxen, for cows, and for particular breeds of each of these animals. There are lamb-fairs, fairs for rams and for ewes, and for lambing ewes. At some of the principal fairs in Scotland, the number of sheep exhibited is from 70,000 to 80,000, and the number of cattle is from 20,000 to 30,000. Some of these are of a description called *character* markets, at which no sheep or wool is shown. The quality of the sheep stock, and the nature of the clip of wool, from each farm, are known by experience or reputation to the purchaser, as flour is known, in this country, by the brand of the manufacturer.

Such markets, were they to become general, would serve, in great measure, to diminish the evil of fluctuation in prices, which is caused by unsteadiness either in the demand or in the circulation of goods. The first cannot be controlled; the last may be checked, in part, by increasing and multiplying the facilities for internal commerce. There is often a demand for corn in the Eastern States, when there is a great surplus at the West. The railroad communications are not sufficient to preserve an undeviating regularity in the exchange of commodities between these two sections of the country. Were it as easy in Massachusetts to obtain corn from Illinois or Tennessee as from New York city, the fluctuation in its prices would be chiefly caused by an increase or diminution, either in the production or the demand, as they could not proceed from the imperfect character of the conveyances. The same reasoning applies to the commerce of more limited districts or sections. The commercial intercourse of the farmers of Massachusetts, with its non-agricultural population, may be so imperfectly systematized, as to render it difficult to sell half the quantity of produce which might be readily sold under a good system of commercial opportunities.

Our farmers do not raise many products for a distant market, because the State contains a large population which is not agricultural, whose wants are more than our domestic agriculture could supply. Hence their principal trade is carried on with the inhabitants of their own State, and domestic markets are almost the only ones that are available to them. It is, therefore, highly important that these should be sufficient in number, that they should be widely distributed, and placed under wise and efficient regulations. They might, thenceforth, become the most valuable aids to our domestic agriculture, and stimulants to its activity. The increased sales of every commodity always tend to increase the efficiency of the labor employed in producing it; and the necessity

for greater efficiency tends to improve the skill and awaken the enterprise enlisted in the business. Our farmers will improve in skill and intelligence, not as we multiply the direct means for their instruction, but rather as we increase their facilities for bringing their products to a good market.

It was recommended, therefore, some time since, by R. S. Fay, Esq., to establish periodical Market Fairs in some important town in each county of the State, for the improvement of commercial intercourse between the agricultural and the non-agricultural classes of our inhabitants. These fairs were proposed to be a sort of Farmers' *Exchanges*, where they would be accommodated, not only in buying and selling, but in conversing with their fellow-citizens upon all topics of interest. It is reasonable to conclude that one or two days in a season, devoted to these occasions, would be of more value than one or two days' labor to the general agricultural interest, as well as to the individual interest of those who attended them. They would greatly relieve the monotony of the farmer's life, by providing periodical holidays, if they may be so called, where business might, to a certain extent, be joined with recreation; and while the parties were making bargains for their mutual benefit, they would learn from each other the state of the crops, the demands of the markets, the prospects of the season, and the means of improving their farms.

In accordance with the views and recommendations of Mr. Fay, the Secretary of the Massachusetts Society for Promoting Agriculture, this association offered a prize of \$150 for the best essay on this subject. Allen W. Dodge, Esq., was the successful competitor. In conformity with the plan recommended in the essay, and to carry out the original design of Mr. Fay, the Essex County Agricultural Society have set the first example to the public, by their late Market Fair in Danvers. This is said to have been very successful, and the society have voted to hold the next fair in North Andover, on the third Tuesday in May; and it is their intention to hold one annually in the same place. It is to be hoped that the farmers will see the tendency of these institutions to promote their general and individual interest, and that they will contribute their endeavors to assist Mr. Fay in carrying into execution his patriotic enterprise, the mere preliminaries for which have required no ordinary amount of energy and ability.

For the New England Farmer.

THE TURNIP CROP.

MR. EDITOR:—Can it be that the turnip is so worthless as Mr. B. of W., and Mr. C. of P. in your last issue, represent? I have long considered it an exhausting crop, as compared with many other vegetable products, but not so bad as they represent.

If my recollection is right, the great Mr. Webster, on his return from England, spoke of the culture of the turnip as engrossing a large share of the attention of English farmers. I am quite sure their books on culture speak of the turnip, as the principal crop for the feed of their flocks of sheep, permitting them to gnaw their in th

field, without being harvested. Is their soil so different from ours, that this crop will do well there, and not at all well with us? I have known 1600 bushels of English turnips to be gathered from an acre, estimated to be worth for the feed of stock 20 or 25 cts. per bushel. I supposed this to be a better yield than 75 bushels of Indian corn from the same land—both demanding like dressings of manure.

I do not believe Mr. A., of P., will agree with his townsman C. in this matter—nor do I believe will Mr. D., of P., all of whom have had the honor of being Presidents of the Plymouth County Society. If my recollection is right, in the last speech I heard from him, and he always speaks forcibly and to the point, he spoke encouragingly of the culture of ruta bagas and other turnip crops.

ESSEX.

June 13, 1859.

For the New England Farmer.

LITTLE THINGS :

OR, A WALK IN MY GARDEN...NO. 19.

While watering some plants the other day, I was led to notice some of the

SIGNS OF A STORM.

My dog, Carlo, has occasionally a fit of eating grass. Now I suppose others have noticed the same fact in dogs; but I never yet saw one eating grass whose act was not followed by rain within twenty-four hours. Others may have met with an exception, but I have not.

The instincts of animals with reference to the weather have been noticed from the earliest antiquity; and I believe the time has arrived when a careful collection of facts should be made respecting the behavior of plants and animals as indicative of the weather.

EARLY AND LATE FROSTS.

While noticing a white frost in my garden where I had hoed a few potatoes, I was led to inquire why it should be so severe there; when a sensible-looking neighbor told me that ground recently hoed in spring was more liable to frost, but when hoed in the fall it would prevent a frost. The reason was at once obvious. In the spring the earth has not been warmed, and evaporation is increased, and cold results, as a consequence, sufficient for a frost; but in the fall, when the ground is warm, stirring it causes an evaporation of warm air and moisture.

It was a beautiful evening, and while taking a walk down the garden I was meditating on the

INFLUENCE OF THE MOON ON THE TEMPERATURE.

Physicists are not inclined to attach much importance to the influence of the moon upon the weather, but it seems to be a well-established fact that when the moon runs high, as farmers say, it is colder than at other times. It is the dread of the farmer that he shall have a frost on the full of the moon, either late in the spring or early in the autumn. He always looks for it at that time, and no other. Farmers in Maine know that if they can get safely by the frosts on the full moon in September, they will not be likely to have a severe frost till the next full moon in Oc-

tober. Farmers have long noticed that when the moon runs low in the summer months, the nights are very warm. Here, I believe, is an interesting field of inquiry, requiring, to be sure, a long series of observations, but which will result in something important to the cause of science and of scientific agriculture.

While painting over the wounds on my apple trees, this week, I was pleased to see the apples well set for a crop, and was led to reflect on the

EFFECTS OF COLD ON APPLE TREES.

I have for several years been led to doubt the generally received opinion of farmers in regard to the causes of a failure of fruit after blossoming full. The present season has been remarkable for two weeks of the coldest weather ever known in June in this vicinity. Water has been frozen the thickness of a dollar. The leaves of locust, beech and sumach trees are all killed—grape vines ditto. On three-fourths of an acre of corn on my land, probably not a hundred hills can be found which are not killed to the kernel, and past recovery, yet the apple trees adjacent are heavily set with fruit. A year ago my orchard was a mass of blossoms, and we had no very cold weather, yet I did not gather but six barrels where I should have expected fifty. I think I can explain the reason. Two years ago my orchard bore heavily. The fall season was favorable for the development of the fruit buds the next year, and when the next year came, blossoms were abundant, but the trees, except a few in a high state of cultivation, were not in a condition to bear fruit. They had been exhausted the year before; I think the weather had but little to do with them. The present year they have recovered their energy, and, frost or no frost, I shall have a good crop.

RHUBARB FOR GREENS.

I did not know till the other day, when a lady told me, that the leaves of rhubarb make excellent greens. They are as tender and delicate as anything I have ever eaten. I think this fact is not generally known.

But as your readers may see that I commenced this article rather *dog-matically*, I fear they may think that I shall close it *cat-egorically*. So enough of little things, till you hear again from

Bethel, Me., June 20, 1859.

N. T. T.

For the New England Farmer.

THE LAW IN REGARD TO THE SALE OF MILK.

MR. EDITOR:—It is well known that a law was passed last winter that milk should be sold and bought by wine measure, and that it is in force in our cities many persons will be ready to testify who have keenly felt the difference between the quart they used to receive and the one that is now dealt out to them.

But I am confident that the law is not as strictly adhered to by those who buy milk at wholesale, as it is by those who sell at retail, and I know that in many instances milk is bought of farmers in the country for sixteen and seventeen cents per can, the cans holding seven quarts beer measure, making the price per quart, beer meas-

ure, two and one-half cents, while the milk is sold in our cities for five cents a quart, wine measure, which any one can see at a glance is giving the dealers an enormous profit, while the farmer is not receiving enough for his milk.

Now, it seems to me, that the old adage, "It is a poor rule that will not work both ways." is applicable in this case; and that if milk is sold by wine measure, it ought to be bought by wine measure of the farmer.

I am not a farmer, and sell no milk, yet a sense of the injustice done to those who do sell, prompted me to write this, hoping that it would call attention to the subject, and that something would be done about it.

Knowing that your valuable paper has an extensive circulation among the very class of persons most interested in this matter, I send this article to you for publication. J.

Concord, Mass., June 27, 1859.

REMARKS.—We have a good law for regulating the purchase and sale of milk, and if those who sell milk by the quantity are disposed to submit to the exactions of others, and *transgress the law of the State* every day, let them suffer the consequences. Thank you for calling attention to the matter.

HARVESTING THE GRAIN CROP.

In making a tour of two or three hundred miles last summer, while our farmers were harvesting their crop of small grains, we became convinced that much negligence and waste still prevail, even with some who mean to be tidy and economical farmers.

In harvesting these grains we suppose the first important consideration to be, the time of cutting. When is the proper time to cut wheat, barley and oats? Some persons do not commence until the leaves on the stem are dead, and the berry or kernel is so far advanced as to be considerably dry. Under this practice there must be considerable loss experienced in both grain and straw. At this advanced stage the head has become dry, and the little scales which encircle and hold the grain are separated from it, so that at every touch it shatters out and is lost. The process has also gone too far to permit the grain to produce as much flour and nutriment as it would if the harvesting were done at an earlier day.

As wheat or barley approaches maturity, the careful observer will notice that the stem, immediately below the head of grain, shrivels, and has the appearance of having partially become dry. When this appearance has covered about six inches of the stem immediately below the head, we have been in the habit of cutting these grains; the kernel is then glazed and just going out of the milky state. "If not reaped until the straw is wholly yellow, the grain will be more than

ripe, as the ear generally, except in late seasons, ripens before the entire of the straw; and it is observable that the first reaped usually affords the heaviest and fairest sample."

Careful observation will show that "the indications of ripeness in wheat are few and simple. When the straw exhibits a bright golden color from the bottom of the stem nearly to the ear, or when the ear begins to bend gently, the grain may be cut. But—as the whole crop will not be equally ripe at the same time—if, on walking through the field, and selecting the greenest heads, the kernels can be separated from the chaff when rubbed through the hands, it is a sure sign that the grain is then out of its milky state, and may be cut with safety; for although the straw, may be green to some distance downwards from the ear, yet if it be quite yellow from the bottom upwards, the grain then wants no further nourishment from the earth, and, if properly harvested, it will not shrink. These tokens will be found to sufficiently indicate the ripeness of wheat, barley and oats; but that of rye arises from the straw losing some of its golden hue, and becoming paler. The usual practice in England is to cut down all grain before it is quite ripe, and to leave it in shocks until the grain is perfectly matured and hardened."

This extract, which we take from an excellent English work, does not precisely agree with our remarks in relation to the appearance of the stem, as the latter, we have often observed, may appear nearly dry for a few inches immediately below the ear, while the rest of the stem is quite green. But the suggestions we have quoted are valuable, and will aid many cultivators in deciding at what particular moment to cut their grains.

Another loss in this harvest is occasioned by the careless manner in which grain is gathered and tied up, being brought into bundles uneven at the ends and of irregular size, so that in the shocking and after-handling, the bundles are burst, and the ears broken off. The stooking, or shocking, is often so badly done that they do not shed the rain, or protect the bundles from dews, and are upset, and scattered by the wind. They are often left uncovered, so that in wet weather, as was the case at the last harvest, the loss must be considerable in the quantity of grain, and more still by a depreciation of its quality. We were gratified to notice in our ramble last summer that in some districts, caps, or coverings of cotton cloth, were used on stocks of grain in the field. It had been raining for three days—a part of the time heavily—and yet most of the stocks so covered had received no damage whatever—all their upper portions being entirely dry. We thought that about three farms out of four along a range of towns in south-eastern New

Hampshire, were using these coverings. There can be little doubt but that the saving by their use in a single season like the past, nearly paid their cost.

It is a great loss to hurry over, or to perform indifferently, the labor of harvesting, because then the crop has matured, and only needs one step more to return to the cultivator its profit. The gathering in, and stowing away in the barn, should be conducted with great care, to prevent waste of grain, to protect it from vermin, and to give it proper ventilation, so that it shall not heat and start the germ of the seed.

For the New England Farmer.

ESSEX AGRICULTURAL SOCIETY.

In the "Sixth Annual Report of the State Board of Agriculture," I find the gentleman who was appointed to visit the fall exhibition of our society, speaks of the show of fruits, which he says was "very large and perfect specimens, both of apples and pears," but that he was "somewhat disappointed in the comparatively small number of dishes of fruit presented, and that upon inquiry, learned that premiums were only offered for certain varieties, and that all others were excluded." He is right when he says, "This course has been adopted for the purpose of keeping out a flood of ordinary and inferior varieties which would otherwise crowd the tables." But when he goes on to say, "that it is only by comparing the good with the bad that the superior qualities of the one and the imperfection of the other are brought out," I would ask him, "how long are we to lumber our tables with worthless varieties? At what time shall we commence this reform?" I apprehend that when a variety of pear or apple has been grown by various individuals, and they all uniformly consider it as worthless, or at any rate, not at all comparable with other and vastly better sorts, the time *has arrived* when this *expurgation* should begin. Regarding the "small number of dishes of fruit," I would inquire of him, at what county Agricultural Society he saw exhibited the past season, *more than was seen at Danvers? Nearly one thousand dishes and plates!* The premiums were offered, not by "a certain arbitrary standard, nor for the consideration of the amateurs," but for the benefit of the farmers of Essex county, that they may be induced to cultivate those varieties which may be most remunerative. Ours is *not* a horticultural, but an agricultural society, and in addition to the list of premiums, we award gratuities for any "acknowledged superior fruit" or new varieties presented.

He says, "there were some important omissions of generally acknowledged superior fruits." If he means by this, superior flavored pears, we admit that there are fine sorts which may succeed in the sheltered gardens of our cities, that will not flourish in open farm culture. Then, again, there are others; the St. Michael and St. Germaine, that are still cultivated at the South, that blast all over New England. Regarding the number of varieties for which premiums are of-

ferred, there are a greater number of named pears than would be given by the generality of our most experienced cultivators; for out of the hundreds that have been introduced, it would be difficult to name over 20 that we should commend for general culture.

J. M. IVES.

Salem, May 25, 1859.

EXTRACTS AND REPLIES.

WHITE SPECKS IN BUTTER.

I would say in reply to Mr. Holmes, of Gratton, Vt., that he is correct in regard to keeping the cream which adheres to the churn and covers during the process of churning entirely from the butter; but in order to avoid it in your next churning be equally as careful to keep it from your cream-pot, or you will not only have plenty of the said specks, but an unpleasant flavor to the butter. It need not be lost, as every good housewife knows well how to enrich her biscuit with it, or whatever she chooses.

Mrs. "L. E. H." of Ludlow, Vt., is on the right track, but I hope by my own experience and that of others, to help her along one pace more. I agree with her in saying it is the same milk which adheres to the cream in the process of skimming, but instead of stirring each day, would say, *not stir*, but let each day's gathering of cream be put on the top and remain so, thus keeping more closely the air from the older cream, which is very necessary to promote a fine flavor to your butter, and thereby exclude the necessity of rinsing butter, which should never be done without washing until the water is perfectly clear. Please try the experiment in saving cream, and my word for it, you will not be troubled with white specks. Keep the cream-pot covered close, to avoid both white and black specks.

H. E. C.

Putney, Vt., 1859.

PATENT ROCK LIFTER.

Can you inform me who is the proprietor of the Rock Lifter, recently employed by the Shakers at Harvard, Mass.? Was that the same machine, the operation of which you describe in the *N. E. Farmer*, sometime last summer or fall? Can it be used to advantage for pulling stumps as well as lifting rocks?

REMARKS.—Thomas Ellis, Esq., Rochester, Mass., or Nourse, Mason & Co., Boston, sell the machine. Some persons who have tried it say that it pulls moderately sized stumps well. Price, \$225. We have sent your letter to Mr. Ellis.

A GOOD COW.

Mr. Secretary Dodge informs me that he has a cow, which he purchased five years since, for \$37. He has kept her for his own family use, and fed her as good cows should be fed. Since the 1st of May, there has been made from her milk 77 pounds of butter, over and above the milk and cream needed for family use. He is entirely confident, if all her milk could have been used for the making of butter, she would have yielded at least two pounds of butter per day. While such butter stock can readily be found on our own native hills, there will be no occasion to go

abroad for butter. At a recent visit to the Treadwell farm, I learned it took more than twelve quarts of the milk of the Ayrshire stock, there fed, as it ordinarily flows, to yield a pound of butter. Ten quarts, or twenty pounds of the milk, from Mr. Dodge's cow, will do this.

June 27, 1859.

ESSEX.

PROFIT OF HENS.

As there is considerable talk about the profits of keeping hens, I thought I would give you a bit of experience. A little over one year ago I commenced keeping debt and credit with a few. I had but 11 hens and 1 rooster; I kept the account one year, and it stands thus:

Cr. by 120 dozen eggs at 13½ cents.....	\$16.20
Cr. by 19 pounds chickens at 9 cents.....	1.71
	—————
	\$17.91
Dr. to feed, worth.....	6.21
	—————
Balance in favor of hens.....	\$11.70

They were fed in the summer with corn, oats and wheat screenings, with occasionally a mess of warm dough or potatoes, boiled and mashed and given to them warm. They did not have a very good chance, as we had to keep them shut up a while in the spring on account of the crops. In the winter they were kept in a rather cold stable. Some of the hens are full blooded black Polands, the rest a mixture of the Poland, bantam and what we call the old-fashioned hens. I think the Polands are as good layers as there are.

BLACK POLAND.

Montpelier, Vt., June, 1859.

SEED CORN.

In the *Farmer* of June 1st, I noticed the following: "Corn for planting should be selected from an equal number of male and female ears, shelling and mixing them together." Signed, S. P. Baker. I believe that plants have sex as well as animals, but being no botanist, permit me to ask a few questions.

If you plant a kernel of corn alone in a field, why does the stalk ever "ear" at all? In a pile of ripe corn, how can the male and female ears be distinguished? Will you or Mr. Baker, who, from an experience of eighty-three years, is doubtless well posted, inform me upon the subject? What is the most convenient size for hay-caps?

A FARMER'S BOY.

Charlemont, Mass., June 22, 1859.

REMARKS.—Two yards square for hay caps.

STUMP-FOOTED CABBAGE.

Can you tell me what makes cabbages grow stump or clump-footed, and what is a remedy? I have often seen large pieces nearly entirely lost from this cause, for a clump-footed cabbage will not head.

ALBERTUS.

REMARKS.—We have heard it said that cabbage seed *raised from the stumps*—that is, where the head has been cut off and the stump set out,—will produce clump-footed cabbages. The whole plant, head and all, should be set, to raise seed from.

HEDGES.

I have a hedge in progress, part of which has arrived to the height desired. Will you or some of your correspondents inform me, through your columns, at what time and how often it should be pruned? and oblige,

HEDGE.

Derry, N. H., 1859.

REMARKS.—Prune it now, and if the growth continues luxuriant, prune again in six or eight weeks.

SHEDDING MILK.

I wish to be informed of the liquid that has been recommended by some for the suppression of milk from the cow's udder where the cow sheds her milk.

Cambridge, Vt., 1859.

REMARKS.—The trouble is probably organic; some of the muscles or other parts not acting with sufficient force. The liquid to which you refer may be glycerine or liquid cuticle, but we doubt whether its use would prove efficacious.

For the *New England Farmer*.

PASTURING---COWS---WOODLAND.

MR. EDITOR:—If any one thing is neglected, forgotten, and left to take care of itself, it is the old farm pasture of New England. How many farmers, and good farmers, too, that crowd to the ridge-poles their barns with hay; that fill to overflowing their corn and grain bins, all, (excepting wheat, to their shame,) still trusting to the same old pasture, unassisted, unenriched; their flocks and herds feed there; generations forgotten and living, still pull down the old pasture bars; perhaps fifty to one hundred acres is the "area of freedom," for fifteen or twenty cattle; they ramble, (poor creatures,) grub and nip all the day long, to carry home their scanty messes and empty stomachs. Now summer has ended, they have gained a little vitality of the skin, and all they have lost is their old shaggy coats, aided by a long tail, and plenty of bushes in rubbing it off. What a preparation this, for another winter's campaign; to enter the leanto thin, and come out thinner, in spring. There is no money in this operation.

The pasture should be the fattening ground; the farmer enriches his land to make his hay to feed his winter's stock; why should he not make rich ten or fifteen acres of his good old pasture, and make it produce more fattening feed than seventy-five to one hundred acres of the old mossy mounds, that time has affixed to decaying nature? The advantages are, a self-manuring process; it necessarily becomes so, the range being made small; animals inclined to be breachy are contented to graze in good feed, and lie down quietly in their own enclosure. This is the place to give the calves and colts a start; the young stock, growth and sleekness; the faithful ox, muscle and fat; the noble cows, flesh and full udders, to increase the business of the "milk-man," to better fill and enrich the cream-pot, and sweeten the butter for a better price in market. Dollars and cents come of good pastures. Hav-

ing established your pasture lots in proportion to your farm wants, which can always be kept in a high grazing condition, and at little expense, convert the balance into woodland, and a few years will give you a forest of great value. The dead pasture waste, sometimes half of the farm territory, seems to me one of the great farming oversights of the more populous parts of New England. How often do we see the "axe laid at the root of the tree," to make more "tillage land," while the old, cleared acres, are suffering for want of the plow. The pasture lies, a bald, grimy waste, perhaps, and probably, the best soil on the homestead. Neither spade or plow has opened its surface since the removal of its primeval forest. Within its bosom, may be found rocks enough to lay your walls, and at odd jobs, with small expense, a great and permanent work can be accomplished.

Mr. Editor, I humbly trust you and every farmer will subscribe to my doctrine; and my only regret is, my inability to do the subject greater justice.

H. POOR.

Brooklyn, L. I., June 12, 1859.

For the New England Farmer.

ONION FLY.

A correspondent in your last *Farmer* recommends soaking onion seed "36 hours in strong soap-suds before sowing," with the impression that the eggs of this insect are laid upon the seed. In this I apprehend that he is entirely mistaken. I have, by the strictest examination with the microscope, *before and after soaking*, been unable to detect eggs or germs of any kind in the seed. Another quite as strong proof that the eggs are not found upon the seed, is, that one cultivator this spring, who sowed three pounds of the Weathersfield red onions, has not as yet been able to detect a single instance of the worm in his patch, while another, who sowed two pounds of seed *from the same lot*, has already lost, or nearly so, his whole bed by this destructive worm.

Regarding the various methods adopted in England for the destruction of this pest which I forwarded to you some days since, I would particularly recommend the *trenching or deep plowing* of the land in the fall, or just before winter, believing that the chrysalis of the insect, if buried deep, will be unable to develop itself, particularly if thus buried below the influence of the sun and air of spring. In this matter, however, I am instituting experiments by transplanting these onions carefully, without disturbing them, into boxes of various depths, in order to ascertain how deep they descend to undergo this transformation. I imagine that this insect, like the canker worm, has its period of growth, and also its descent into the ground. I have, upon a small bed, applied tobacco water without effect, and more recently tar-water and soot; this latter has a better effect. As regards guano, there have been various opinions, and it has occurred to me that these conflicting accounts have been in consequence of this insect appearing on one part, (it may be the corner of his plat,) and then applying guano over the whole bed, and this worm not extending itself *that season* over the whole bed, he assumes that he stopped his farther progress.

With regard to this insect travelling along under the ground, I think this doubtful; they may, and they undoubtedly do, enter all the roots in near proximity, but farther than this, they probably do not progress until the next season, when the perfect insect emerges in the spring.

I received two ounces of the Weathersfield red onion, last spring, part of which I sowed, and the bed is well filled with the worm. The balance of this seed is that with which I have made these experiments of soaking.

J. M. IVES.

Salem, July, 1859.

THE RIVER OF LIFE.

Blood is the mighty river of life, the mysterious centre of chemical and vital actions as wonderful as they are indispensable. It is a torrent impetuously rushing through every part of the body, carrying by an elaborate net work of vessels, which, in the course of the twelve months, convey to the various tissues not less than three thousand pounds weight of nutritive material, and convey from the various tissues three thousand pounds weight of waste. At every moment of our lives there is nearly ten pounds of this fluid rushing in one continuous, throbbing stream, from the heart through the great arteries, which branch and branch like a tree, the vessels becoming smaller and smaller as they subdivide, till they are invisible to the naked eye, and then they are called capillaries, hair-like vessels—although they are no more to be compared to hairs than hairs are with cables.

These vessels form a net work finer than the finest lace, so fine, indeed, that if we pierce the surface at almost any part with the point of a needle, we open one of them, and let out its blood. In these vessels the blood yields some of its nutrient materials, and receives in exchange some of the wasted products of tissue; thus modified, the stream continues its rapid course back to the heart, through a system of veins, which commence in the myriad of capillaries which form the termination of the arteries. The veins, instead of subdividing like the arteries, become gradually less and less numerous, their twigs entering branches, and their branches trunks, till they reach the heart. No sooner has the blood poured into the heart from the veins, than it rushes through the lungs, and from them back again to the heart and arteries, thus completing the circle of circulation.

This wonderful stream, constantly circulating, occupies the very centre of the vital organism, midway between the functions of nutrition and excretion, feeding and stimulating the organs into activity, and removing from them all their useless material. In its torrent, upwards of forty different substances are hurried along; it carries gases, it carries salt—it even carries metals and soaps! Millions of organized cells float in its liquid; and of these cells, which by some are considered organized entities, twenty millions are said to die at every pulse of the heart, to be replaced by other millions. The iron which it washes onward can be separated. Professor Berard used to exhibit a lump of it in his lecture room—nay, one ingenious Frenchman has suggested that coins should be struck from the metal extracted from the blood of great men.



DESIGN FOR A SUBURBAN COTTAGE.

In accordance with an announcement made at the commencement of the year to furnish new and useful illustrations to the *Farmer*, we present to-day another of the chaste, simple and yet very beautiful designs by Mr. G. E. HARNEY, of Lynn. Those already given, Nos. 1 and 2, have been very favorably received, and we are confident that No. 3 will afford valuable suggestions that will be made practical by many individuals.

The sketches which we now offer comprise a design and plan for a cottage suitable for a suburban or village lot. Though the exterior is somewhat ornamental in its character, there is nothing about it costly or difficult of execution—no detail which cannot easily be wrought by any ordinary house carpenter.

It is designed to be of wood, and covered in the usual vertical and battened manner. The roof projects two feet and a half, and is supported on brackets. The house should rest on a foundation projecting, at least, three feet above the level of the ground. The first story is 10 ft. high in the clear, and the second 6 ft. at the eaves and 19 ft. high at the ceiling. The plan comprises

No. 1, gallery, 5 ft. wide. No. 2, hall, 7½ ft. wide and 20 ft. long, containing stairs to chamber and cellar.

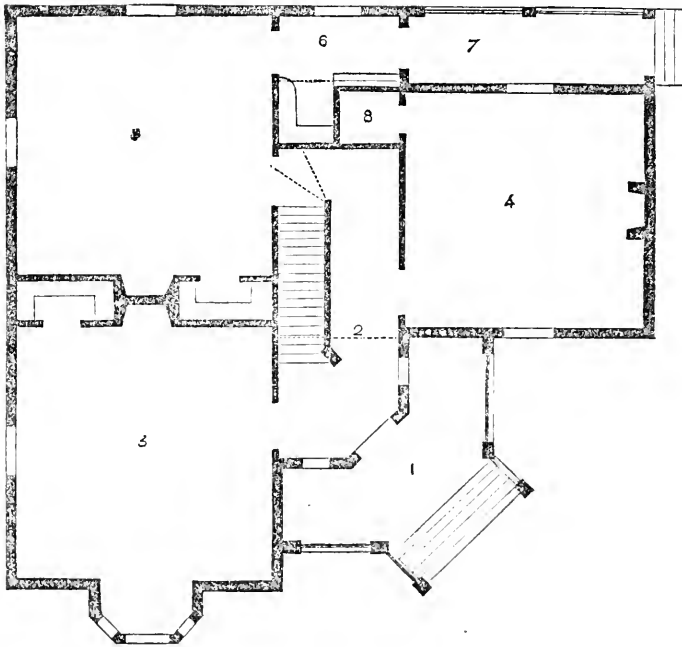
From the hall we enter No. 3, the parlor, 13 ft. square, in the front of which, and forming its principal feature, is a bay window overlooking the front yard.

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

The second floor contains 4 chambers, each furnished with a large clothes-press; two of these chambers are lighted by dormer windows.

Cost, about \$1600 near Boston.

THE TEETH.—The teeth are divided into three classes, each class fitting us for a different kind of food: First, The incisors, or cutting teeth, being eight in number, four top and bottom; those of the upper jaw being larger, and falling over the under ones in closing the mouth. The office of these teeth is for dividing and cutting the food, by bringing it between the surfaces of the sharp edges. Second, The canine teeth, so called from their resemblance to the dog's tooth, are placed on each side of the incisors, making two in each jaw. The intention of these teeth is to lay hold of substances, and are peculiar to all carnivorous animals, and of which man is con-



GROUND FLOOR PLAN.

sidered the most harmless. Third, The molars, or grinders, are ten in each jaw, and serve to fit the food for the stomach, by dividing it into minute portions, or pulp. Thus, it will be seen that nature designed man should partake of each of the foods common to the carnivorous, herbivorous, and granivorous animals. There are other teeth, appearing late in life, called "wisdom teeth;" but frequently these are not to be met with at all.

For the New England Farmer.

EFFECT OF WEATHER ON FRUIT TREES.

MR. EDITOR:—In reading the article of your "Sandy River" correspondent, it suggested to my mind some thoughts that may be a benefit to him and others. He says, "The last winter has proved to be a disastrous one to fruit trees in the interior of Maine; in one instance the mercury falling to 40 below zero. This circumstance affords an opportunity to test the capacity of different varieties of fruit trees to resist the effects of climate." I had supposed the question nearly settled that it was not the coldness of the winters that destroys our fruit, but other circumstances, which, perhaps, we may find out by looking on all sides of the question.

The winter of '55-'56, and '56-'57, was colder than 1858-'9; the mercury fell lower in Massachusetts, and I think the papers gave it lower in Maine. But I do not recollect hearing anything in particular of the injury done the fruit trees.

He says, "The past winter has proved the Baldwin is the most tender variety of the apple yet introduced into Maine." The reason is obvious;

there is no tree that has ever been cultivated in our nurseries, that will make wood so fast as the Baldwin, hence its tenderness. Notice his expression, "grafted at considerable height above ground, and on the slowest growing trees."

There is no danger of the Baldwin, if you do not grow them too fast. Now let me show you an instance in my own experience: In 1822 or 1823 I set out twenty-five Baldwins and twenty-four russets, (and one greening by mistake,) and as I said to you in my other communication, the winter of 1830 and '31 killed the twenty-four russets, and not one of the Baldwins! Now what was the reason of this? The russets were set on the richest soil, and grew the most; the greening was set on the richest spot, and made more wood than either of the russets, and is a fine tree now; so are all the twenty-five Baldwins. Now I would like to know why the greening tree escaped the injury the others felt; is it more hardy? It is a settled question in my own mind, that it depends upon the growing of the trees late in the fall, and of our having gentle or light frosts at first to check the growing of trees, and preparing them for winter, that prevents the injury, and not the severity of the winter that causes it.

If it is true that Maine has suffered the past year, I doubt whether they have as much as Massachusetts did in 1831. I do not recollect of hearing that Maine suffered at that time. Maine has its advantages and its disadvantages. In 1834, Maine had more apples than all the rest of the States. The frost cut off almost all the fruit in the other States, but in Maine, the season being later, escaped the frost. In Maine the apples are later, do not ripen so early, do not ripen

so perfectly, do not decay so soon, and will make better cider, generally, than Massachusetts apples. I would not be discouraged with the Baldwin; we may not see another season like the past for a long time to come.

N. B.—I was in Maine in the fall of 1834; bought cider and apples; saw many of their orchards, and noticed their fruit generally, and believe that where the fruit of Maine is as well cared for as in Massachusetts, it will keep as well or better.

DANIEL LELAND.

GRAY'S BOTANICAL SERIES.

Professor ASA GRAY, the author of the botanical works referred to above, has devoted his life to the exposition of the delightful science of botany, and has achieved a success not only honorable to himself as an individual, but honorable to his Alma Mater, and his native State.

The study of plants, with their beautiful and infinitely varied forms and properties, adapting each to its peculiar location and life, the wonderful provision made for the preservation and propagation of each species, their growth from seeds, buds, roots, tubers and cuttings,—their fruits designed principally to furnish protection and nourishment for their germs, and secondarily to furnish food for all animal life, cannot but awaken in the mind of the student, wonder, reverence and love for their Creator, as he witnesses the proofs of his inexhaustible resources, his infinite skill, and his boundless benevolence.

To this proper effect of his studies, Mr. Gray has obviously yielded his own mind, while at the same time his enthusiasm in his chosen pursuit has carried him onward through all the difficulties and intricacies of the science, until he has become the most accurate and accomplished botanical teacher in the country. His statements are always clear and reliable, and the student feels that he is guided by the hand of a master. Many of the educational books of the present day are mere compilations, soulless skeletons, and it is in the highest degree refreshing to find an author who speaks right on, telling us what he does know, and instructing us out of the accumulated treasures of his own mind. Such an author is Prof. Gray. He imparts to his readers a portion of his own enthusiasm, and keeps up in their minds an unflagging interest, while they follow his clear, concise and consecutive statements, and almost before they are aware, they find themselves enlightened with some rays of that light which had shone so clearly in the mind of the author. What was before confused and mysterious, and little more than a dark mass, gradually arranges itself into clear and well-defined forms, which become instinct with beauty and life, as when the morning sun, rising above

some distant mountain crest, illuminates, and distinguishes the organic and inorganic forms, that seemed but one confused mass, while the shadow of the mountain rested upon them.

Prof. Gray follows the order of nature in his classification, and thus has an unerring guide, which all may follow with perfect confidence.

Botany, like zoology, has to deal with an infinite number of individuals, and as the latter has reduced all animals, whether inhabiting the air, the water or the land, into four classes, so the former includes in a few groups, the countless varieties of vegetable forms, which spring from the earth's surface. The laws of development are adopted as the basis of correct classification. Plants are grouped into classes. These are divided into orders, and orders into genera, and genera into species, and these into varieties. To describe the principles according to which individuals are arranged into these groups, to point out the structure and the organs of plants, to show how they are developed from their germ, and to teach the laws by which this development is governed, is the object of botanical science. The great difficulty in the study of botany, has hitherto been the use of technical terms, and unpronounceable names, as though botanists intended, like the hierarchs of Egypt, to confine their knowledge to men of their own class.

Prof. Gray has succeeded admirably in his two elementary books, in conveying a knowledge of the principal parts in botany, in language that can be readily comprehended by every intelligent child. They are illustrated by a multitude of drawings, which are among the most perfect and best executed cuts that we have ever met with in any educational book. They are printed on good paper, and with a clear type, and are highly creditable to the press—that of Messrs. *Iverson & Plimney*, New York—from which they have issued.

We cannot doubt that the little book, "How Plants Grow," and the "First Lessons," will soon take the place of all other books on the subject, in our schools. The larger books will meet the wants of more advanced students.

HEN MANURE.—The excreta of birds of all kinds is valuable as manure, and if properly used, will invariably pay for the pains-taking. Lime, ashes or other alkalis, should never be mixed with hen manure; such treatment throws out the ammonia, and forms other compounds of lessened value. When dry muck, charcoal dust, wood-earth, or other cheap divisor, can be procured, compost hen manure with it, and if wetted with dilute sulphuric acid, so much the better; this will fix the ammonia as a sulphate, which is soluble, but not volatile, like the carbonate of ammonia. No farmer can afford to sell his hen manure to morocco dressers, even at four times the usual market price.—*Working Farmer*.

For the New England Farmer.

SELECTION OF STRAWBERRIES.

STATEMENT OF WM. R. PRINCE.

American Institute—Farmers' Club—June 20th.

The great point in all culture is economy and its results, and the true test of the strawberry is farm culture, with or without cutting off the runners.

The following I consider the best varieties for field cultivation, where the plants are to cover the entire ground, thus avoiding extra labor and expense, and making the whole of the soil available.

Scarlet Magrate, the heaviest of all strawberries.

Diadem, splendid scarlet, very productive; Mr. M. Bergen, of N. J., stated that he had not deemed it possible for so large a crop of fruit to grow on a given space as he saw growing on this variety.

Eclipse, early, bright scarlet, upright, clean and beautiful.

Minerva, estimable quality, produces more than twice Wilson's Albany.

Imperial Scarlet, large, bright scarlet, upright, firm for market.

Perfumed Pine, seedling of Burr's Pine, obtuse cone, very large, bright scarlet, sweet, juicy, high flavor, vigorous, very productive, combines more valuable qualities than any other berry.

Hovey, qualities well known.

Milvina, same qualities as Hovey, but more productive, brighter color, higher flavor and earlier.

Florence, very large, conical, splendid scarlet, fine flavor, vigorous, very productive, valuable.

Globose Scarlet, large, rounded, very productive.

Prince's Globose, a late variety, large, scarlet, moderate flavor, very productive and vigorous, ripens twelve days after the general crop, and therefore valuable as a late market fruit.

Six best staminate varieties for field culture, requiring to be cultivated in stools, and the runners to be cut off, thus however occasioning additional expense, besides leaving much of the ground unoccupied,—Scarlet Prize, Wilson's Albany, Sirius, Barry's Extra, Primate, Montrose.

Varieties preferable for families, being of finest flavor,—LeBaron, Ladies' Pine, McAvoy's Superior, Sirius, Longworth's Prolific, Ward's Favorite, Globose Swainstone, Fragrant Scarlet, Hooker, Imperial Crimson, Perfumed Pine, Minerva, Scarlet Prize.

ROOT CROPS—FODDER.

We are glad to see a return to the culture of roots, such as turnips, ruta bagas, mangel wurtzels and carrots, among us. Not that they have ever been wholly abandoned, but the culture of them, for the last ten years, has fallen off very much. People talk about the comparative value of these things.

We all know that there is great difference in the nutritive power of the articles which we use, not only for our own food, but for the food of our domestic animals; and we also know, that we, as well as our animals, are so constituted as

to require this same variety for the continuance of health and activity. Keep yourself on one single article of concentrated food, and you may perhaps grow fat, but you will also become sick, or languid and spiritless. Sailors know this. When they get into situations where they are obliged to live on one kind of food, they find their health decline, and their strength and vital powers to flag, and they finally have to "give up the ship." It is, therefore, a duty to cultivate a variety of articles to be used as fodder for our stock, during our long winters. Good hay is the staple crop for this purpose. It is to cattle what bread is to their owner, the staff of their lives. But roots of different kinds make an agreeable and a profitable variety. In olden times, when the potato rot was unknown, the potato, being the easiest raised and preserved, was much used for cattle food. The potato rot put a veto on this root as stock food.—*Maine Farmer*.

For the New England Farmer.

BIRDS VS. FRUITS.

Regarding the service or injury of birds, of which so much is now written, I am aware that they destroy considerable fruit, much more than at the time of Wilson. I think that all animals acquire a taste; for example, the domestic pigeon will now eat the acid currant. Some years since I obtained of Col. Jaques, of Charlestown, a pair of Bremen geese for a farm; these birds I kept for a fortnight, and during that time their food was grass; corn they would not eat. Some twelve months after this I saw these birds on a farm in Danvers, and was then told that they were great eaters of corn. I say above that in the time of Wilson birds could not have been called such plunderers. In his description of the purple grackle or crow blackbird and the common crow, (these of all birds considered the most destructive to the corn,) he thought that they more than compensated for their depredations, by "following in the furrow of the plow, and that their services in the spring, in destroying grubs and larva, of which they eat prodigious quantities before, and, as if to compensate for the grain they take, in the fall."

In the first edition of Manning's Book of Fruits I inserted an article on this subject from which I take the following extract:

"In speaking of the annoyances sustained from birds, I am persuaded that these plunderers as they are sometimes called, more than compensate for their inroads upon our orchards by their services in the spring, and during their incubation, in destroying insects: in the breeding season we see them constantly flying from the nest for a supply, and returning with a grub or a worm. I have seen the ampelis, or cherry bird, that remarkably silent and dove-like species, upon my apple trees, when the canker worm was about half grown, destroying them in numbers, and although called plunderers, they are, in fact, benefactors likewise.

"Public economy and utility, says one, no less than humanity, plead for the protection of the feathered race, and the wanton destruction of birds, so useful, beautiful and amusing, if not treated as such by law, ought to be considered

as a crime, by every moral, feeling and reflecting mind."

If we should make war upon the crow, black-bird and blue Jay, particularly the last named, it would be for their thievish propensities in destroying the eggs of our truly insectivorous birds.

Salem.

I.

For the New England Farmer.

SUPPORTING DWARF PEARS--PROPAGATING GRAPE VINES.

MR. EDITOR:—In the last number of the monthly *Farmer* I find an article on supporting transplanted trees, from the pen of your able correspondent, "J. M. I." I like the plan which he describes very much, and it has occurred to me that it would be valuable as a permanent support for dwarf pear trees, which are liable to be swayed to and fro by the wind, especially in the spring and fall, when the ground has been softened from heavy rains.

Now if a large, strong stake of some durable kind of wood were used, it would last for a long time, and if it were well coated with gas tar, it would be much more durable. It need not rise more than a foot above the surface of the ground, and if the tree were kept bound to it, it would certainly hold the tree firmly in its place. Such a support would be of much service to dwarf pear trees standing in places exposed to high winds.

On another page of the *Farmer* for June, may be found an article on the \$100 grape premium offered by a gentleman in N. H. The writer says that roots are preferred, but that cuttings two inches in length will answer. As the premium is to be awarded in two years after the roots are planted, I suppose that these short cuttings are to bear fruit the second year. Will some one posted on such matters tell us how such cuttings are treated, to make them produce fruit so early? If by grafting, give us the mode of doing it, as I have tried the ways given in the books, but never could make them succeed; they would grow an inch or two, and then die. I should be very glad to learn how to graft the grape successfully.

Can you tell me how to distinguish the Angers quince from the Orange? Is there any difference in the leaves of the two varieties?

AN OLD SUBSCRIBER.

Clinton, June, 1859.

REMARKS.—We do not know.

THE COLLEGE JOURNAL OF MEDICAL SCIENCE.—This work is published monthly at Cincinnati; is a magazine of 48 pages, has six editors, and is well spoken of by the press of the country. It has many medical terms, of course, but the plain, common sense that pervades its pages is refreshing. We like it, especially for its liberality, and thank the editors for their manly defence of Dr. CURTIS, of Hartford. Carry out the principles laid down in your article on "Illiberality," and you will not fail to make your journal popular and useful.

For the New England Farmer.

WHY DO YOU NOT PURCHASE A MOWING MACHINE?

MR. EDITOR:—If the above question were put to many of our farmers, they would respond by saying, "That the manufacturers are continually making improvements, and I intend to wait until I can get the best."

Now let us examine this reply for a few moments, and see if it will abide the test of sound reasoning. I presume that I have your assent to this proposition: That until recently, nearly all the inventive genius that has been expended, has been in the line of producing and cheapening our apparel and our equipage instead of our food, the most important article. Therefore, the time has fully come when the latter should receive its full share of inventive talent. To make this most effective, it is manifest that on the part of both manufacturer and practical farmer, there should be mutual sympathy and cordial effort. I hold, that there is no ingenuity, skill, or theory, applicable to some agricultural implements, which will not utterly fail when tested by putting the same on, or into the ground, by a practical farmer. Hence it is the duty, I think, of farmers to co-operate with the manufacturer in his efforts to improve and perfect agricultural machines and implements. Should he not, therefore, purchase and use those machines, although imperfect, and in the process of using them, report to the maker of them their failings, or suggest improvements? In this way, I am satisfied that such labor-saving machines may be obtained as shall very much facilitate, and render farming attractive in New England. If this reasoning is correct, the above observations will apply with peculiar force to mowing machines. The practical utility of a machine for cutting grass is now a question past controversy, or discussion. It is only a question of time to prepare the surface of our mowing lands, and the machine best adapted to do the work. I do not propose to enter the partizan controversy respecting mowing machines. I do not profess to be a special advocate for either of them, and have refused to be a paid agent for the sale of them from two establishments.

I was present at the trial of mowers in Boylston (June 14), and saw the operation of the five machines, and for the first time saw the working of the Manny machine. I have also read in the *N. E. Farmer* the report of the trial by "Truth and Justice," and the reply by Mr. Brown. After carefully reading these statements, I apprehend they may not be an exception to the general rule in such cases that the exact truth is to be found "between them." If I were called upon to correct them, I should say that "Truth and Justice" had not given sufficient credit for the cutting of the Manny machine, and Mr. Brown had overstated the difference of draft between the two. While I do not profess to be a partizan in this matter, I do confess that I am much pleased with the working of the Ketchum patent, as now manufactured by Nourse, Mason & Co. It is also my impression, confirmed by six years, experience, that in order to be adapted to New England farms as we find them, and to be popular throughout New England, every machine must be reduced, substantially, to the construc-

tion of the Ketchum mower. The manufacturers of the various machines will call this a sweeping observation, and demand my reasons.

The mowing lands of New England will always present obstacles, more or less, to the mower, such as apple trees, boulders, stumps, uneven surfaces, &c. We are bound, nevertheless, to have a machine which will work, notwithstanding these obstacles. But under these circumstances, the demand is imperative that we have a mower in its construction simple, strong, compact, "handy;" one into which we can readily insert cutters of different length, from a three foot to a six foot, according to the condition of the grass, surface or obstacles. This idea of changing cutters carries with it an importance which farmers do not yet appreciate. My own experience enables me to say that it is a most happy arrangement by which I accommodate my machine to the grass to be cut, and the work to be done, to the capacity of my team. I may be mistaken, but I apprehend that I am correct in saying there is now no machine capable of meeting the above demands but the Ketchum patent.

The labor of taking apart and of re-adjusting is a consideration with me in favor of the small iron machine. Last fall, a neighbor came to me for my machine to cut his rowen; said that he had been to three owners of the Manny, and they refused because their machines were taken apart, and it was too much work to "rig up." The Ketchum, occupying four square feet in the corner of my tool room, was ready for action in less than ten minutes.

When my first machine had more than paid for itself, and when the manufacturers of both kinds had made great improvements, I sent it back with directions to send me their best mower, and give me what they could afford for the old one. To this last, I have added the improvements as they have come out, and yesterday I cut a piece of grass sixty rods long, and three wide, (one and one-eighth acre) in less than an hour, the town clock bearing testimony. And yet my horses gave no evidence of the least extra labor. Now, sir, if you do not consider this sufficiently expeditious, come and see me, and tomorrow I will slip in a six-footer, and cut an acre by the side of it in thirty minutes, and yet my horses will not labor harder than they did with the old machine with a four foot cutter.

I do not profess to have any scientific gauge by which I can discover the amount of power required to overcome a given amount of resistance, but from careful observation, I have reached this conclusion: That the two horse machine as now manufactured by Nourse, Mason & Co., requires no more power to work it with a six foot cutter, than the machine did with a four foot cutter made five years since. Also, that the one horse machine, with a three and one-half foot cutter, is no harder for one horse, than it would be for the same horse by the side of another in the old machine with a four foot cutter. For this statement, however, you have only my own judgment, based upon the evidence I had at Boylston.

Nearly all the interest manifested in mowing machines in this part of the county, appears to be in behalf of the one-horse machines. This is to be expected, inasmuch as probably nine-tenths of our farmers keep but one horse. These are

just now being introduced, and remain to be tested. At the trial at Boylston, their working was very gratifying to me, and I think they come within the ability of most farmers' horses to work them.

The manufacturers of these mowers need no circulars from me, certifying that they are "honorable men," and I will only say to those who purchase of them that they seem anxious to supply all improvements as fast as discovered, and I have no doubt that with the aid and patronage of farmers, they will give us a machine of such price and quality, that every man who has twelve or fifteen acres to cut, will find it for his interest to buy.

CHAS. HUMPHREY.

Lancaster, July 1, 1859.

MOWING MACHINES.

A trial of two mowing machines took place on the farm of Mr. Lynde, in Melrose, on Tuesday of last week, which we had the pleasure of witnessing. The machines used were the "Buckeye" and the "New Englander," the first with two horses, and the latter with one. The Buckeye took a swath four and a half feet wide, and the New Englander four feet. Each cut its acre handsomely in *forty-two* minutes. The grass was light, and the ground every way favorable, so that the labor for the horses was not severe,—that of drawing the one horse machine was not a heavier draft than is required in the use of a common cultivator in working corn.

After this trial, each machine was put into heavier grass, where there were some patches of thick clover, and some of it lodged. The New Englander led the way, cutting the grass finely and turning a handsome double swath. The Buckeye also cut a double swath, and did it well.

Since this trial, we have used Ketchum's and Manny's one horse machines in a very heavy growth of clover on our own farm. The field was on a hill-side, was encumbered with apple trees twenty-five feet apart, and the clover in many places badly lodged, but both machines cut it as well as could be reasonably expected. It seems to us that the draft on the Manny was the lightest, but that the Ketchum had more facility in turning, and could be moved over the cut grass, to go from place to place, with greater ease. Where a person cuts fifty tons of hay annually, either machine will pay for itself in three years.

Many trials of machines are taking place, and the public mind seems at last to be aroused to something like a proper appreciation of their merits.

OILING HARNESS—LEATHER, &c.—Oils when applied to dry leather, invariably injure it, and if to leather containing too much water, the oil cannot enter. Wet the harness over night, cover it with a blanket, and in the morning, it will be

damp and supple, then apply neats-foot oil in small quantity, and with so much elbow-grease as will insure its disseminating itself throughout the leather. A soft, pliant harness is easy to handle, and lasts longer than a neglected one. Never use vegetable oils on leather, and among the animal oils, neats-foot is the best.—*Working Farmer.*

TIMES GO BY TURNS.

An English Jesuit, Robert Southwell, wrote the following lines of much merit, two centuries and a half ago. The philosophic strain pervading the piece is worthy of admiration.

The lopped tree in time may grow again,
Most naked plants renew both fruit and flower;
The sorriest wight may find relief from pain,
The driest soil suck in some moistening shower.
Times go by turns and chances change by course,
From foul to fair, from better hap to worse.

The sea of fortune doth forever flow,
She draws her favors to the lowest ebb;
Her tides have equal times to come and go,
Her boom doth weave the fine and coarsest web
No joy so great but runneth to an end,
No hap so hard but may in time amend.

Not always fall of leaf, nor even spring;
No endless night, nor yet eternal day;
The saddest birds a season find to sing,
The roughest storm a calm may soon ally.
Thus with succeeding turns God tempereth all,
That man may hope to rise, yet fear to fall.

A chance may win that by mischance was lost;
That net that holds no great, takes little fish;
In some things all, in all things none are crossed,
Few all thy need, but none have all they wish.
Unmingled joys here to no man befall;
Who least have some; who most, hath never all.

For the New England Farmer.

MOWING MACHINES.

MR. EDITOR:—I noticed in a recent number of the *Farmer* a communication describing a recent trial of mowers on the farm of Mr. Lamson, in Boylston; the writer signs himself "Truth and Justice." His comparison of the relative condition of the horses does not prove the inferiority of Manny's mower, for every teamster knows that a horse in high condition works better after half a day's exercise, than a fresh horse, especially if the latter is unused to the work, which was the case in this instance.

"Truth and Justice" says that in cutting the double swath the superior excellence of the Ketchum machine was still more apparent. The truth is, all the machines performed their work admirably, nor could any unbiased spectator decide which cut the closest, smoothest, or evenest. "Even "Truth and Justice," himself, could not have selected, on the next day, the swath cut by the Ketchum, except by measurement, and this boasted length of cutting-bar is no merit in a mower, unless there is a commensurate gain in the power applied. For instance, if the six feet cutting bar, which made such an "awful gap in the tottering grass," requires one-third more power than Manny's, cutting four feet, then give us the latter; for horse-flesh is too expensive to waste for mere display, unless we can have the profits of mowing machines for compensation.

But the real question with our farmers—most of whom have but one horse—is this: can we have a mowing machine which will work in all kinds of grass and grain, which will adapt itself to uneven land, which will keep in repair, and which can be worked by an ordinary farm-horse? The trial on the field of Mr. Lamson did not decide any of these points. The draft was through a half-grown crop, and down a smooth inclined plane. "Truth and Justice" says the decision of those who witnessed the trial was in favor of Ketchum's. In reply, I answer, that several of Manny's patent were sold on the spot; while I know of none of Ketchum's that were disposed of.

HONESTY.

For the New England Farmer.

STRIPES AND SPECKS IN BUTTER.

MR. EDITOR:—With an experience of twenty-five years in butter, I believe Mr. Holmes to be wholly mistaken as to the true cause of stripes and white specks in making it, as I always practised scraping down the cream that is thrown about the churn in churning, as soon as the butter began to come, and never have striped butter. If the butter is thoroughly churned, and well worked after churning, it will never be striped. I believe the cream that is scraped down from the sides and lid of the churn, most, if not all of it, comes to butter; if not, it goes in with the butter-milk, which only makes it the better for biscuit.

The white specks in butter are caused by getting milk in with the cream when skimming, which is suffered to lie still until it becomes hard like cheese; to prevent this, stir the cream thoroughly after skimming it off the milk; this will generally prevent there being specks in the butter. If the cream is strained after skimming it off, there will never be specks. If my theory be correct, it will be seen that the idea of cream making stripes or specks in butter is incorrect.

N. B.—Good butter-makers rarely have stripes or specks in their butter; if they do, they attribute the cause to the neglect of duty in not taking proper care of the cream, and properly working the butter.

H.

Luillow, Vt., June 25, 1859.

SUMMER PRUNING.

A Mr. Sweet, of Triftonburgh, Mass., writes to the *Boston Cultivator*: "Trees should never be pruned in the fall, for the reason that the stock dries up, the bark curls from the stock, lets in water, and injures the tree, and it never heals so well as when removed at the proper time. To prune in early spring is better, but not the best time. Limbs removed at this season of the year, when the sap first begins to start, also injures the trees, for the sap rushes with great power to every part of the tree, which will cause the wound to bleed. The tree, or limb, will turn black, and often the tree will die. I am satisfied that the best time to prune apple trees is from the last of June to the last of July. At this season of the year, that strong flow of sap begins to subside, the tree is covered with foliage, which is a great help to the wound in preventing its drying and cracking."

BUSINESS CHANGE.

On the first of July a change was made in the business management of the *Farmer*, by the relinquishment by Mr. NOURSE of a third interest each to Mr. RUSSELL P. EATON and Mr. ALBERT TOLMAN. Mr. Eaton assumes the general editorial charge of the weekly *Farmer*, while Mr. Tolman will conduct the business affairs of the firm. No change whatever is made in the editorship of the monthly *Farmer*, or in the manner of carrying on the general business of the establishment. The announcement of the new firm will be found upon the cover of this month's issue.

For the New England Farmer.

MOWING MACHINES.

MR. EDITOR:—I cut about seventy-five acres of land, and you will readily see that haying, with me, has been a long and tedious business. I tried several mowing machines, and found none that gave satisfaction, as a great part of our land is low, clay meadow, laid in beds four rods wide, and no machine would operate on this land, only one whose knife-bar played up and down, independent of the driving wheel. I was induced to try the Manny mower—and this has accomplished the work so near perfection that I have purchased, and am fully satisfied with its operation. I am not acquainted with the new machines, but I understand that this year there are many new and very good ones. One advantage that I notice in my machine is, the instant the grass is cut, the reel removes it from the finger-bar, while I have noticed that on machines that have no reel, when going with the wind, the grass stops upon the finger-bar. Upon close examination I have found that the grass in great quantities was cut as fine as powder, and good for nothing or wasted. My advice to farmers that have twenty or more acres of land to mow, is, first to find a good machine and then buy. Perhaps I am not at liberty to say the "Manny" is the best, but will say that it is a good machine, and in the experiment of last year I saved nearly the price of the machine.

JOSEPH BROWN.

Kensington, N. H., July, 1859.

For the New England Farmer.

THE PEAR MOTH.

The worm of the pear moth (*Tortrix angustiorana*) is now busy in some localities upon the young fruit of the pear, attacking it immediately under the crown or eye. This worm is about a quarter of an inch long, of a dirty green color, and reddish brown down the back. As a means of destroying this insect, it has been suggested to search for the maggots in the eye of the fruit, but the most rational way is to collect the leaves in autumn and burn them, as it is more probable that they lay their eggs upon these, or that the caterpillars spin webs in the cinks of the bark to undergo their transformations. If they hibernate in the latter, the best method to destroy them would be to paint over the bark with a mixture of strong soft soap and air-slaked

lime. I have a few of these insects, taken from some young pears some days since; they had eaten holes in the fruit the size of a small pea.

Salem, June, 1859.

J. M. L.

Each plant, while growing, throws off certain matters which are not favorable to the growth of successive crops of the same plant. Plants in this respect are somewhat like animals, which always avoid their own excrements. Now, other plants may use these matters. Hence a rotation is profitable, because one crop may take up what another throws off.

LADIES' DEPARTMENT.

TO MAKE CURRANT WINE.

For several years we have made a ten gallon keg of currant wine, which is of as good quality as any we have tasted, and is generally so pronounced by those who have had an opportunity to judge. The mode of manufacture is simple, and can be easily followed by any family having the currants and the disposition to make the wine. For general information we give the receipt, and cordially recommend it.

The currants should be fully ripe when picked; put them into a large tub, in which they may remain a day or two; then crush them with the hands, unless you have a small patent cider-press, in which they should not be pressed too much, or the stems will be bruised and impart a disagreeable taste to the juice. If the hands are used, put the crushed fruit, after the juice has been poured off, in a cloth or sack and press out the remaining juice. Put the juice back in the tub after cleansing it, where it should remain for about three days, until the first stages of fermentation are over, and removing once or twice a day the scum copiously arising to the top. Then put the juice into a vessel—a demijohn, keg or barrel—of a size to suit the quantity to be made, and to each quart of juice, add three pounds of the best brown sugar, (we prefer this to the loaf,) and water sufficient to make a gallon.

Thus, ten quarts of juice and thirty pounds of sugar, will give you ten gallons of wine, and so on in that proportion. The cask must be full, and the bung or stopper left off till fermentation ceases, which will be in twelve or fifteen days. Meantime the cask must be filled up daily with water, as fermentation throws out the impure matter. When fermentation ceases, rack the wine off carefully, either from the spigot or by a syphon, and keep running all the time. Cleanse the cask thoroughly with boiling water, then return the wine, bung up tightly, and let it stand for four or five months, when it will be fit to drink, and can be bottled if desired.

All the vessels, casks, &c., should be perfectly sweet, and the whole operation should be done with an eye to cleanliness. In such event, every drop of brandy or other spirituous liquors added will detract from the flavor of the wine, and will not in the least degree increase its keeping qualities. Currant wine made in this way will keep for an age, unless it is—*drunk*.—*Germanatown Telegraph.*



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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NOURSE, EATON & TOLMAN, PROPRIETORS.
OFFICE...34 MERCHANTS ROW.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

SEPTEMBER.

To him who, in the love of nature, holds
Communion with the visible forms, she speaks
A various language. For his gayer hours
She has a voice of gladness, and a smile
And eloquence of beauty; and she glides
Into his darker musings with a mild
And gentle sympathy, but steals away
Their sharpness, ere he is aware.

Bryant.



SEPTEMBER. It has its name from Septum, a Latin word meaning seven, because formerly the year began with March instead of January — making September the seventh month of the year.

September is called a fall month, but it seems more properly to be a connecting link between summer and fall.—

Its first days are as warm and calm as those of June—not to speak of the month of June, eighteen hundred and fifty-nine, when it rained, and rained, till man-

kind almost feared a second deluge—but of June such as it should be—such as it was in our memories, and on the page of the poet. It is true, we miss the long, sweet twilights of early summer—and a few yellow leaves gleam from among the abundant foliage, like the first gray hairs that tell of departing youth. We can see, too, that the sun sets a little further to the south, but his beams are as ardent as ever, and as yet we have no need to put by our light garments, or to close our windows and doors against the outer world.

But presently comes the “equinoctial storm”—and the bright, brief vision of a northern sum-

mer is over! How the wind wrestles with the trees, and strips off the leaves, still green, in showers! Now we are glad to gather about the fire again, and to beguile our evenings with books and work in winter fashion. When the storm has spent its fury, it will pass by, but not again shall we look out upon a landscape having the semblance of summer. Decay is everywhere visible. Even the birds have heard a mysterious voice telling them that winter is coming, and warning them to seek a warmer climate. Man however, is not nomadic. It seems strange that, when “the world is all before them,” human beings should voluntarily subject themselves to the inconveniences of extreme heat and cold. But such is man's attachment to home, that he will endure almost anything rather than cut loose from old associations, and wander over the world seeking a place of rest. If necessity compel him to this, he presently takes root in his new abode—and gathers his household goods about him. As one by one his friends pass away, here he buries his dead, and more than one harsh wind will blow over him, before he will voluntarily surrender the comforts and delights of a permanent home. One would think, too, that the dwellers in the most beautiful lands would have the strongest attachment to home and country,—but such is not the case. The Frenchman loves his “vine-clad” France, and the Italian his sunny Italy, but the Switzer on duty in a foreign country, must not even hear his familiar *Ranz des Vaches*, or he can no longer be restrained from returning to the hills and glaciers of his own native land. Even the Esquimaux and Icelanders, were they transported to the orange-groves of the South, would sigh for the huts where they had burrowed with wife and children, and perhaps said wife and children are just as beautiful in their eyes, clad in robes of bear-skin, as those of their more luxurious neighbors in their silks and muslins. Well, “every man to his taste.”

Let us be thankful that we are born at least among the appliances of civilization—that if it is our destiny, in a general way, to put out our branches very near the spot where we first took root, let us rejoice that this spot did not happen to be the summit of an iceberg. Yet in this curious ordering of nature, we see a wise purpose. Were it otherwise, the tendency would undoubtedly be toward the temperate portions of the globe, giving them an undue population, while the rest of the world would be thinned of its inhabitants. One sees at a glance how the arts and sciences would suffer, and how many comforts we should be deprived of, which flow directly from an intercourse with people of different climates, habits and customs.

Doubtless some adventurous Dr. Kane would still pay a visit to the North Pole, but if there were no human beings in that region, native to the soil, his sojourn would be likely to be more desolate than any explorations we have yet heard of. But, to use another's language, "Where no trees grow, where no vegetables come to maturity, and gales from every quarter of the Icy Sea beat the last faint life out of nature, men will still persist in living, in apparent defiance of all natural laws."

"Well is it for us, that there are people whose ideal of life consists merely in possessing a sufficient quantity of whale oil, blubber and seal skins, with a warm den underground. To the torrid zones we are still more indebted. Our finest fruits, our precious woods, are all brought from countries about the equator.

But we have got upon a subject involving too many considerations to be fully dealt with here. One inference strikes us,—that what at a first glance seems mere accident, will be found, on a closer view of the subject, to be the result of a special design. It is so in this case, and we believe it will always be found to be so, where our own limited faculties do not stand in the way of full investigation. So may we always

"Look from Nature, up to Nature's God."

COAL ASHES AS A MANURE.

But few experiments have been made by American farmers, says a writer, to test the fertilizing properties of coal ashes. While we are importing guano and other manures from foreign lands in enormous quantities, and at great expense, it may be well to employ substances nearer home, which are now neglected and cast aside as worthless. Thousands of tons of ashes might be obtained in cities where coal is extensively employed for fuel, which, when applied to the soil, would doubtless greatly augment its productive powers. It is stated in "Faulkner's Farmers' Manual," an English publication on manures, that coal ashes contain sulphate of lime, with some

potash and soda, all of which are known, when separately applied, to produce a good effect on clover crops, and to constitute an important part of the food of all grasses.

The following experiment by an English farmer, may shed some light on the subject: The ground selected contained three perches (rods) of clover; the first had no manure, and produced thirty-eight pounds when cut in full head; the second, where four quarts of sifted coal ashes, which had not been exposed to the weather, were applied, the produce was fifty pounds; on the third perch, one quart of plaster was sown, and the crop weighed fifty-four pounds. It will be seen that the ashes increased the clover nearly one-quarter above that on which no manure was applied, which goes to prove that this substance is a valuable fertilizer. Coal is said to be of vegetable origin; therefore, we can see no reason why its ashes should not contain the food of plants. Experiments on various soils and crops might be made by any farmer at a small expense, as coal is employed as fuel in nearly every town.—*Etc.*

FARM DRAINAGE.

Everybody has heard of F. O. J. Smith, as one of the pioneers in telegraphing, as a politician who generally prophesies correctly, and a thorough going business man.

It may not be so generally known that Mr. Smith is, also, always interested in agricultural affairs, residing upon one of the most picturesque and beautiful estates in New England, known as *Forest Home*, near Portland, Me., where he amuses his leisure hours with his thorough-bred stock and the high culture of his broad acres. Thus he speaks in the *Eastern Argus* of Drainage, and Judge French's treatise on that subject.

A BOOK FOR FARMERS.

Of all departments of agricultural science, that which teaches the value, and best methods of THOROUGH DRAINAGE of lands for cultivation, has no rival in practical usefulness. No other is marked more distinctly in its results, when listened to and properly obeyed in its teachings. It is the base line of all wise agricultural improvement upon a major part of all lands on this continent.

Ditching grounds is the rude, superficial and temporary remedy of a positive evil.

Drainage is the perfection of ditching, reduced to a system of lasting effects.

One is the scratching of the scab which appears on the surface, and for temporary relief; while the other is the cure of the disease which produces the scab.

That farmer has a good look towards advantages, who ditches his grounds extensively.

But that farmer marches far in advance of the first, who appreciates and executes a well studied system of drainage.

In this country quite too little importance has been attached by farmers in general to either ditching or drainage; although many have understood and practised them well.

Most men have been inclined to seek lands for cultivation that seemed to require neither ditching or drainage. And yet, the most valuable of all lands for improvement and when improved, are those which require these agencies, and draining in particular, and extensively. And for the reasons that they are susceptible, under such system, of commanding, with most certainty of all lands, all the fertilizing elements of nature, and of using them in exactly the best proportions, and at the right times, and of throwing off the redundancies of each, as may be best for the growth, or support, or protection of the desired crop.

As a marked and instructive illustration of the effects of drainage, I recollect of noting in my readings some years since, the following statements from an English paper:

"There is a field on the estate of the Earl of Leicester, at Longford, in this country, which some years ago was occupied by Mr. John Sherat, and brought forth rushes in such abundance, that the occupier gave leave to any body to carry them away, who would be at the trouble to mow them. Three years ago, the field was drained, under the direction of Mr. T. Harper Foster, and this year, we are told, the present occupant, Mr. T. Robinson, has cut *three tons an acre* of as nice herbage as ever grew."

Judge HENRY F. FRENCH, of New Hampshire, through Messrs. A. & O. MOORE, Agricultural Book Publishers, New York City, has produced the most complete, instructive, readable and entertaining manual upon FARM DRAINAGE that has been given to this reading and progressive world.

It contains a greater variety of details, of clear and comprehensive, practical and practised results, of rules, and of reasons of rules, and of modes and agencies to be employed in this department of agricultural economy, than all other books extant, and substantially comprehending all other books on the subject.

As the incidents of *thorough drainage*, and proper to be understood, the legal rights of flowage and drainage, pertaining to land owners—average annual rain falls; snows, dews, frosts, composition, filtration, absorption, and their affinities, are discussed and illustrated in a style alike entertaining and instructive, and more than one hundred engravings are interspersed to make clear to the eye whatever the pen might have failed to render clear to the commonest understanding.

And, what is especially praiseworthy in an author, he has furnished not only an elaborate table of contents, but a capitally minute index, without which the best of books is only as a lighted candle under a half-bushel measure.

Judge FRENCH is himself a practical farmer as well as jurist, and a constant writer on the theories and practice of agriculture, being one of the editors of the *New England Farmer*.

Besides personal practice and extensive reading and writing on this science, he has treated himself to extensive personal observation of the practice of others, in both our own and foreign lands. He visited Europe a year since with a special reference to his own improvement in his study and practice of agriculture.

With a mind naturally active, vigorous, search-

ing and discriminating—with an ambition to render himself personally useful to others, concurrently with a rational enjoyment of life—with an acquisition of advantages in education and society tending directly to the success of these endowments and personal aims—it would be strange if in attempting to produce a book ranging within the chosen field of his chiefest labors he should have failed.

He has not failed. And no man who obtains the book and reads it will feel otherwise than rejoiced in the possession of it. No man owning an acre of ground should be without a copy of it. It is the book for distribution by our Agricultural Societies as premiums at their shows. Even the housewife, who is privileged to learn by study in doors, what the prudent husbandman, and his sons and workmen, ought to understand how best to execute out-doors, will find this volume both readable and interesting in its lively style and manifold details. And she, too, may be left to the struggles of a desolate widowhood, in the management of a heritage, until her youthful sons can release her of the painful responsibility, and until then she will need to know how to instruct those sons in the judicious modes which the father would have pursued if present, first with this field and then with that, to secure the greatest improvement and derive from it the greatest advantage. In all that relates to redeeming lands from the waste of a superabundance of waters, Judge FRENCH's book will be found a faithful counselor in her solitude and cares.

It is seldom I find leisure, or feel an inclination, to praise a book. It is generally labor enough to read them thoroughly. But I deem this production of Judge FRENCH so deserving, and so calculated to be useful to the agricultural community, I hesitate not to risk all the censures which any intelligent person who may procure and carefully read it, may feel disposed to bestow upon me, for commending it to him.

FRANCES O. J. SMITH.

Forest Home, Westbrook, July 27, 1859.

STATE FAIRS FOR 1859.

We publish below a list of the various State and Provincial Fairs to be holden the coming fall, as nearly perfect as we can make it from the information in our possession.

STATE.	PLACE.	TIME.
Alabama.....	Montgomery.....	November 15—18
California.....	Sept. 27—Oct. 6.
Canada West.....	Kingston.....	September 27—30.
Connecticut.....	New Haven.....	October 11—14.
Illinois.....	Freeport.....	September 5—9.
Indiana.....	New Albany.....	Sept. 23—Oct 1.
Iowa.....	Oscalooza.....	September 27—30.
Kentucky.....	Lexington.....	September 12—17.
Main.....	Augusta.....	September 20—23.
Maryland.....	Frederick City.....	October 25—28.
Michigan.....	Detroit.....	October 4—7.
New Hampshire.....	D. ver.....	October 5—7.
New Jersey.....	Elizabeth.....	September 13—16.
New York.....	Albany.....	October 4—7.
Ohio.....	Zanesville.....	September 20—23.
Pennsylvania.....	Philadelphia.....	September 27—30.
Southern Central Agricultural Society,		
.....	Atlanta, Ga.....	October 24—24.
St. Louis Agricultural and Mechanical Association,		
.....	St. Louis.....	Sept. 26—Oct. 1.
Tennessee.....	Nashville.....	October 5—7.
United States.....	Chicago.....	September 12—17.
Vermont.....	Burlington.....	September 12—16.
Wisconsin.....	Milwaukee.....	September 23—34

For the New England Farmer.

AGRICULTURAL KNOWLEDGE.

MR. EDITOR:—It appears to me that the means of obtaining agricultural knowledge is not so easy as it ought to be. The State money which is distributed annually among the several county societies, can and ought to be so managed that knowledge will accrue from it to the great mass of the farming interests of the State, instead of doling it out in premiums, to a fortunate few.

I have recently been perusing the pages of the "Transactions of the Massachusetts Society for Promoting Agriculture," which is a new series just issued, and I find that from its foundation, its managers have been zealous in getting agricultural knowledge in some form or other before the people; they resorted to such expedients as were available, which were widely different from the collection of such matter and resources for its dissemination now. It appears if there was that interest taken in the diffusion of agricultural knowledge at the present time, that there has been formerly, it would materially change the aspect of many rural homes. "Knowledge is power." Its effects have produced wonderful changes. May it be applied to the important science of agriculture in such a manner, as to give it a new impetus. It may be said, we have a large number of agricultural works and newspapers; this is all very well, but it does not suffice. We want a system by which the *community* may be drawn together to have a talk, or hear occasionally a lecture on agriculture.

Winchester, Feb. 8, 1859.

D. W. J.

REMARKS.—Certainly. We have given premiums a fair trial—let us now try something else. When you have got farmers to talk and compare notes among themselves, in public gatherings, you will at once inspire them with a new love and interest in their calling; and then they are in a condition to receive benefit from lectures, books, and the discussions of more scientific men.

For the New England Farmer.

UNDERDRAINING---MOWING MACHINES.

MR. EDITOR:—I this morning visited the farm of Mr. Franklin Alley, of Marblehead, who, wherever he is known, is regarded as good authority as any other man, on subjects to which his attention has been given. My particular object was to witness the improvements he has made by underdraining. For many years the farm he occupies has been known as one of the most productive hay farms in the county. He now uses about half of it for the growing of vegetables. On this he has laid about 3000 feet of underdrains—on an average about 2½ feet deep. By so doing, he thinks his crops have been doubled. My attention was first called to this, by the extraordinary crop grown on his land, an account of which was given in our transactions. Mr. Alley is a practical farmer, without pretensions, *no mistake*. While looking at his lands, I saw about two acres of grass that had been cut with the Buckeye Mower, moved by two horses.

I asked him which he preferred, a single or two-horse mower. He said he would not take a one-horse implement, and work it through the season, if any one would give it to him. That one horse was not adequate to the performance of this work. This so entirely accorded with the impression that I had formed, that I was pleased to hear it; and now mention it for the information of those who are willing to learn the best mode of cutting grass—of which there is at present a prospect of so great an abundance. I do not pretend to be an instructor myself, any further than I learn from good authority.

J. W. PROCTOR.

South Danvers, June 30, 1859.

LOOKING IN THE WINE CUP.

"Look not thou upon the wine cup when it is red, when it giveth his color in the cup, when it moveth itself aright. At the last it biteth like a serpent and stingeth like an adder."—*Proverbs* 23 : 31, 32.

Hiram Cox, M. D., of Cincinnati, has made the following statement:

"I analyzed a lot of liquors for some conscientious gentlemen of our own city, who would not permit me to take samples to my office, but insisted upon my bringing my chemicals and apparatus to their store, that they might see the operation. I accordingly repaired to their store, and analyzed samples of sixteen different lots. Among them were Port wine, Sherry wine and Madeira wine. The wines had not one drop of the juice of the grape. The basis of the Port wine was diluted sulphuric acid, colored with elderberry juice, with alum, sugar, and neutral spirits.

The basis of the Sherry wine was a sort of pale malt, sulphuric acid, from the bitter almond oil, with a per centage of alcoholic spirits from brandy.

The basis of the Madeira was a decoction of hops with sulphuric acid, honey, spirits of Jamaica rum, &c. The same week, after analyzing the above, and exhibiting the quality and character of the liquor to the proprietors, a sexton of one of our churches informed me he had purchased a gallon of the above Port wine, to be used in his church on the next Sunday for sacramental purposes, and that, for this mixture of sulphuric acid, rum and elderberry juice, he paid \$2,75 a gallon."

Prof. C. A. Lee, of New York, makes the following statement:

"A cheap Madeira is made here, by extracting the oils from common whisky, and passing it through carbon. There are immense establishments in this city where the whisky is thus turned into wine; in some of those devoted to this branch of business, the whisky is rolled in in the evening, but the wine goes out in the broad daylight, ready to defy the closest inspection."

Prof. Lee further states, "The trade in empty wine casks in this city, (N. Y.) with the Custom House mark and certificate, is immense; the same casks being replenished again and again, and always accompanied by that infallible test of genuineness, the Custom House certificate. I have heard of a pipe being sold for twelve dollars."

"There is in the neighborhood of New York an extensive manufactory of wine casks, which are made so closely to imitate the foreign, as to

deceive experienced dealers. The Custom House marks are easily counterfeited, and certificates are never wanting."

"I have heard," says Dr. Lee, "dealers relate instances in which extensive stores had been filled with these artificial wines, and when merchants from the country have asked for genuine wines, these have been sold them as such, with assurances that there could be no doubt of their purity."

The late Rev. T. P. Hunt, of Wyoming, Penn., wrote: "While I lectured in Philadelphia, I became acquainted with a man who was engaged extensively in making wines, brandy, &c. Through my influence he abandoned the horrid traffic. He informed me, that in order to produce the "nutty flavor" for which Madeira was so much admired, he put a bag of cockroaches into the liquor and let it remain there until the cockroaches were dissolved. I have been informed by several that this is no uncommon practice. If any wine drinker doubts it, he can soon settle the question by experiment. Cockroaches are plenty, and many much more nauseous and poisonous substances are known to be employed by the makers and venders of intoxicating drinks. I would give you the name of the person who gave the recipe for using cockroaches, but he gave it in confidence, and is now occupying a much more moral and useful station than that of poisoning his customers."

Says President Nott, in his admirable lectures, "I had a friend who had been himself a wine dealer, and having read the startling statements, some time since made public, in relation to the brewing of wines, and the adulteration of other liquors generally, I inquired of that friend as to the verity of these statements. His reply was: 'God forgive what has passed in my own cellar, but the statements made are true—all true, I assure you.'"

"That friend," says President Nott, "has since gone to his last account, as have doubtless many of those whose days on earth were shortened by poisons he dispensed. But I still remember, and shall long remember, both the terms and the tone of that laconic answer, 'The statements made are true—all true, I assure you.'"

"But not on the evidence of that friend does the evidence of these frauds alone depend. Another friend informed me that in examining, as an assignee, the papers of a house in that city, which had dealt in wine, and which had stopped payment, he found evidence of the purchase, during the preceding year, of hundreds of casks of cider, but none of wine; and yet it was not cider, but wine, which had been supposed to have been dealt out by that house to its confiding customers."—*Michigan Farmer*.

WESTFIELD ACADEMY.—We notice this institution with pleasure because it has an Agricultural Department. The late STEPHEN HARRISON, (we will cherish his memory,) of Westfield, bequeathed \$5000 for endowing this department, and the town, with great good sense, contributed an additional sum of \$5000.

The course of instruction in this department, we learn, is eminently practical, and includes al-

most every topic connected with agriculture and horticulture. We have heretofore spoken of the Institution at Bernardston, Mass., conducted upon similar principles. These are among the encouraging indications of the progress of agriculture. The course of study at Westfield includes,

Recitations in Scientific Agriculture.
Agricultural Chemistry.
Special Topics in Chemistry and Agriculture.
Theory of Fertilizers.
Discussions of Questions relative to Crops, Modes of Culture, Agricultural Implements, etc.
Feeding and Treatment of Stock.
Directions for conducting Experiments in Agriculture.
Discussion of Agricultural Statistics.
Principles of Land Surveying.
Horticulture.
Fruits and Modes of Culture.
General Principles of Taste, with Applications to Landscape Gardening and Rural Architecture.

JOSEPH B. HOLLAND, M. A., Principal.

WORCESTER AGRICULTURAL SOCIETY.

FORTIETH ANNUAL REPORT.

This report contains the award of premiums, statements of committees and competitors, the by-laws of the society, and a list of the members from its origin. The premiums awarded amounted to \$979 50. There appears to have been a fine show of neat stock, and this is always expected in Worcester, for there is no finer stock to be found in the State, than in Worcester county. Horses were obviously a prominent feature at the exhibition, and nearly one-third of the whole amount of premiums awarded was for horses. Two premiums of \$50 each were given to one person for two fast horses! We notice, also, that \$331 were received for the use of the track. This we suppose was for a purpose not contemplated in the act incorporating the society, or for any thing that would tend to promote the art of agriculture. We presume, however, that the operations on the track were not carried on under the immediate supervision and patronage of the society, but only with its knowledge and consent, and the society, must therefore share in whatever credit and honor may be attached to them.

We notice that the society has a heavy debt of nearly \$16,000, the interest on which absorbs a large portion of its income. We fear it will be a long time before the profit derived from the track will pay this debt. We believe the true policy of all our societies is to invest as little as may be in real estate, and keep their funds so invested that they will yield an annual income, which may be used for the legitimate purposes of the organization. When money is invested in buildings, insurance must be paid, and they constantly require repairs, which absorb no small portion of the income of the society. A cheap, substantial hall, that will accommodate the exhibition, when suitable accommodations cannot be procured in the immediate neighborhood, is justi-

fiable. The purchase of ground and the erection of buildings, fixes the annual meeting at the place where the estate is located, and however gratifying it may be to the people in the immediate vicinity, leads to the division of county societies into district societies. This has been the case in Worcester and Middlesex, and will be the case in other counties, whereas, if the annual exhibitions could be held alternately at two or three towns in the county, the county societies might continue unbroken, and have strength and friends enough to devise and execute many useful and efficient plans for the promotion of agriculture, which cannot be accomplished under the existing order of things.

EXTRACTS AND REPLIES.

WHITE SPECKS IN BUTTER.

I noticed in the *Farmer* of June 11, an article written by Henry Holmes, on "White Specks in Butter." I never manufactured or sold churns, but have used churns more than forty years; I have had white specks in my butter, but it was not caused by uneven churning, or by scraping down the cream while churning. The cream should be put down as soon as it thickens, and before the buttermilk appears, or you lose the cream, but it will not cause white specks in the butter; dried cream is the cause of white specks. It is dried in summer by a current of air blowing across the pans. Since I altered my milk-room, and put on a blind to prevent the wind from blowing directly across the pans, I have got rid of the dried cream. If your cream is dried, you can soak it in the cream-pot and prevent the specks in the butter; it should be soaked twenty-four hours before churning, and stirred well, and if thick, some milk added to soak it; but if you churn it as soon as skimmed in Fyler's churn, or any other churn, you will have white specks in the butter.

AN OLD FARMER.

Montpelier, Vt., July 4, 1859.

A YOUNG NON-BEARING ORCHARD.

I have a young and thrifty orchard, from which I receive little or no fruit. The trees are about 12 inches in diameter, and in a rich soil, facing the sun; the ground has been cultivated every year and a crop taken off, since the trees were set, 12 years ago. As trees in good bearing yield, I have enough for one hundred barrels of apples. What can be done to procure a crop of apples? Will you, or some of your correspondents, answer this question? E.

REMARKS.—Hard to tell you. Let it go to grass two or three years, clover, and then plow it again shallow, and see what the result will be.

MR. REED AND HIS BUGS.

In the summer of 1858, my attention was arrested by the grand microscopic discovery made by Mr. Lyman Reed, of Baltimore, of the bug that destroyed the potato. I received from him

notice of his patent right for the remedy, and an earnest solicitation to participate in the benefit, simply by remitting a small sum in advance—but time passed on, and the bugs with it, and I have heard nothing of them since. I have a strong suspicion that the bug discovered was of the humbug order; whether it will be found in the latest work on insects, I am not able to say. I am in hopes the Board of Agriculture, with their entomologist from Christian Hill, in Andover, will be able to tell us about it, when they next publish a treatise on onion maggots. *.*.

REMARKS.—We know Mr. Reed, and believe him to be an ardent and sincere inquirer after truth.

EGGS OF INSECTS ON GRAPE VINES.

I herewith send you by a friend, a small slip from my grape vine, cut in March last. It contains, as you will perceive, either an insect, or the larvæ of some insect. My vines have, for some years, been nearly covered with it. When plump and fresh, it presents a disgusting appearance; has the small red insect called lady bug anything to do with it? Will you please inform me through your paper what it is, or what comes from it? D.

Lynn, July, 1859.

REMARKS.—We are unable to shed any light upon the inquiries of our correspondent. Several persons have examined the piece of vine sent, but without giving us any knowledge of what occasions its singular appearance.

TO KILL COCKROACHES.

In your July number of the *Farmer* "A Subscriber" asks what will exterminate cockroaches. In reply—Equal parts of dry red lead and sugar, well mixed, is a certain and sure exterminator of cockroaches, black and red ants, and other like pests. A READER.

TO "OAK HILL"—PINES AND DUCKS.

For the information of "Oak Hill," please say the best time for transplanting the pine, spruce, &c., is from the first to the middle of June. The same care is needful in transplanting them as in other trees.

He will obtain the Muscovy ducks he inquires for by sending four dollars for the three to South Wilbraham, Mass. NELSON MOWRY.

GRASSES.

Will you please give me the names of the enclosed grasses? E. T. WHEELER.
Berlin, Mass., 1859.

REMARKS.—The parcel marked "No. 1," is the true Fowl Meadow Grass. "No. 2," is the Italian Rye Grass. "No. 3," is the Blue Joint. "No. 4," is a grass entirely unknown to us.

GOOD OPINIONS.

Thanks to "O. P. I.," Pembroke, Mass., for the good opinions he expresses for the *Farmer*.

For the New England Farmer.

CORN AND CORN FODDER.

In the monthly *Farmer* for March is an article on "Corn and Corn Stalks," by W. Bacon. I fully endorse his preference for the "old foggy" way of topping the corn, both on account of the grain and the fodder, and also the labor of harvesting.

I have tested the matter to my entire satisfaction by cutting up at the roots and shocking a part of my corn each year for several years past. When severe frost is apprehended, the "new way" may be advisable, but in all other cases I much prefer that my corn should ripen the "natural way."

I place a high estimate upon the value of corn fodder for stock, and much has been said and written upon the best mode of curing it. The way which I prefer and practice is this:—when the tassel has become dry and the kernel well glazed, I cut off the stalk above the ear, laying the stalks of two hills together. When wilted I bind and pike them in the field, letting them remain, if the weather be favorable, ten or twelve days, then cart to the barn, hanging them on poles or setting up under the roof.

I find that my cattle eat them better if cured in this way, than if hung up in the barn as soon as bound, or if dried wholly in the field.

As I husk my corn mostly evenings, I begin so early in the season that the husks and butts would mould too much, if I did not mix with them a quantity of straw or poor hay. I also salt them freely.

My cattle being judges, the fodder is better cured in this way than when all is cut up together and exposed to the weather the usual time allowed in such cases. Perhaps it is because they have failed to "get the hang of it," which I am sometimes told is the reason why I think the labor greater to harvest corn which is shocked, than that which is topped.

While I agree with your correspondent in so many things, I must dissent from his opinion that it is better to feed out all the corn stover in early winter, to the exclusion of other fodder. Fed out *exclusively* it is too laxative, and nothing but the husks will be eaten; but a few foderings a week, from November to April will tend to keep the bowels of the cattle in a loose and healthy condition, especially if you have much straw or poor hay to feed out. A few corn butts, through the winter and spring, occasionally, will be chewed with a relish.

From my own experience I am led to believe that the well secured fodder from 150 to 200 bushels of corn, fed out judiciously, to a stock of 25 head, is nearly as valuable as an equal weight of medium quality hay.

It is often and truly said, that the value of the turn crop can hardly be overestimated. It is a native grain, and, on a large proportion of our soils, the surest crop which can be cultivated. The farm on which I have always resided, was purchased by my father when covered with its native forest. He was told that he must not expect to raise corn; and when, after a few years, he ventured to plant a small patch, and succeeded in raising *fifteen bushels of ears*, he felt that his land had an unexpected value. I have often

heard my mother remark that she looked upon that *first* crop of corn, when in the field and in the chamber, with more satisfaction than upon any succeeding crop, though many times as large. While many of our crops, from causes known and unknown, deteriorate as the land grows older, the corn crop, from improved cultivation, has continued to improve, until reports of 80, 90, or even 100 bushels to the acre, have ceased to create surprise.

"The golden corn" has drawn inspiration from some of our most talented poets, but even a Longfellow cannot give it a richer dress than its own bright hue.

J. WOOD.

Royalston, July, 1859.

For the New England Farmer.

LETTERS FROM MAINE--No. 3.

Apple-Tree Philosophy—Should Seed be Planted where the Tree is to Grow, &c.

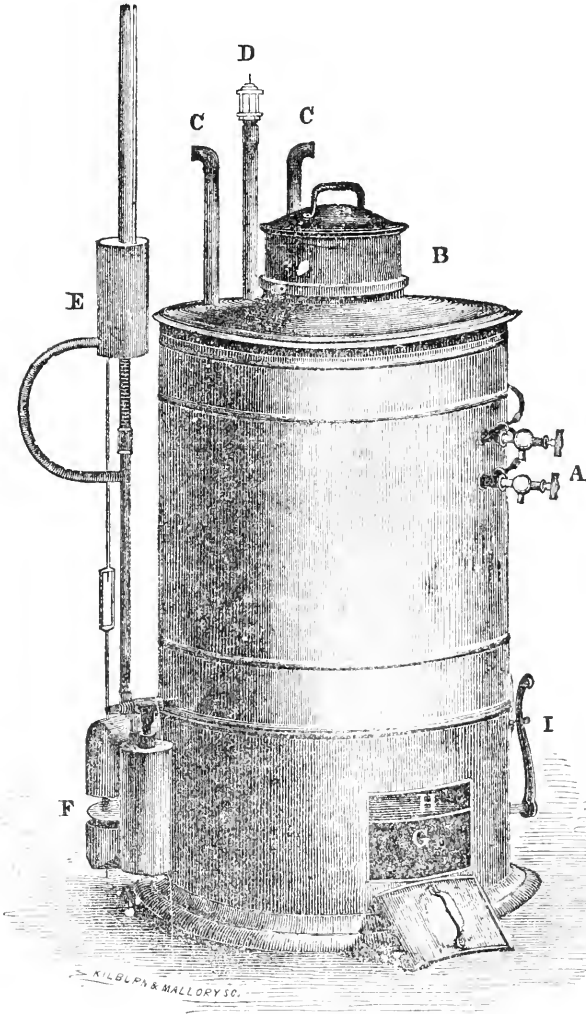
I read with much interest the observations and speculations of several correspondents of the *Farmer*, who seem to be devoting particular attention to the subject of fruit culture. I, too, would show my opinion, and propose in my present communication to discuss the subject of apple-tree philosophy.

One writer contends that apple trees ought to be planted in the seed where they are designed to grow, as transplanting injures the tree and makes it shorter lived. This theory he supports by the fact that trees which came up accidentally by the sides of fences, &c., prove to be more healthy and longer-lived than those which are raised in nurseries and transplanted into orchards.

I will not dispute the fact alleged, but I will account for it in a different manner. Trees which come up accidentally in the situation alluded to grow very slowly for a number of years, and all slow growing trees are hardier than those which grow more rapidly. Even if such trees, after a while, become rapid growers they preserve the peculiar condensed cellular texture of wood and bark which was at first the result of slow growth. When an apple seed germinates and sends forth its first leaves, or perhaps the first ten or twelve leaves, it has a tender herbaceous stalk, and if the soil or culture force the growth, while in this state, the sap cells become large, and when the stem hardens to wood this peculiarity is preserved and transmitted to every succeeding part of the tree, and even to the fruit. Hence the fact that trees from some nurseries will produce fruit of different average size and flavor from those which are raised in another nursery. Nurseries which are not forced the first year will produce trees of firmer wood, slower growth, harder character, smaller fruit, and fruit of finer grain than the average of forced nurseries.

Will not this account for the longer life of apple trees which originate under disadvantageous circumstances? Another cause may likewise have a share in producing the effects under consideration. The mechanic knows that "pasture oaks"—as lone trees growing in fields and pastures are sometimes called—make tougher timber than trees taken from groves. The firmer texture of the wood is the result of the shaking and bend-

NICHOLS AND INGALL'S PATENT STEAM WARMING APPARATUS.



Within the extended circle of our readers there is a large class of persons living in cities, or populous towns, who are not farmers, and who use coal, principally, as fuel. This class, probably, numbers some thousands. They are among our prompt and steady supporters, and we feel inclined to say and do something occasionally for their especial benefit. In noticing the Steam Heater, however, we are far from believing that it may not yet be introduced into a large number of farm-houses, heated with wood as fuel, and keep the entire house warm with a less expense than is now incurred. We had it in use all last winter and spring until warm weather, and enjoyed the luxury of a tropical climate, if we desired it, or kept the house at any temperature we pleased. For warming three rooms, each fifteen feet square, and a little more than nine feet high, three rooms of the same size and eight feet high, and two halls, each thirty feet long, we used $3\frac{1}{2}$ tons coal, at a cost of about \$40,—and we think this more than would have been required, had we thoroughly understood how to manage it from the first. During the extreme cold of the eleventh of January, when the thermometer fell to 22° below

ing which the tree receives from the winds in its exposed situation. Apple trees which stand alone or in exposed situations will possess the same characteristics; and I believe the fact is now generally conceded, that orchards planted in situations exposed to the winds are longer lived and better bearing orchards than those which are located in sheltered situations. At least, I think this is the case in high northern latitudes.

SANDY RIVER.

☞ Truth is the most powerful thing in the world, since even fiction itself must be governed by it, and can only please by its resemblance. The appearance of reality is necessary to make any passion agreeably represented, and to be able to move others, we must be moved ourselves, or at least seem to be so, upon some probable grounds.

zero, no more coal was used than usual, but the rooms on the north side of the house were shut up, so that the halls and chambers in use could easily be kept up to 60° or 65° , and the sitting-room which the family occupied to 73° , with perfect ease.

It is simple in its construction, and in no way more liable to get out of order than a common stove. It is self-feeding, both as respects a supply of coal and water, and controls the air-draft promptly and perfectly. There is not a single pulley, float valve, chain or pump connected with it, and there are no tubes, flues or valves in the boiler to become obstructed or get out of order.

The apparatus is as portable as a house stove,

and can be put up in a basement, hall or parlor, as may be desired. It requires no more than ordinary skill in its management, and may safely be intrusted to servants who can attend upon an air furnace.

It receives a supply of fuel in the morning sufficient for twenty-four hours, and the steam does not vary in amount night or day.

The steam is condensed in the radiators in the rooms, and runs back to the boiler through the same pipe that conveys it from the boiler. If there is no escape of steam or no leakage, *the same water put into the boiler in the autumn will be found there in the spring, undiminished in quantity.* There is a simple device for feeding water, if it is wanted.

The amount of fuel required is very small, not more than half the amount used in hot air furnaces.

EXPLANATION OF THE CUT.

- A, are the water cocks to show the height of the water in the boiler.
 B, the fire pot. The fire is *built in the boiler*, by taking off the cover at B, and putting in the coal.
 C C, are pipes for conveying steam to the radiators.
 D, is a safety valve.
 E, a water vessel sliding upon a tube to open and close the air-draft valves at F.
 G, shows the position of the ash pit.
 H, an opening into the space around the boiler.
 I, the handles to the grate.

It is not so much our purpose now to speak of the advantages of this arrangement in regard to health as to the *economy* of the matter; but the great superiority of steam heat over that got by stoves or hot air furnaces, is very generally understood and conceded. Health and safety ought to be the first consideration,—but a saving of dollars *will be*, by a majority.

A six months' use of this steamer has convinced us that we can save the whole cost of the apparatus in a few years in the item of fuel alone. Then there is a great saving of time, as it does not require half the time to tend it to warm the whole house, that it does to tend a stove to warm a single room! Another item of saving is in sweeping. There is no dust from it, either of ashes or coal, so that very little sweeping of carpets or floors is required.

It is ornamental, durable, economical, *absolutely safe*, as it is impossible for it to explode, and gives an elastic, wholesome air to breathe, warmed up to 65° or 75°, without depriving it of any of its vital powers, or adding anything hurtful to it. When the thermometer stands at 70 in the room, the air has a cool and fresh feel-

ing, like that blowing upon a person standing in the shade in a hot summer day.

Those who are building may introduce this steamer at a very cheap rate, as but one chimney will be found necessary in the house.

For further particulars inquire of Messrs. Braman, Perham & Co., 8 Charlestown Street, Boston.

THE NEW MOWN HAY.

BY CHARLES MACKAY.

When swallows dart from cottage eaves,
 And farmers dream of barley sheaves;
 When apples peep amid the leaves
 And woodbines scent the way—
 We love to fly from daily care,
 To breathe the country buxom air—
 To join our hands and form a ring—
 To laugh and sport—and dance and sing,
 Amid the new mown hay.

A stranger comes with eyes of blue;
 Quoth he, "I'm Love, the youth and true;
 I wish to pass an hour with you,
 This pleasant summer day."
 "Come in! come in! you saucy elf!
 And who's your friend?" "'Tis friendship's self."
 "Come each—come both, our sports to share;
 There's welcome kind, and room to spare,
 Amid the new-mown hay."

The ring is formed; but who are these?
 "Come, tell your errand, if you please;
 You look so sour and ill at ease,
 You dim the face of day."
 "Ambition!" "Jealousy!" and "Strife!"
 And "Scorn!" and "Weariness of Life!"
 "If such your names, we hate your kin;
 The place is full, you can't come in
 Amid the new-mown hay."

Another guest comes bounding by,
 With brow unwrinkled, fair and high—
 With sun-burnt face and roguish eye,
 And asks your leave to stay.
 Quoth he, "I'm Fun, your right good friend!"
 "Come in! come in; with you we'll end!"
 And thus we frolic in a ring—
 And thus we laugh, and dance, and sing,
 Amid the new-mown hay.

For the New England Farmer.

INSTINCT OF ANIMALS.

MESSEURS. EDITORS:—For the specimen of your valuable paper under the new firm, I thank you. Most animals have some peculiarities indicative of a change in the weather, beside the grass-eating dog. The goose, for instance, that usually may be found sitting about the farmer's door, in the summer time, in pleasant nights, however pleasant the afternoon and evening may be, if it is to be rainy or stormy before morning, will most certainly take shelter. Yet they have not the least idea of perpendicular distance, for they will quite as lowly bow the head in passing under the great doors of the barn as under the lowest rail of a fence. Swine, especially those with families of pigs, will indicate a change of weather, and quite surely before a thunder storm, by the great fear they manifest in their uneasiness. A litter of pigs at sea, are as valuable as a barom-

eter,—and at the end of the week, more so, as they serve as a fresh mess for poor Jack.

Most of the papers, particularly agricultural ones, abound in advertisements of artificial manures—they are well enough for use in the vicinity of large cities, where manures, proper, cannot be so well made; but for the country, where farming is pursued as a business, to make it profitable, the fertilizers used must be made upon the premises.

AGRICOLA.

Augusta, Maine, July 10, 1859.

For the New England Farmer.

CULTIVATION OF CORN AND OATS.

BY FREDERICK HOLBROOK.

Benefits of Cross Cultivating—Effects of different Fertilizers—Corn not calculated to follow Turnips or Buckwheat—Guano for Oats—Oats and Grass—Guano on Grass.

MY FRIEND MR. BROWN:—I have been looking about in the fields here to-day, observing the modes of cultivation, &c., and now send you a few notes about such things as most interested me in the course of my tramp.

In passing through five or six cornfields, I was impressed anew with the advantages one derives from having the rows of corn marked out both ways of the field, so as to use the horse and cultivator each way between the rows, at hoeing time. Indeed, if the land gets foul with grass and weeds, or is at all inclined to be heavy and to pack close, or to crust over after a rain, the horse and cultivator may be advantageously used twice in a row, each way, at each hoeing. By using the horse and cultivator thus thoroughly, the land is worked up fine and mellow, the labor of hand-hoeing is very much lessened, and the young corn grows all the more rapidly, and is more "stocky" and healthy, for having the soil thus completely stirred up and its particles changed about and mixed anew, or if the manure is near the surface, within reach of the cultivator, having that stirred about and brought in contact with other or different particles of the soil. The horse and cultivator can do very much more for the crop, in the way of mellowing and enlivening the soil, and effectually rooting up grass and weeds between the hills, than can be done by man with the hand-hoe. The hand-hoe is indeed quite necessary for dressing out the hills and shaping the earth properly about the young corn-plants, out beyond that the horse and cultivator are the most serviceable to the crop. So far as I can form an estimate, from considerable particular observation of the effects of cultivating or thoroughly stirring the ground, I am inclined to think one may realize from five to ten bushels more of corn to the acre, by the thorough use of the horse and cultivator between rows running each way of the field, than he would obtain if he worked the land only one way, all other things, as to land, manure, &c., being equal. The gain in the crop by thoroughly working both ways, over what could be realized by working only one way of the field, will be somewhat in proportion to the natural tendency of the land to pack closely and crust on the surface, or to bear weeds and grass between the hills. In any case, however, let the character of the land be as it may, the saving of expense in cultivation will be consider-

able by working the land both ways, with the horse and a good sharp cultivator, rather than by digging so much between the hills of corn with the hand-hoe, as must necessarily be done if the cultivator is used only one way of the field.

I have repeatedly observed in my own corn-fields that where they happened to run out at either end in a long triangular point, so that the narrowest part was too narrow to bother with so short rows crosswise the field, and therefore this end was only worked with the horse and cultivator the long way, while the rest of the field was worked in rows both ways, the corn on the narrow end would not grow so fast the first of the season, nor yield so large ears at harvest, as that on the rest of the field.

Notwithstanding the fine theory that may be stated as to the advantages of level cultivation of the ground for the corn crop, I must still say that I do like good broad hills,—especially, if the land is inclined to pack, or to crust over. A well shaped, mellow hill, not raised too high and peaked, operates to send the corn forward rapidly, and make it stocky and stout.

Several corn-fields have been examined to-day, which have a dressing of superphosphate of lime in the hills. My neighbor, R. BRADLEY, Esq., has several acres of corn, dressed with a heavy coat of manure, broad-cast, and a table-spoonful of superphosphate in each hill. His corn is large and vigorous for the season, and of splendid color. On one field he used superphosphate in a part of the hills, unleached ashes in another part, and plaster in the remainder. That portion of the corn dressed with the superphosphate is decidedly superior in size and color to those portions dressed with ashes and plaster; and it appears now as if this superiority might hold out through the season. Coe's superphosphate was used. It seems to be a very strong manure, and needs a good covering of earth before dropping the seed-corn over it. Occasionally, in a hill, where the superphosphate did not happen to get well covered before planting the seed, the corn was dilatory about coming up and growing, at first,—the superphosphate being in too close contact with it and eating off the little tap roots as fast as they shot out. But at length the lateral roots pushed out beyond the superphosphate, and the ground also absorbed and modified its qualities, so that the downward tending roots could run through it, and now the corn in these hills is growing well, and may perhaps catch up in size with that which had a more favorable starting.

I next came to a corn-field of my own, well manured broad-coast, and in addition dressed with a shovel-full of manure in each hill, on half of the field, and a table-spoonful of superphosphate in each hill on the remainder. The corn has been cut pretty hard by frost at three different times; but it has survived all hindrances, and is now growing fast. On the half that has superphosphate in the hills, the corn is taller and of a deeper green color than that which has the manure in the hills. This goes to show that the superphosphate has the quality certainly of forcing the corn along fast through the first of the season. Whether it will hold out in good works as well as the manure, can be better determined by-and-by.

MR. CHARLES LAWRENCE has three acres of corn which is well manured broad-cast, and has a table-spoonful of superphosphate in each hill. The corn is of good size for the season, and its color as good as can be. Here, too, Coe's superphosphate was used, and there are occasionally hills where it came too near the corn, delaying its growth at first, the same as in Mr. Bradley's field; but the roots have at length got good foothold, and the corn in these hills is now growing well.

I next looked at Mr. RUFUS PRATT'S corn-field, which also is manured well broadcast, and on a part of the field the hills are each dressed with a shovelful of rotten manure, and on the remainder with a table-spoonful of a mixture of Mapes's superphosphate with plaster, about half-and-half of each. Here the corn planted on the compost manure is the tallest as yet, but that planted on the superphosphate and plaster has rather the deepest green color. As a whole, Mr. Pratt's corn stands remarkably even, and gives promise of a fine crop.

I next examined Mr. RUFUS CLARK'S corn. He has several pieces which are dressed in the hill with a compost of Mapes's superphosphate with old rotten muck, a handful to each hill, and about a table-spoonful of superphosphate included in each handful. The land is also manured broad-cast. He has also one or two pieces with a shovelful of manure in each hill, instead of the superphosphate and muck. As a general thing, the corn planted on the superphosphate and muck has a deeper green color than that on the manure, but there is little or no difference between the two as yet as to size of stalks. On one of the fields the superphosphate and muck mixture was omitted in two of the rows of corn, while the remaining rows had a handful in each hill. The corn in these two rows is quite small and pale, as compared with the rest of the piece, and shows one, at a single glance, the value of the dressing in the hills, for starting the young corn forward vigorously.

Mr. Clark's practice of mixing superphosphate with dry finely pulverized muck, appears to me to be an excellent one. The superphosphate, thus diffused and modified by mixture with the muck, is not likely to cut off the young tender corn-roots in the hill; and the muck, which is a superior absorbent, imbibes enough from the superphosphate to sweeten and prepare it for use, and thus furnishes a little finely pulverized vegetable food to nourish the young corn, and makes a little mellow hill or place for the roots to work in. The proportion of muck to superphosphate may be such as to enable one to use say a large handful of the compost in each hill, and not include more than about a moderate table-spoonful of superphosphate in each handful of the compost. Perhaps even a smaller quantity of superphosphate would have a marked effect on the corn, especially if the mixture was made up a week or two previous to planting time, and the compost kept in a dry place, under cover. The older, drier and more finely divided the muck is, the better the superphosphate will mingle with it, and the better, every way, the quality of food the compost will make for the young corn.

I noticed, to-day, a field of corn which last year produced root-crops—a part potatoes, a

part carrots, and the remainder turnips. The land is of uniform quality, and well and equally manured, broadcast, this spring. There is not much difference in the growth and color of the corn on the portions of the field which last year produced potatoes and carrots, though perhaps the corn after carrots looks rather the best. The corn after turnips, however, is small and pale as compared with that on the other portions of the piece; and from former experience, I should incline to expect that this inferiority may be seen throughout the season. So far as I know, corn does not follow either turnips or buckwheat very well. Manure the land ever so well for corn, the year after it has produced either of these two crops, and you will not get as large a crop of corn as though the land had not borne the turnips or buckwheat. I shall not attempt to give the philosophy of the thing, but have found the fact as now stated.

I have been looking at Mr. BRADLEY'S fine field of oats of six acres. Last year the land produced a light crop of corn. This spring it was plowed and two hundred pounds of guano, and two bushels of oats were sown on each acre and harrowed in each way of the field. Then the land was stocked with sixteen pounds of red clover seed to the acre, and the surface smoothed with the roller. I have not seen so good oats for size and color, nor so thick and perfect a catch of clover, on any other land this season. So far as one can now judge, the guano will prove a very profitable investment. On a few rods at one corner of the field, the guano was omitted, and the oats and young clover here look very inferior, every way, as compared with the growth on the rest of the field, where the guano was applied. The design in thus treating this field, is to get a good crop of grain this year, if possible, and to fill the soil well with clover roots; then to mow off the first crop of clover next year, and plow under the second crop, the roots and stems of which, together with a good coat of manure, to be applied the following spring, it is thought will enrich and enliven the land, and bring it at once into a high state of cultivation for a crop of corn. I shall, perhaps, have something further to say of this experiment, by-and-by.

I have a piece of land, of a light, loose, sandy soil, which formerly bothered me a good deal when I wanted to lay it down to mowing after it had been taken up, well manured, and planted a year or two. It would bear great corn, and good oats or other grain, but the grass would not catch well. Finally, the last time it was seeded down, I sowed two hundred and fifty pounds of guano, and one and a half bushels of oats to the acre, and harrowed them in; then sowed grass seeds liberally and rolled them in. The oats made a great growth, and the catch of grass was perfect.

If one wishes to seed a rather uncertain piece of land to grass in the spring, with an oat crop let him put on, say two hundred pounds of guano to the acre, harrowing it in well with the oats, and sow the oats thin, so as to give the young grass a chance to breathe, and he will be pretty sure of a great crop of oats and a good stand of grass. I should not sow over seven pecks of oats to the acre, on such land, and it is quite likely that six pecks would be still better. Th

oats will tiller out very much at the root, under the stimulating effects of the guano, so that from one grain, or seed oat, there may be four, six, eight or ten stalks, bearing each a good head of grain, while at the same time the surface of the ground is open, so that the young grass can get a good foothold and grow well. I have been much interested this season in observing a field of thinly sowed oats of my own, and in pointing out to other persons how remarkably the grain is branching out from the root. I have counted from eight to twelve stalks growing from one seed oat. The young grass, also, is coming along among the oats just to suit me, and gives promise of making a good mowing-field.

A friend called my attention to-day to two little patches of grass in his recently seeded lawn, in which he sowed guano about ten days ago, omitting the guano on the rest of the plot. The effect of the guano is very marked, the grass being much thicker and greener on these patches than in other places.

I have several other little matters to tell you about some time, but this epistle will do for now. If one could write out these details as well as he can observe and think about them of a fine day in the field, there might be something done. But the mind will not always wait for the slow operations of the pen, and thus some of the best observations are often lost in writing.

Brattleboro', June 29, 1859.

DOING TOO MUCH WORK.

Our farmers are accustomed to doing a great deal of work,—we think, in many cases, too much, but have not so regular a habit of doing it well. Whether the greater profit is to be found in accomplishing a large amount of work indifferently, or of doing less, and in a better manner, is the question for each one to settle for himself,—for it is the *profit* we are seeking, not quantity or quality, only as profit is concerned. Any person may decide this question with the slightest arithmetical aid, by ascertaining the precise cost of raising sixty bushels of corn on a single acre, and then of raising the same amount on *two* acres of the same kind of land. If the corn on the one acre costs fifty cents a bushel, he will find that on the two acres it will cost him seventy-five cents a bushel at least,—making a loss of one-third in producing an equal amount of produce for the market! It will require skilful management in selling to make up such a loss as this.

This is what we mean in saying that we think a great many farmers do too much work. They are anxious to cultivate quite a number of acres, hoping all the time that from such a breadth of land under cultivation they must reap a large reward. But hoping is one thing, and a critical calculation, based upon well-known facts, is another. They must go back to the illustration of the two corn-fields.

In New England, we believe there is scarcely

more than one season out of twenty, in which we cannot obtain *with certainty*, so far as climate concerned, any of the common crops of our farms, if we but manage the lands according to the light which has now dawned upon every department of farm labor. The experience of thousands of wise men is spread before every person who can read, so that the profit of the same amount of labor ought to be twenty or thirty per cent. more than it was twenty or thirty years ago.

We are acquainted with farms of twenty acres where the annual income is not less than \$4,000 to \$6,000,—and with farms of 100 acres, where the annual cash income is scarcely twice as many dollars as the number of acres! A man on a large farm can raise just as much corn or wheat per acre as a man on a small farm. He ought not to feel obliged to cultivate land merely because he owns it. Herein lies the error. Like the boy with the oranges, he attempts to grasp too much, and loses profit on the whole. Slight manuring and poor cultivation, on an extensive breadth of land, is like the management of the merchant who builds a large store, and fills it with rods of shelves upon which he places only a few goods. He must remain there and superintend it, and at the call of every customer travel four times as far as he ought to, in handing down the goods wanted,—so that his own superintendence and the interest on the capital united in the store and goods exhaust all the income, and he grows poorer and poorer as each year rolls away. While the farmer practices this kind of economy, he laughs at the poor merchant or manufacturer who is daily exhausting his means by it. The phrase has passed into a proverb, “that we undertake too much for our means,” and still there are few who do not err in this respect. We forget the actual cost of travel, plowing, harrowing, seeding, cultivating, hoeing and harvesting twice as much land as is necessary for a given crop, and pursue a course which five minutes' investigation will show us is fatal to our profits.

COAL ASHES AS A MANURE.

But few experiments have been made by American farmers, says a writer, to test the fertilizing properties of coal ashes. While we are importing guano and other manures from foreign lands in enormous quantities, and at great expense, it may be well to employ substances nearer home, which are now neglected and cast aside as worthless. Thousands of tons of ashes might be obtained in cities, where coal is extensively employed for fuel, which, when applied to the soil, would doubtless greatly augment its productive powers. It is stated in “Faulkner's Farmers' Manual,” an English publication on manures, that coal ashes contain sulphate of lime, with some potash and soda, all of which are known, when separately applied, to produce a good effect

on clover crops, and to constitute an important part of the food of all grasses.

The following experiment by an English farmer, may shed some light on the subject: The round selected contained three perches of clover; the first had no manure, and produced thirty-eight pounds when cut in full head; the second, where four quarts of sifted coal ashes, which had not been exposed to the weather, were applied, the produce was fifty pounds; on the third perch, one quart of plaster was sown, and the crop weighed fifty-four pounds. It will be seen that the ashes increased the clover nearly one-quarter above that on which no manure was applied, which goes to prove that this substance is a valuable fertilizer. Coal is said to be of vegetable origin; therefore, we can see no reason why its ashes should not contain the food of plants. Experiments on various soils and crops might be made by any farmer at a small expense, as coal is employed as fuel in nearly every town.

THE GARDEN AND THE PORK BARREL.

A notable housewife, who presides over the culinary department of her household with "dignity and grace," as well as with remarkable skill and prudence, said to us the other day, "Why, we get half our living from the garden and the pork barrel for four or five of the summer and autumn months." We had been speaking of the advantages to be found in a good garden, not only from the edibles themselves, but from its associations, and the pleasant remembrances which even a good kitchen garden leaves upon the mind.

"Half our living,"—and the family was a large one. So she enumerated some of the excellent lingers which she is enabled to prepare from the good things grown in the garden, when seasoned with a piece of corn-fed pork cured in the New England manner. What a variety of vegetables may be had, beginning with the asparagus, and then the new potatoes in the last of June, followed by the peas, beans, squashes, turnips, cabbages, beets, onions, carrots, egg plants, parsnips, green corn, cucumbers, &c., &c. Why, the mouth of an epicure might water at the recital of such an array of good things. Depend upon it, brother farmers, there is nothing that spends so profitably, so economically—and at the same time that gives so much sound health and strength in the family, as a barrel of good sweet pork, and plenty of tender and succulent garden vegetables.

BRAIDING STRAW.—At the meeting of the Rhode Island Historical Society, last week, it was stated that the braiding of straw in this country was first begun in Providence, in 1798, by Mrs. Betsey Baker, daughter of the late Joel Metcalf, and now residing in Dedham, Mass. The first bonnet she made was of seven straws, with bobbin let in like open-work, and lined with pink satin.—*Scientific American.*

EXTRACTS AND REPLIES.

YEARLINGS AND TWO-YEAR OLDS—WILD GRASS IN MEADOWS.

1. When do yearlings change into two-year olds—and two-year olds to three, in the Boston cattle market? The reason I inquire is, I never notice any change in the prices in the spring of the year. For instance,—two-year olds have been quoted from \$22 to \$26, since last fall. Now if cattle that were two years old last spring are worth from \$22 to \$26, we farmers want to know it, for the drovers will not pay us over \$14 to \$16.

When is the proper time for cutting wild or meadow grass? Will it kill it out to eat it early? What little experience I have had, tells me it will, although I have never heard the matter discussed in this part of the country. While travelling in the West a few years since, I often heard the remark, "that it kills out our low marsh grass to eat it early, or before the seed is ripe." We all know very well, that the hay made from such grass is much better if cut early—but there are two sides to the question.

REMARKS.—1. Yearlings remain yearlings until they are two years old, and two year olds remain so until they are three. We believe this is generally understood by cattle dealers, as we have stated it above.

2. The proper time to cut grass, in order to secure the best hay from it, is generally supposed to be when the head is in full blossom; but if the crop is cut at that period continuously for several years, many kinds of grass will certainly run out. Our opinion of the matter is much like yours. In order to obviate the difficulty, would it not be well to cut most of the grass when in blossom, leaving a portion to go to seed, to be cut, threshed, and the seed scattered over the whole meadow at a proper time? In this way you would be likely to secure both objects—get good hay and re-seed the land.

BEANS FOR STOCK.

I have some four or five bushels of beans three or four years old, and no sheep to feed them to. Will it pay to have them ground for my pig or cow, and how much should I feed at a time?

Forestdale, Vt., 1859.

A. E. C.

REMARKS.—Certainly it will, and pay well. Feed them to either about as you would corn meal. They have about the same amount of nutritive matter that rye has. They are used in large quantities in England for other stock than sheep—for horses, especially.

"CAUGHT A TARTAR."

A correspondent from Media, Delaware County, Pa., writes us some strange incidents in the conduct of game fowls at that place, kept in the game chikery of Dr. J. W. Cooper, author of a new work on game fowls. A few days ago, while a little boy attached to the family was passing

through the chickery, he was set upon by a large game rooster of the Tartar breed, and so severely spurred and billed as to endanger his life. Many and deep were the gashes in his tender flesh, and the injury would have been greater, had not a servant of the family rescued him. Again, while a hen of the same strain was roaming through a field, one of her young was pounced upon by a large hawk. The mother bravely attacked this "fell destroyer of all poultry," and so disabled him as to make his capture easy.

Media, July 8, 1859.

T.

BUSINESS AND CROPS IN RYEGATE, VT.

I never knew such a busy time in this part of the country before. Every thing and every body has been busy; first the elements, rain, wind and jack-frost. The latter was round, at least, on the morning of the 5th inst. It did no injury, however, except on very low land; some potatoes and beans were killed to the ground in this vicinity. Farmers, mechanics, merchants and day-laborers have been very busy. Nearly a dozen large barns have been built in this immediate vicinity, within six or eight months; several of them are very large and commodious, and built with every modern improvement; one improvement is a cupola with ventilator; another is several steam chimneys placed near the centre of the hay mow, made of plank, bored full of holes.

Grass and grain look promising, except corn. Much of our best corn land in the Connecticut valley, and all low lands was planted, and the corn injured, but that on the back high lands escaped the hard June frost, and looks well. Apples are not plenty; wild fruit is very plenty; the bees are having a glorious time on the raspberry blossoms, and white clover.

T. P. BAYLEY.

South Ryegate, Vt., July 12, 1859.

WHITE SPECKS IN BUTTER.

Next time you churn, take one of those veritable specks (if you find any,) and apply it to the tip of the tongue, and if by the aid of taste, you can possibly discover what the critter is, and conclude that he is a white speck of cheese curd formed in the bottom of a neglected pot of cream, I guess you catch him.

Now for the remedy. Go a visiting to-day, and churn to-morrow.

Yours, in search of hidden things,

Mrs. S. PIERCE.

South Londonderry, Vt., 1859.

REMARKS.—We trust that by this time, the grand discovery as to what causes white specks in butter has been made, and that we shall find none of them in our next winter's stock.

HENS, AND HENS' HUSBANDS.

I observe in your June number a note from Mr. Geo. Vining, in which he recommends a mixed breed of poultry as the best. I partly agree with him in this respect, but take exception to another recommendation, viz., "to keep a small rooster, or none at all." Now I consider him a very unfeeling man to deprive the poor hens of their natural protector, for they like to hear his

voice when he crows, and when he answers their cackling. It would be too bad to keep poultry in that unnatural way. I have also heard it stated that hens do not lay so well when kept in that way. There is a breed of fowls in this city called the Black Hamburg, which comes up to the mark of a good article as near as any breed I know. The hens commence to lay about December 1st, and continue to lay almost every day till moulting time, say September 20th. They are nearly as large as the Dorking, and of much the same shape. They do not want to set, have large rose combs which incline gently to one side, are of a beautiful glossy black, and their flesh is very white and juicy. I prefer them to any fancy breed yet introduced to this country. Hoping that your friend will not continue his absurd doctrine of celibacy,

I remain your constant
Hulifax, N. S., 1859.

READER.

HABITS OF THE SHAD.

The habits of our fish have been but very little attended to in this country. Our scientific men, it is true, have been very precise in their accurate classification, and in the use of their ponderous nomenclature—they have described our fishes even to the shape of a scale or the number of thorns in the dorsal fin, but they have not condescended to note their habits, their food, their length of life with all such particulars as would interest common readers, and be of use to mankind.

No fish is more valued or more valuable than the shad; yet but few of its habits of life are known. The books are silent, and angling gives no information. It was for a long time, a commonly received opinion that the shad spent the winter in some part of the Gulf of Mexico, and then as spring advanced and the snow ceased running, came along the coast and entered the rivers in succession. If this were true, there would be no uniformity, year after year, in the run of shad in each river. The very distinct varieties would all become intermingled. But each river has its own variety. Those of Connecticut River have long been known as possessing superior size and flavor to any others. The variety that seeks the Hudson as a spawning ground is easily distinguished from ours. This fact of the distinctness of the varieties in each river tends to the belief that shad go no further than the mouth of the streams in which they are hatched.

The habits of the shad are unlike those of other fish. As soon as the snow water has ceased running, they press up the river as far as they can reach, in order to deposit their spawn. In following this instinct, they never stop for refreshment or food. Who ever found anything in the maw or stomach of a shad that would indicate the nature of its food? Who ever knew them to bite at a baited hook? They do not feed from the time they enter the stream until they sink down thin and exhausted into the deep places at the mouth. For this purpose of nature the shad has been preparing itself during the quiet luxuries of a winter, and has become fattened for the use of man, or, if it escape his net, for the reproduction of its species. The shad lives but a single year. It is hatched in the early summer—descends the streams as soon as large enough—

feeds and fattens in the winter at the mouth of the stream—ascends in the spring to deposit its spawn—and descends to die at the bottom of the ocean. This fact accounts for the uniformity in the size of the fish. A Connecticut River shad seldom goes beyond seven pounds, and the variation in size is comparatively slight. The bass, on the other hand, which is known to live many years, varies from half a pound in weight to fifty, even in our own river. It has a longer time to grow, and shows a much greater diversity of size. These considerations have lately led to the conclusion that one year only was the duration of a shad's life. What was only a matter of conjecture and inference has been lately proved by the artificial fish-breeders. Somewhere in the State of New York, one of these raisers of fish from spawn which he fed in early life with crumbled crackers strewn upon the pond where they were kept, has proved their short hold on existence. He raised them for the purpose of supplying the very large fish he had in his tanks and ponds with food. As this science of breeding fish is known more, the habits of the different species will be more easily described.—*Hartford Courant.*

For the New England Farmer.

STUMP-FOOT CABBAGES.

The remedy given in reply to "Albertus," "for stump-footed cabbages," does not agree with my experience. I raise my own seed, not only for myself, but for others, and from the most perfect heads of the kinds called "Early York," "Low Dutch," "Drum Head," "American Premium" and "Savoy," and from the seed thus raised, more than one-half of my cabbages have proved stump-footed, whilst others growing side by side formed good heads. One of my near neighbors who sowed the same seed, raised several hundred, and not one stump-footed. I have found from practice and close observation, that not only cabbages, but the large ruta bagas or Western sweet turnips are subject to this disease, and from inspection, have found in the roots small white maggots.

The remedy which I have tried thus far successfully, is to mix plaster of paris and ashes in equal parts, and add one quart of fine salt to each peck, put a large table spoonful to each plant, mix the earth with the compound, but confined to the roots when transplanted. Soot, lime, and pulverized charcoal in equal parts has answered the same purpose.

Out of 250 heads last year, not one which had the above compound was stump footed, whilst others were more or less damaged, and some entirely worthless.

S. L. B.

Rockingham, Vt., July 11, 1859.

REMARKS.—Excellent. That is a remedy worth having—because, while the disease is prevented or arrested, the remedy used is a fertilizer that will produce the finest plants. The ingredients are all common and accessible, and if the prescription is sure, this information is worth to thousands of our readers, all the *Farmer* costs for one year.

CROWS AND OTHER BIRDS.

"Crows and other birds" in "Old Kentuck," by C. M. Clay, is a very interesting letter, especially to those who are fond of the feathered race, as is your humble servant. But I don't understand why our New Hampshire crows should be so much more prolific than the Kentucky crows are. Our crows usually lay as many as four eggs, and I think there is occasionally more than that number of eggs or young found in their nests. Some four years ago, a pair of crows built their nest on a pine tree within a stone's throw of my confield. Soon as the boys ascertained the fact, they were rife for pulling it down. But I told them if the crows would let the corn alone the nest should not be disturbed. About ten days after the corn came up, early one morning they visited the field, and plucked up fifty or more hills. The boys did not want to be told the second time to tear down the nest. It contained four young crows nearly large enough to fly; they were, after killing them, hung upon poles about the cornfield. The old crows soon ascertained the truth of the matter, and "poured out their vociferous imprecations" in a way that soon brought to their company some twenty more, who hovered high in the air, and such a scolding as we got was a caution to us about killing young crows.

Last year they were so bold and troublesome upon my grain, corn and potato fields, that I had to, very much against my will, resort to strychnine-steeped corn. I soon procured dead crows enough to dangle in my fields, and was no further troubled with those that escaped the poison. Taking the year round, I think the crows do the farmers a vast deal more good than hurt. Our migratory birds return here much in the same order as stated by Mr. Clay, in Kentucky. The blue jays and snow birds stay with us the winter through. We have four kinds of swallows, the barn, the chimney, the bank and the caves swallow. They all build very differently. A pair of "orioles, with their rich and varied tropical plumage and luxurious habits," have annually built their nest on an elm tree within ten feet of my house for over twenty years in succession.—LEVI BARTLET, *Warner, N. H., in Country Gent*

For the New England Farmer.

ONION MAGGOT.

MESSRS. EDITORS:—About a fortnight since a neighbor said to me, "I shall lose all my onions. The maggot is eating them all up." I took some guano and went to her garden. They were making bad work. I put guano on all but two rows, and have kept watch of them since. Almost all the onions on the two rows are gone, while the other rows, which I put guano on, have lost very few, if any. So much for the experiment. Whether it was the faith or the guano that stopped their working, I cannot say. I will leave that to friend Proctor.

A neighbor of mine, Mr. Farley, who raises a good many onions, says, "Poke the dirt well away from around the onion, and one hot day will kill the maggot."

ED. EMERSON.

Hollis, July 1, 1859.

HOW A CHICK IS HATCHED.

In conversation with Judge Butler, of Norwalk, a few days since, he explained the operation of the hatching process, which is so beautiful and philosophical, that as we have never seen it explained in books, we repeat it to our readers.

The chick within the egg breathes through the shell; in the silky membrane lining the shell the blood circulates, and is thus brought in contact with outer air.

The head of the chick is in a position as if it had been brought round under the wing and over on the back—a little one side of course—in such a position that the least muscular exertion will press the beak against the shell, and about in the middle, and when any violent struggle is made, it will break a little hole in the shell. Now this little movement of the head, perhaps an eighth of an inch forward, turns the chick in the shell so that when the head is drawn back into its normal position, it is brought against another portion of the shell. The next struggle breaks a fresh hole, and so on, each struggle making a new opening in the shell.

These struggles, as the chick gains strength from breathing the fresh air, become more frequent. Finally, in the course of half a day perhaps, as it goes on turning itself in its shell, the little blood-vessels which originally formed a connection between the chick and the lining membrane of the shell, are drawn so tight as to prevent circulation, or are twisted off, and when holes have been punctured and the shell cracked about two-thirds around, the shell falls apart and the young chancier steps out into a new world.

Occasionally the lining membrane of the egg is so tough that the shell parts from it, and leaves it unbroken, except in the little holes described, and so if not seen in time the chick dies; a pair of scissors will effect a liberation.

It is dangerous to attempt to take a chick from the egg before it has, as will be evinced by the cracked shell, turned itself nearly or quite two-thirds round; otherwise the blood vessels spoken of will be broken, and the chick either bleed to death or be long in recovering.

The whole process may be watched if the egg be kept warm in the hand, and observed as its struggles call attention to it. This will not interfere with reading or writing, and is instructive and interesting.—*Homestead.*

HOUSATONIC AGRICULTURAL SOCIETY.

This society held its 17th exhibition at Great Barrington, on the 22d, 23d and 24th of September, 1858, and it was quite a spirited affair. It embraces within its bounds, some of the most noted stock-raising towns in the State—of course, there was a fine collection of stock on the ground. The reports are quite too meagre. The farmers of Lenox, Barrington, Stockbridge, and other towns, should give us some valuable information respecting the breeds of stock which they raise, and the best methods of feeding them, and preparing them for market.

Two premiums were awarded for the culture

of an acre of winter wheat, and six premiums for six acres of spring wheat.

Premiums were also awarded for crops of corn, rye, barley and oats. We are glad to notice this, especially premiums for the encouragement of wheat-raising. We think the interest of Massachusetts farmers requires that they should pay more attention to this crop than they have for some years past.

The flowers were not forgotten—as seven premiums were awarded for beautiful collections, showing that taste and beauty are cultivated and appreciated among the hills of Berkshire. How could it be otherwise in the home of Mrs. Sigourney? The address, by MARSHALL WARNER, contains many capital suggestions. The amount of premiums awarded was \$879, indicating that the society is in a healthy and flourishing condition.

For the New England Farmer.

CUTTING OFF CORN STALKS.

MESSRS. EDITORS:—A correspondent recently dissents from the practice of permitting the stalks of corn to grow on till the maturity of the grain. I would premise that this cutting off the stalks, while the leaves are green or healthy, is contrary to all the known principles of vegetable physiology. He says "that by cutting off *after* the pollen has fallen from the spindle, the wound will soon heal up, and all the upward circulation above the ear is stopped, and the remaining nourishment which is drawn from the soil passes to the ear."

Your correspondent may not be aware that the crude sap which passes up *has no immediate* effect upon the growth, until it enters into the leaves or lungs, and is there elaborated, (manufactured,) and that the flow of sap is from the leaves downward. I have not the fear which he expresses, "that the article he referred to may do harm with inexperienced farmers," for I should say at the outset to such, *ascertain whether the worth of stalks when taken off, is of more value than any additional weight in the grain.* There are many ideas relative to the growth of trees and plants, which are not true in fact; thus, much is said about the ascent of sap in the spring, and its descent to the roots in autumn. The sap in spring commences at the top or extremity; it is there that the excitable buds begin to swell independent, thus early, of the root; the last place it reaches is the roots. The writer says that, "by early topping, the sugar is retained in the stalk." Now, if he will but raise a few stalks of the sugar corn or imphee, and late in summer, when the plant is in the same condition of growth as the corn, when he recommends this topping, he will find it difficult to detect any saccharine matter in the stalk; on the contrary, if he will let it stand until the leaf has dried, and then cut it off, he will readily find that sugar is so fully developed as to occasionally drop from the end of the stalk.

Another familiar example which shows the importance of the leaves, while green, to remain on

plants, is exemplified in a tulip or hyacinth bulb. If, even after the flower and flower-stem has dried away, and while the green leaves remain, you now take up these roots, they will shrivel and be unfit for resetting; they must remain in the ground until the leaves shall have performed their office in the consolidation of the bulb.

I have thus hastily drawn up these remarks, which could be extended by numerous examples of the folly of interfering with the leaves or lungs of plants, while in a growing state.

One reason which I have found to be given for cutting off the tops of corn was to accelerate its ripening, but I understand this writer to say that "corn will not ripen so quick by several days, with the stalks taken off early, as it will if suffered to die altogether." I have supposed that by this practice it ripened prematurely.

Salem, Ms., 1859.

J. M. IVES.

For the New England Farmer.

A NOXIOUS WEED.

I have noticed with interest for a few months past, in a number of papers, that there appears to be a waking up among the farmers to the greatest scourge in the form of a weed that ever visited our American land. I have reference to "The Weed," as the *Springfield Republican* calls it. I cannot give the botanic name, and indeed I do not know as it has any; yet it does not want for names. I will mention a few, most of which I have seen in print. Butter and eggs, stink weed, devil's snake, dragon's weed, Chloe's, Mary's, Mother Wait's, Mother Rice's, and Boyanton's weed. It has a yellow blossom, a small, narrow, picked leaf, somewhat in form like that on flax, only larger, the color blue rather than green, its odor very offensive, and will mature so as to produce seed after being cut two or three times a year. One traveller reports to have seen it growing spontaneously in eleven different States. Hydra-headed, it matters little which end is up, or what part of the root touches the ground. I have known it to grow two or three feet high, and so thick as to run out the grass, almost entirely, on the best of land. Cattle will not eat much of it green, but when ripe will eat the seed and scatter it where they go. If let alone, it spreads beyond conception.

Thistles, daises, cadlock, cale and fire grass, when combined, will not prove so great a pest to our New England. How it was first introduced remains a mystery; most probably, in foreign seeds.

Some have introduced it into their land by having it cultivated in their gardens for the blossom. By what I can learn, five of the above last mentioned names were given for this reason. It is estimated that the above named weed increases in New England at the rate of twenty-five per cent., notwithstanding the effort made to destroy it. I have seen acres of land in itself very good, that has been reduced more than one-half its value, by having a quantity of this noxious weed in it.

Now, Mr. Editor, will you give us the true botanic name, and tell us if there is any use can be made of it, for the benefit of man or beast, or tell us how it can be annihilated from our

land? I have heard it said there was a class of flies in India that would destroy the weed, and that we had better send express order for a bag of them. I am afraid *say so* will never do us any good. I give you my experience with it for some years past. It made its appearance on our farm, exciting no suspicion until it was discovered to have taken almost entire possession of one field. I mowed and carried off all I could and burned it, yet it appeared as prolific as ever. I then plowed, planted with corn, broom corn and potatoes, hoed it three years, gave it one late hoeing every year, so as to prevent seeds ripening, but to no good purpose. I then seeded to grass, and sometime before mowing, carried on salt, and where the weed was very thick, I scattered on the salt dry, broadcast, thick enough to kill everything green. I then made a strong brine, and having salt constantly in the bottom of my pail, put it on to the weed with a brush broom, taking a little salt each time, and when I could, stamped it with the heel of my boot. In this way, whether sunny or rainy days followed, there would be a briny surface. I continued the process the first season, going over the ground three or four times. I repeated the application last season with equal success as before. I shall expect the present year there will be less of the weed, by seventy-five per cent., than last year.

I wish hereby to notify those that see it approaching them, if by roadside even, to beware.

A NEW ENGLAND FARMER.

Deerfield, Mass., July 8, 1859.

REMARKS.—The weed spoken of above by our correspondent, is undoubtedly the common *Linaria*, called toad flax, from the resemblance of its leaves to flax. It is also called Ranstead weed, and Butter and eggs; why it has received the latter name we do not know, unless because its flower resembles butter in color, and its odor that of rotten eggs.

Dr. Darlington, in his "American Weeds and Useful Plants," says "it is extensively naturalized—has become a vile nuisance in our pastures and upland meadows. Mr. Watson, in his annals of Philadelphia, says it was introduced from Wales, as a garden flower, by a Mr. Ranstead, a Welsh resident of that city; and hence one of its common names. It inclines to form large patches, by means of its creeping roots,—and as far as it extends, takes almost exclusive possession of the soil. Although the flowers are somewhat showy, it is a fetid, worthless, and very objectionable weed,—the roots very tenacious of life—and requiring much persevering effort to extirpate them."

HABITS OF FISH CHANGING.—The habits of fish, in respect to taking the hook, are said to be much changed within fifty years. The Grand Bank fishermen found once no difficulty in taking cod by throwing the hook and line from their vessels; now each vessel is almost always provided with dories in which the fish are taken and brought to the vessel. Mackerel fishermen once

found fish inclined to take the hook, as blue fish, by trailing; late years they take the hook as soon as it is thrown into the water, and a vessel needs but a few hours for a full supply, if they will "bite." Now it would seem that the water may be full of them, and not one can be taken out by the hook. At the present time in Provincetown harbor none are taken by the hook, while the whole harbor is crowded full of them. The introduction of nets has been a great gain in the way of taking them, and it is predicted by some that mackerel will soon be taken upon this coast only by nets.

For the New England Farmer.

THE PROGRESSION OF PRIMARIES.

ANALYSIS OF SOIL AND FERTILIZERS.

BY JUDGE FRENCH.

Whether the first egg was created before the first bird, or whether the first bird laid the first egg, is not settled, perhaps, either by reason or by revelation. Whether man was created upright in form, at the first, or, according to the idea of the author of "The Vestiges of Creation," was originally a very low kind of a worm, and gradually crawled up through millions of successive generations of fishes, reptiles, birds and quadrupeds, to the dignity of the human, does not immediately concern us, as agriculturists. We all believe in *progress*, and that nature usually walks onward to higher and higher results. Hearing a geologist once reasoning learnedly that this continent had once been submerged, from the fact that marine shells are found on the tops of the highest mountains, we suggested, somewhat maliciously, that it was as easy for the Creator to make mountains with shells on their tops, as otherwise! "Yes," said he, "He might have done it, *but He did not!*"

Probably everybody agrees with the geologist, that when order came out of chaos, the earth gradually took form, and that whatever of creative energy was employed in calling into life the various living creatures which inhabit it, for the most part, changes everywhere are wrought through the operation of fixed laws, and that every little shell of the seashore is composed of matter in a condition somewhat different from that in which it before existed. It was before part of a rock; it has advanced to be part of an animal. It is chiefly lime now, as it was before; but lime of somewhat different properties. For some reason, we generally believe, that oyster shell lime possesses properties for agricultural purposes which are not found in the lime rock.

But our mention of the shell has led us in advance of our argument. Let us return. A few years ago, all the world was talking of soil analysis. The theory was beautifully simple. Thus, plants are composed of certain known substan-

ces, which can be ascertained by chemical analysis. To form this plant, the soil must supply a proportion of these elements. Phosphate of lime makes a great part of the ashes of wheat, for instance, and therefore if the soil has not this phosphate, it must be added, so that the wheat plant may find, and appropriate it. Phosphate of lime is found in bones of animals. It is also found in the rocks at Dover, New Jersey, at Crown Point, and other localities. The chemist analyzes the bones and the lime rock, and they seem to all his tests, identical. They are applied to the soil, and the animal phosphate wonderfully nourishes the plant, while the mineral phosphate produces very little effect. Potash from wood is a powerful fertilizer for many plants. Felspar, one of the constituents of granite, contains seventeen per cent. of potash, but pulverize it as we may, it produces no such effect upon plants, as potash from vegetable sources.

Manifestly, there are more things in nature than are dreamed of in your philosophy. The plant knows more than the chemist! There *are* differences which the chemist cannot detect.

And now we are coming to the learned words at the head of our article.

All substances in nature are said to be composed of sixty-four simples, which we first, or *primarily*, find in rocks. The theory then is, that these rocks, in the lapse of ages, have been broken and worn away, and from their debris, soils have been formed. Next, we find those same substances in vegetables, and finally, in animals; the same, so far as the chemist knows; but changed or *progressed*, as the *plants* plainly tell us. Even the microscope, which shows us eels, and even sea serpents, in Cochituate water, and rhinoceri on the surface of figs; which can detect at a glance, the different kinds of blood, and *almost* discern the oxygen in the atmosphere, can see no difference between these two kinds of phosphates. But the plants, with their instincts, sharper than man's reason, and more subtle than chemists' tests, decide that for their food, the one is far better than the other. Why is this so?

Professor Mapes, of New York, has been for several years discoursing upon this topic through the *Working Farmer*, and before the New York Farmers' Club. His theory is, that the elements, which we may find apparently identical in the rock, and in both the vegetable and animal matter, are first taken up by the lower orders of plants like mosses and lichens, that they have thus *progressed* one step, and that on the decay of those lower plants, those same elements may now be suited to the constitution of plants of a higher order, and so on, till passing gradually upward, they form part of the food of animals, including man, and thus become a constituent

part of flesh and blood. Having thus progressed, perhaps having again and again constituted part both of vegetable and animal substances, those elements acquire an aptitude for such organization, and so are the more readily taken up anew to be wrought into new structures, just as grape cuttings buried in vineyards form the best nourishment for the vine, and as egg-shells are found by hens, the most convenient substance of which to make shells for new eggs.

In the *Working Farmer* of April, 1855, Professor Mapes clearly states his theory, which we have attempt briefly to indicate. He there states as known facts, that if we apply a quantity of bullocks' blood to the soil, it proves a powerful fertilizer, whereas if we apply the exact equivalents, so far as chemistry can tell us, taken from the primary source of rock, and dissolved, the effect as a fertilizer is very small; and so if we use phosphate of lime made from bones, and the same amount of mineral phosphate, the bone phosphate will prove by far the better manure. Yet the chemist's analysis finds the mineral phosphate taken from the rock at Crown Point, Lake Champlain, and other places, in various parts of the world, identical with the phosphate from bones, and sets them down as of equal value to the farmer.

We think the readers of the *New England Farmer* have a manifest interest in this matter, even if it does savor somewhat of abstruse science. We are all buying what one of our neighbors comprehensively calls "bag manure," and we read in the advertisements, certificates of learned chemists, that this kind of guano contains such a per cent. of phosphate of lime, and this patent fertilizer such a per cent. Now, if phosphate of lime is all one thing, and produces the same effect, from whatever source derived, why there is no objection to considering it a lawful tender to the farmer for his money, but if the above theory is correct; it may be the old illustration literally verified, of *asking for bread and receiving a stone!* buying plant-food and receiving an indigestible rock.

In a recent article, Professor Mapes states his opinion even more strongly than before. He says:

"Phosphates have no value for agricultural purposes, unless taken from *organic life*, like the blood and bones of animals. The phosphates from the phosphatic rocks and volcanic deposits, *miscalled guanos*, although ground and treated with sulphuric acid, *have no value as fertilizers*, and cannot be absorbed into the higher class of plants, such as are now required for the use of men and animals. They must first be taken up by lichens and mosses, and be progressed by them in a way which chemistry as yet has failed to discover, and on their decay and redeposit of their phosphate in the soil, be absorbed by a

higher class of plant for further progression, and so on through nature's laboratory, until we find the progressed phosphates occupying the bones of animals.

"Man might as well try to exist on dissolved rocks instead of the same constituents composing plants in a progressed state, as to attempt to feed plants on primitive phosphates, no matter how manipulated by grinding and acids."

These views have recently received strong support from a published report of a committee of the French Academy of Sciences. The fact that mineral phosphate is far inferior in value and effect for agriculture to the animal phosphate, is clearly stated, though the reason assigned seems to be the difficulty of reducing the mineral to a sufficiently minute state of division. The French Committee say—

"The importations of mineral phosphates from Estramadura into Great Britain, have not produced amongst the agriculturists all the favorable results which were expected from them. One of us, M. Dumas, had the opportunity, in 1850, of stating this fact, during a mission with which he was charged by the Minister of Agriculture and Commerce, relative to the agricultural improvements introduced into England, Scotland and Ireland. It does not appear that they have since succeeded in obtaining in Great Britain as good effects from the mineral phosphates as from bones, or the black residues of the refineries."

* * * * *

"On his part M. Moride has rendered indisputable services to agriculture, by analyzing the manures deposited in the Government dockyards, and, exposing certain frauds in commercial manures, has proved by direct experiments the insolubility of many mineral phosphates in the weak acids, in the state in which they are now offered to agriculturists."

* * * * *

"We shall render to agriculture a still greater service if we discover the means of economically dividing the mineral phosphates to the state in which they readily become assimilable by plants."

Whatever the true theory, it is manifest that the difference between animal and mineral phosphates is everywhere admitted among scientific men. It is not enough, then, that the guano or superphosphate be certified to contain a certain proportion of phosphate of lime. There is a further question.—*Is this phosphate such as the plants can use?* If not, whatever the reason, it is useless to the farmer. Careful experiment alone, it would seem, can answer this question as to any fertilizer from an unknown or unreliable source.

The farmers of the present day require not only knowledge enough to perform their farm labor intelligently, but enough, also, to defend themselves from their scientific friends, who innocently sign all sorts of certificates, commending often, it is feared, new compounds as fertiliz-

rs, from a too great reliance on supposed chemical laws.

And finally, an analysis of a soil or of a fertilizer, to be of any value to the farmer, must indicate, not what are the whole elements, but what are those which are in a condition to feed the plants. A granite boulder or a grindstone may contain all the elements of a specific manure, but it would be rather hard fare for a young cucumber or a tomato plant to thrive on.

For the New England Farmer.


COAL ASHES AS A DISINFECTANT.

At this season of the year almost every one is troubled by the noxious vapors arising from vaults, the outlets of sinks and drains. I am not aware of having anywhere read a recommendation of coal ashes for this purpose, but it is a fact, that a very slight covering of coal ashes will prevent almost all noisome odors, and will also prevent the rapid and troublesome increase of flies, from stagnant water or manure heaps, which so much trouble the peace and comfort of neat housewives. Whether the effect is merely mechanical or chemical, I am unable to state, but that it is certain and effectual, I know by repeated experiment. A compost of night-soil and coal ashes makes a very valuable, inodorous and inoffensive application, as dressing to the soil, especially for light lands; for heavy soils, I am inclined to think coal ashes, except in a very small proportion, are injurious, making the soil colder and heavier; at any rate, heavily coating the earth with coal ashes about the roots of one or two trees, of the same variety, retarded its blossoms and leaves, a week or ten days, and snow covered with coal ashes will, for a long time remain unmelted.

A very striking instance of the value of coal ashes as a disinfectant was seen last year in the filing below the Public Garden with coal ashes by the city; through that coating no odor of marsh mud or decaying vegetable matter was able to make its way. The cheapness and readiness with which this material can everywhere be had, the comparatively small quantity necessary, and its being more effectual than any substance known, has led me to make this use of it more generally known, by the aid of your columns.

Boston, July 12, 1859.

REMARKS.—Coal ashes is a good disinfectant—not so powerful as dry, pulverized clay, charcoal or meadow muck, but can be obtained with more facility than either of the first-named articles. We can endorse the statement of our correspondent, as we have long used it, and found it valuable for the purposes of which he speaks.

 An experienced writer on propagation says:—"Never increase climbers or plants from suckers. The like never produced the like more to the letter than do these plants from suckers. Destroy all suckers, is my maxim."

For the New England Farmer.

A FEW NOTES ON DWELLING-HOUSES.

BY WILSON FLAGG.

A great deal of advice has been proffered to the public for the last ten years, on the advantage of possessing "beautiful dwelling-houses," until our people are almost persuaded that the rudeness, or the refinement of a man's character, is created by the style of the house he occupies. It is maintained that taste cannot long survive in a homely house; and it would seem that an illiterate boor needs but to quit his hovel, and become the proprietor and occupant of an ornate villa, to be transformed into a gentleman and a scholar. It is also supposed that domestic happiness is greatly increased by the tasteful embellishments which are appended to the outside of one's roof. I believe this idea has produced more mischief than good; it has led men into extravagant expenditures upon the style of their buildings; it has caused them to overlook that combination of utility and convenience, which is the chief end of home-architecture, and to seek after embellishments at the expense of that charming simplicity, which renders so many old houses and their surroundings, objects both of affection and delight.

It is not true that a man is made more contented or happy, by living in an elegant, ornate, or beautiful house; and no man was ever improved in character or manners, by adding architectural ornaments to the outside of his dwelling. There are certain requisites demanded by comfort and convenience, which seriously affect the happiness of a family, and ought never to be neglected; but neatness, rather than ornament, should be the aim of those who are seeking after home-embellishments. A large proportion of the most virtuous and liberal men in the land, are found among those who live in homely houses; for the plainness of the exterior of one's dwelling inspires contentment, while the opposite style fosters vanity, and creates a kind of necessity for costly pretences, which are incompatible with a generous hospitality.

There is a mean between an ornate and an ugly style; and the houses which are usually called plain or homely, occupy this mean. Many of these homely dwellings are really beautiful, in the best sense of this term, where we perceive in them a perfect adaptedness to the wants and habits of an honest and benevolent family. Their moderate, but sufficient accommodations for all private and hospitable purposes; their open enclosures shaded by one or two large trees, and not crowded with a profusion of needless shrubbery; and on all sides appearances, more easily perceived than described, indicate that the family live for happiness and not for pretence, for friendship and not for fashion.

Ugliness is any quality in a building that excites disagreeable emotions from its want of outward evidence of comfort and convenience; and it may exist in connection with an excessive amount of ornament. A building is ugly, when it is unsupplied with those mouldings which are required to relieve the abrupt, naked and angular look of its exterior; it is ugly, when it has a large projecting roof, that gives it a toppling and dangerous appearance. This is the fault of many

ornate houses, which have been erected within a few years, that seem as if they might easily be unroofed in a high wind.

A house may be ridiculous, as well as ugly. It is ridiculous, when it abounds in conspicuous ornaments that do not harmonize with its general character; as when Grecian columns support a large porch attached to a mean house; also when a building manifests an attempt to imitate a style which cannot be attained; as when a house, at a cost of only two or three thousand dollars, is made after the model of a baronial mansion. There are many of these absurdities among those houses in our land which were erected by men who were ambitious to produce some extraordinary work, and whose sense and judgment were not equal to their ambition.

We ought to adopt that style of building, which is calculated to inspire the owner with permanent satisfaction, and tends to promote a *frugal hospitality*, as distinguished from a *niggardly extravagance*. A frugal hospitality distinguishes those families who indulge in no fashionable expenses; who buy no costly furniture that is not needed, but who are always ready to entertain a friend; who pay those who work for them justly and generously, and give freely to rational purposes of charity and public improvement. A niggardly extravagance marks those who furnish their houses with costly gewgaws, dress themselves in finery, and pay largely for fashionable amusements, while on the other hand, they shut their doors against company, pay those who labor for them the smallest pittance they can force them to accept, and give nothing in alms, except in such a way as to gain applause.

Fine houses certainly encourage this sort of selfish extravagance; they foster a spirit of rivalry, and a love of show and "gentility," and oblige a family to live meanly in many respects, to enable them to support the expenses of their ostentation. Our neighbor, for example, who is a manufacturer, having crippled his fortune by building a fine house, immediately cuts down the wages of his operatives to save himself from embarrassment. His new and elegant stable requires a pair of elegant horses; this additional expense obliges him to dismiss one of his needful clerks, and his son, who was intended for college, is employed to fill the vacancy. The costly furniture which was purchased to correspond with the style of his new home, requires the cutting down of some necessary expenses for comfort; and although he is now supplied with more ample accommodations for company, he is obliged to diminish the amount of his former hospitalities. In this way has many a family been forced to perform private acts of meanness, in order to pay for their affectation of munificence!

All the modern improvements for utility in home-architecture, so far as they can be afforded, should be adopted in the cheapest and humblest dwellings, because they serve to promote health and comfort, and to abridge labor; but a sufficient amount of decoration has been bestowed upon a house, when its outside appearance is made to correspond with its interior perfection. The highest kind of beauty springs from the manifest combination of neatness and convenience; yet how often do we see dwelling-houses tricked out with various ornaments, and neatly

painted, while an ugly sink-spout discharges its waters conspicuously upon a grassy bank, and destroys all the beauty of the place! If, in this case, there is neatness within doors, the outside is false to the character of the interior.

There are other ways in which a house may be false in its appearances, when, for example, it appears to be built for purposes of hospitality, while the owner and his family live like misers, and only to themselves. It is remarkable to what an extent this kind of ostentation in fine houses is carried by the meanest and most miserly sort of people. I believe it is only in this country, that the sight is beheld, of an elegant and spacious dwelling-house, with numerous large and handsome rooms, provided with furniture as costly as the house,—while the master and mistress seldom entertain a party of friends, and live with all their family in a back room or the kitchen. I would not find fault with such people for occupying that part of the house which their manners and habits are best suited to adorn. I would simply inquire for what purpose seven or eight superfluous rooms were made, since the family neither occupies them, nor devotes them to hospitality! How much more sensible their conduct, if the house had been planned to correspond both in size and appearance, with their own habits and requirements! Such a home is designed neither for the proprietor nor for his neighbors. It is built by a vain man for the idle gaze of a public, who are not allowed to soil it with a single footstep. In this case, the grandeur of the house serves to render the meanness of the owner the more conspicuous.

All this, however, is rather affectation than hypocrisy, which is more commonly manifested in our sepulchral monuments, and in the style of our churches, than in our dwellings. When a man who has led a wicked life, erects before his death a solemn marble tombstone, with a cross and other religious devices, and engraves upon it certain impressive mottoes, the work is an act of hypocrisy. But the affectation that marks the builders of dwelling-houses is that of endeavoring to seem wealthy, when they are poor; gentlemen of leisure, when they are devoted to laborious toil; or princes, when they are only men of wealth, and slaves in their own counting-rooms. It is very common to see the house of an illiterate adventurer furnished with its library and study, while the humble parsonage, right opposite, is so poorly supplied with rooms, that the clergyman writes his sermons and pursues his studies in the parlor or living-room.

It is very customary for the press to ridicule plain houses, because the cant of the times jingles in praise of "the beautiful." But if any one will take pains to study the effects in landscape of the different styles of building, he will find that homely houses, made for comfort and not for show, are the most pleasing objects in rural scenery. There are many who will bear witness of instances I have often observed, in which the beauty of a charming scene has been totally destroyed, simply by removing a neat and plain cottage, and putting up an ornamental one in its stead. The reason why we are thus affected, is that the one wears the expression of freedom and comfort, the other that of vanity and restraint.

If the ornate styles of buildings were favora-

ble to a generous and comfortable mode of living, they would not deserve censure. But if I were to measure the hospitality of a stranger by the style of his house, I should declare in favor of the owner of one that is homely and moderately spacious; and should suspect the liberality of one who lived in an ostentatious house, as I should doubt the piety of those who occupied the most expensive pews in a fashionable church. As this man's palace loomed before my sight, I should feel some misgivings, and say to myself—"These poor people who live on pretence, cannot spend much for generosity."

WHY SOWS DESTROY THEIR YOUNG.

A writer in the *Homestead* gives an article on this subject, in which he argues very conclusively that "costiveness and its accompanying evils are the main causes of sows destroying their young—and proper food is the preventive and cure." He says, and the fact is patent to thousands of pig-raisers, that sows never eat their pigs when running at large, with plenty of green food as in autumn, but with hardly any exception, sows littering early in the spring are troubled with costiveness, often very severely. This causes extreme restlessness, often almost frenzy, and the pains of labor increase it until they destroy their young or any other living thing within their power.

"Green food is the cure." If sows are confined in pens at any season, and especially in early spring, they should have a daily supply of green food for some weeks before littering. Potatoes, sugar beets, carrots, parsnips, and such like, are excellent—and half a peck per day is amply sufficient. If no roots are to be had, sulphur—a tablespoonful two or three times a week—may be given in their usual food, and charcoal is also beneficial. Sows should not be moved about from pen to pen at this time, as it disturbs and irritates them—they should be put by themselves at least a month before littering, and used at all times with kindness and due attention to their comfort.

Corn and cob meal, or corn unground, is bad food alone for sows heavy with young. Sour milk, kitchen slop and vegetable food should be given with it, and for all swine it is to be preferred. In summer, with good clover pasture, pigs will do well without grain, and every farmer should provide a proper pasture for his swine.

We have before stated that sows could be prevented from destroying their young, by giving them rum sufficient to make them tipsy after littering. The preventive of green food would be far better for the animal, as well as of permanent benefit. Sometimes sows refuse to own their young, acting perfectly indifferent to their welfare. We have found this readily overcome by holding the sow, and allowing the pigs to suck once—after which she gave no further trouble.

Country Gentleman.

BEAUTIFUL BUGS.—We have no knowledge of the beautiful bugs sent us by our Berlin correspondent. They exceed in beauty of form and brilliancy of color anything of the beetle kind we have ever seen.

DELEGATES TO COUNTY SOCIETIES.

We have been obligingly furnished by the Secretary of the State Board of Agriculture with the following names of the Delegates who are to visit the county agricultural societies at their annual meetings next autumn.

DELEGATES TO THE SOCIETIES.

Essex, at Danvers, Sept. 23, 29.....	Rev. Mr. Sewall.
Middlesex, at Concord, Sept. 28.....	E. G. Gardner.
Middlesex, S., at Framingham, Sept. 20, 21.....	Wm. Sutton.
Middlesex, N., at Lowell, Sept. 21.....	S. H. Bushnell.
Worcester, at Worcester, Sept. 23, 29.....	G. M. Atwater.
Worcester, W., at Barre, Sept. 27.....	Nathan Durice.
Worcester, N., at Fitchburg, Sept. 29, 30.....	John C. Bartlett.
Worcester, S., at Sturbridge, Sept. 28.....	Cyrus Knox.
Hampshire, Franklin and Hampden, at Northampton, Sept. 28, 29.....	Josiah White.
Hampshire, at Amherst, Oct. 13, 14.....	Chas. K. Tracy.
Hampden, at Springfield, Sept. 21, 22.....	M. P. Wilder.
Hampden, E., at Palmer, Oct. 4, 5.....	W. G. Lewis.
Franklin, at Greenfield, Sept. 27, 28.....	Jabez Fisher.
Berkshire, at Pittsfield, Oct. 5, 6, 7.....	Paoli Lathrop.
Housatonic, at Great Barrington, Sept. 28, 29.....	Geo. Marston.
Norfolk, at DeLham, Sept. 27, 28.....	Chas. G. Davis.
Bristol, at Taunton, Sept. 14, 15.....	O. C. Felton.
Plymouth, at Bridgewater, Oct. 5, 6.....	Levi Stockbridge.
Barnstable, at Barnstable, Oct. 5, 6.....	Wm. S. Clark.
Nantucket, at Nantucket, Oct. 12, 13.....	James S. Grinnell.
Marth. Vineyard, at West Tisbury, Oct. 11, 12.....	Simon Brown.

For the New England Farmer.

LETTERS FROM MAINE---No. 4.

Effects of Deep Planting—Season for Pruning—A Mistake Corrected.

In my last, I gave some reasons why trees which have never been transplanted, seem to be hardier and longer lived than those which are started in nurseries, and removed from thence to the orchard. I have now one additional reason to give. Examination will show that trees which grow in the spot where the seed germinated, have a set of roots on which the tree mainly depends, running very near the surface. In transplanting trees, the roots are generally buried deeper than they naturally grow; and in such cases the tree never gets over the deleterious consequences, unless another set of roots springs out near the surface.

Fruit trees winter-kill in consequence of the imperfect ripening or maturing of the sap. The well matured sap has an essential oil so largely incorporated with its substance as to prevent the fatal effects of severe freezing. An abundance of leaves and a supply of roots near the surface of the soil are the essential prerequisites to the ripening of the sap. Hence deep planting and excessive pruning generally prove fatal to the apple tree in Maine, when the winter happens to be more severe than usual.

The correspondents of the *Farmer* have had much to say about the time of pruning trees; and the fact that the sap sometimes runs from the wound made by pruning—blackening and apparently poisoning the bark—has been attributed to pruning at an unfavorable season. This conclusion is based on error. The living healthy wood of an apple tree will not bleed or discharge sap, when cut at any season of the year. It is not sap which seems to run from the wound, but acidulated water from the dead winter-killed wood under the bark. The sap in the bark is better ripened than that in the wood, and hence the wood is often winter-killed when the bark, and

sometimes two or three layers of sap-wood directly beneath it, remain green. When the wood is killed, and the bark only remains green, the tree or branch will leave as usual, and perhaps directly after the flowering season the leaves will wither up. This is more frequently the case with the pear than with the apple tree, and the effect is then called fire blight, &c. In pruning trees, if a branch is cut where the whole of the wood or a part of it has been winter-killed, the water will run from such killed wood, at whatever season of the year the tree may be pruned. I have more facts upon this subject to communicate hereafter.

SANDY RIVER.

REMARKS.—Our correspondent says—"The living, healthy wood of an apple tree will not bleed or discharge sap when cut at any season of the year." We are greatly confident that he is mistaken. An extended experience, both as to time and number of trees worked upon, has thoroughly convinced us that if a vigorous tree is cut when the sap is in full motion, that sap will *immediately* flow out, long before there is time for any wood to die, or be winter-killed, or even to acidulate. Upon coming to the air this sap becomes pungent and bitter, and poisonous to the bark and wood over which it flows.

EXTRACTS AND REPLIES.

WATER CRESS.

I noticed in your July number a few remarks by a Salem correspondent, of the value and utility of the Water Cress, recommending its more general use. I can attest, from long experience, to its utility as an edible or early salad, and often wondered that it was not more generally used. I have observed the New York markets are partially supplied early in the spring, from Long Island or Jersey.

Early in the year 1841, I was travelling in the vicinity of New Haven, and observed a fine bed of water cress growing spontaneously, and apparently unnoticed previously. I therefore gathered a bunch, took it home with me, planted or strewed it into a spring of water near my house, and within two or three years from that time, without any trouble or cost whatever, I have had an abundant supply for the use of my family and neighbors. If any of your correspondents should have a clear spring near his homestead he could not put it to any better purpose than make a plantation of water cress—they are not only a perennial, but remain by seed, which deposits and germinates so as to keep a supply. J. WOOD.

Mountain Grove, Bridgeport, Ct.

SPECKS IN BUTTER.

Having noticed in your paper a number of remarks on "White Specks in Butter," I would here give a few words of my experience, never having 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." I agree with "H. E. C." of Putney, Vt., in "not stirring the cream." The thick sour milk will be settled at the bottom; that I keep from the churn. The cream wants straining, not merely to "get the dirt out" but to break and mix it preparatory to churning. This method I will warrant to keep the "specks" out of the butter.

M. E. C.

Warner, N. H., 1859.

THE MANNER OF MOWING.

When, a half century since, I learned to mow model farmers were in the habit of cutting their grass very close to the ground, and those who failed so to do were taunted with being slovenly husbandmen; therefore, when I acquired the skill of shaving off the stubble of the preceding year, and leaving the turf in my swath as smooth as though it had just emerged from a barber's shop, I regarded myself a "crack" mower.

Recently, some of our farmers are getting into the practice of mowing higher. They say cutting Timothy below the lowest joint kills the roots, in case of dry weather immediately after mowing, and they say their attention was first attracted to the subject, from noticing that the grass lands of some of their slovenly-mowing neighbors, held out from year to year better than their own, until they adopted the practice of cutting above the lower joint.

What is the experience of Massachusetts farmers in this matter? — VERMONT.

BUTTER-MAKING.

Permit me to express my views, as the result of twenty years experience in the dairy business has shown me that white specks in butter are caused by sour milk being taken off with the cream in skimming, which, by standing with the cream, is hardened, as all sour milk will be. In the process of churning it adheres to the butter in the form of white specks. These are never formed when cream is churned immediately after skimming.

C. T. COWDERY.

South Royalton, Vt., July 11, 1859.

For the New England Farmer.

HAY CAPS.

Grain of all kinds may be cut and shocked up at once and capped, and it will not hurt.

I have used hay caps for from fifteen to twenty years, and have always had them keep grain perfectly well.

I have cut grain in the milk, shocked it up at once and let it stand from one to five weeks. I use, or should like to use, caps four feet square. All things considered, I think them best. They will cover from eight to twelve sheaves of wheat and from twelve to twenty sheaves of oats, according to size of bind. Set up the bundles as you would for stooking, except the cap sheaves, then throw the cap over, and pin it down at the corners with pins about eighteen inches long. I do not hesitate to let the rake follow the cradle, and shock my wheat up at once, if the weather looks unfavorable.

ED. EMERSON.

Hollis, N. H., July 9, 1859.



A SPLENDID DOMINIQUE FOWL.

We present the reader to-day with the most beautiful illustration of the Dominique cock that we have ever seen. It does not show on paper as coarse as our sheet is, so favorably as it would on that of a finer texture. But it is very beautiful even here. We copy it, by permission, from Mr. C. N. BEMENT'S "*American Poulterer's Companion*," a work which we heartily commend to all persons interested in the raising of poultry. Mr. Bement says,—

"The Dominique fowl, well selected and carefully bred, is a fine and useful bird. They are distinguished as Dominique by their markings and their color, which is generally considered an indication of hardiness and fecundity. They are by some called "Hawk-colored fowls," from their strong resemblance in color to the birds of that name. In England they are usually called "Cuckoo-fowls," from the fancied resemblance of their plumage to the feathers on the cuckoo's breast. We seldom see bad hens of this variety and take them all in all, we do not hesitate in pronouncing them *one of the best* and most profitable fowls, being hardy, good layers, careful nurses, and affording excellent eggs and first quality of flesh.

"The prevailing and true color of the Dominique fowl is a light ground, undulated and softly shaded with a slaty-blue all over the body, as indicated in the portrait of the cock, forming bands of various widths.

"The hens are not large, but plump and full-breasted. Their eggs average about two ounces each, are white, and of porcelain smoothness. They are good layers, good feeders, good sitters, good mothers, hardy, and are well worthy of promotion in the poultry-yard."

AMERICAN FARMER'S MAGAZINE.—This excellent journal, under the editorial management of our respected friend, Professor NASH, has been discontinued and "dies," the editor says, "of a collapse in the money drawer." We are sincerely sorry that it has not been better sustained. Prof. Nash is an able writer, an upright and high-minded man. We always read his writings with pleasure and profit, and believe that the farmer will rarely find pages so full of sound and practical instruction as were those of his magazine. We wish him great success in any new enterprise to which he may give his attention.

THE WHEAT CROP OF 1859.

The following article upon the wheat crop of the present year is from the *Metropolitan Bank Note Reporter* of New York. It seems to be carefully considered, and as an estimate of the crops, based upon apparently reliable information, is worthy of attention :

The Wheat Crops.—The wheat crop has generally been harvested throughout the country, and sufficient is known to make a careful estimate of this important staple, interesting for present consideration and important for future reference.

The last official return of the whole wheat crop is from the Patent Office returns of 1855. Using this as a basis, and getting the increase in production from a comparison with the former Reports of the Patent Office, and by the actual investigations made by several of the States, particularly Ohio, we have the means of obtaining approximately from the average amount of land in cultivation for this crop, the yield for this and other years. In this connection it may be remarked that it is found that the average amount of land does not fluctuate like the yield per acre, but like mortality, is governed by certain laws. The average yield per acre every year is only to be found by carefully examining the reports from different parts of the country, etc. With labor we have collected the returns for this year, and give them below in comparison with the returns made out last year for 1857 and 1858, and which we have had no occasion to change.

The production of wheat in the several States for 1858 and 1859 may be stated as follows :

WHEAT.			
STATE.	1857. Bushels.	1858. Bushels.	1859. Bushels.
New York.....	22,000,000	20,000,000	22,000,000
Pennsylvania.....	20,000,000	20,000,000	25,000,000
Virginia and North Carolina.....	20,000,000	18,500,000	20,000,000
Kentucky.....	10,000,000	8,500,000	11,000,000
Ohio.....	25,000,000	22,000,000	26,000,000
Indiana.....	15,000,000	13,000,000	17,000,000
Illinois.....	18,000,000	14,500,000	20,000,000
Other States.....	50,000,000	42,000,000	60,000,000
	180,000,000	158,500,000	201,000,000

The production in the Western States, which have the largest surplus for export, is shown by the following figures :

WHEAT.			
STATE.	1857. Bushels.	1858. Bushels.	1859. Bushels.
Kentucky.....	10,000,000	8,500,000	11,000,000
Ohio.....	25,000,000	22,000,000	26,000,000
Indiana.....	15,000,000	13,000,000	17,000,000
Illinois.....	18,000,000	14,500,000	20,000,000
Total.....	68,000,000	58,000,000	74,000,000

The surplus for the present year in these States may be estimated as follows :

Crop 1859.....	Bushels. 74,000,000
Consumption 5 bushels per head.....	56,000,000
Surplus crop 1859.....	38,000,000

It is estimated that in addition to this, from one-sixth to one-fifth of the surplus crop of 1858 is yet in the hands of the producers. We therefore have in the States, estimating last year's surplus crop of the West at twenty-four millions of bushels, as the gross surplus :

Crop of 1859.....	Bushels. 78,000,000
Sixteen two-thirds per cent. on 1858.....	4,000,000
Total for export.....	42,000,000

The transportation of this at forty cents per bushel will give nearly seventeen millions of dollars to our canals and railroads.

It will probably be thought by many that this estimate of two hundred and one millions of bushels is a large one for the present wheat crop, but we think not. In 1855 the Patent Office returns gave the wheat crop at one hundred and sixty-five millions of bushels; and it is considered as not a large return for that year. In 1855 California was put down as producing only twenty thousand bushels; last year it produced over four millions; and this year probably five millions. In 1855 Kentucky produced only five millions of bushels; it now produces eleven millions. Tennessee has been, except for home consumption, a wheat growing State only since the opening of the Memphis and Charleston Railroad; but now its wheat ranks in quality second to that of no other State. The New England States have decreased in their production, but the West has increased four to one. The amount of land under wheat cultivation this year is thirty-three per cent. greater than in 1855, and the decrease per acre in the production cannot be greater.

It should be remembered that the reports of the failure or excess of a crop are almost invariably exaggerated. It has been found that unless a total apparent failure takes place, the difference between two crops rarely exceeds forty per cent., or between a small crop and an average one, twenty per cent.

The wheat crop in the several States may be considered as harvested and partially ready for market. We can, therefore, give the following returns with some degree of certainty :

In New England the area was not larger than in former years, and the crop is not harvested, but promises, by its superior quality, a return equal, perhaps, to any previous year. In New York the crop is generally excellent, but in some few counties complaint is made. In Pennsylvania and New Jersey the breadth of land and the yield per acre have never before been as great. In Virginia and North Carolina the quality is superior, the land sown rather above the average, and the yield fully ten per cent. over an average and good crop. Tennessee and Kentucky have largely increased their breadth of land sown, and the yield per acre is above the average, while the quality of grain will make their wheat, as in former years, the best in market. In Ohio, the Secretary of the Board of Statistics has prepared careful returns of the wheat crop in that State, and estimates the yield at over 25,000,000 of bushels, showing that notwithstanding the frost, which was more severe in that State than any other, the yield will be larger than ever before by fifteen per cent. In Indiana the same features exist as in Ohio, with perhaps less loss by frost. In Illinois there has been some complaint about the spring wheat, and of all crops in some of the northern counties, but, notwithstanding, the yield will be thirty per cent. greater than ever before. In Iowa there is no com-

plaint made either of yield or quality. In Wisconsin and Minnesota the winter wheat is very fine, and the spring wheat promises well, but is not yet secure. In Michigan complaints have been made, but they have local foundation. In Missouri the wheat crop is secondary to some others, but the press of that State express no dissatisfaction.

With export prices we should doubtless have a movement of the crop never before witnessed, but as this is dependent upon two things, namely, the continuation of the war and poor crops in Europe, we shall perhaps witness no unusual movement. Our people have not, in getting political independence, got, or even learned the value of commercial independence. We are, therefore, dependent upon a foreign demand. If now the producer and the consumer were both in this country, if our manufacturers use our raw material and our producers used home manufactures, we should not have the anomaly of a people almost fearing too large a crop, and hoping for disasters to their neighbors almost, to enable them to sell their surplus. When will we learn wisdom?

RUSTICS NEED NOT KNOW MUCH.

The world has moved a pretty good stretch, in the education of farmers, within the last two centuries, and we hope—indeed we know—that during the next two it will move comparatively a good deal more.

The *Horticulturist*, quoting from "*Philip's Progress of Agriculture*," says that Gervase Markham, who lived at the commencement of the 17th century, wrote a practical work on husbandry, with a view of enlarging the knowledge of the farmers of his day, and laid down what may be considered essential knowledge for them.

He considered reading and writing not very necessary for them to know.

As touching the master of the family himself, learning, he thought, could be no burthen, but as becoming some of the servants, he says, "some servants in husbandrie, as the bayliffe, the under farmer, or any other ordinary accountant, it is not much material whether they be acquainted therewith or no, for there is more trust in an honest score chaulkt on a trencher, than in a cunning written scrowle. And there is more benefit in simple and single numeration in chaulke, than in double multiplication, though in never so fair an hand written." Markham had a curious method of finding how the corn market would open in each month of the year. This was before the days of combination of speculators in breadstuffs.

"If you would know," says he, "whether corne shall be cheap or deare, take twelve principal graynes of Wheate, out of the strengthe of the eare, upon the 1st day of Januarie, and when the harth of your chimney is most hot, sweepe it clene; then make a stranger lay one of these graynes on the harth, then mark it well and if it leape a little, corne shall be reasonably cheape, but if it leape much corne shall be exceeding cheape, but if it lie still and move not, then the price of corne shall stand, and continue still for that moneth, and thus you shall use your twelve graynes the first day of every moneth one after

another, that is to saye, every moneth one grayne, and you shall know the rising and falling of corne in every moneth, all the year following." We suppose the hopping of parching peas in a hot skillet would foretell the price of peas by the same rule.

For the New England Farmer.

VERTEBRATE ANIMALS--No. 2.

The grand division of the animal kingdom called Vertebrates are divided into four classes. The first two, fishes and reptiles, are cold-blooded, that is, they have a temperature about the same as the element in which they live. This depends upon their respiration and circulation. Fishes breathe by means of gills, and their blood is purified only by the action of the small quantity of air held by the water, as it is made to pass through the gills. Reptiles breathe by means of lungs, but their circulation is very sluggish, and compared with the higher classes, but little blood in a given time passes through their lungs. Some reptiles, as the frog, in early life, (tadpoles,) breathe by means of gills. Fishes are universally organized for swimming in water—reptiles for the most part are amphibious—living both in the water and on the land.

The other two classes, Birds and Mammals, are warm-blooded, maintaining a uniform temperature in the different seasons, whether the weather be hot or cold. Birds, with fishes and reptiles, are *oviparous*—producing eggs. Mammals are *viviparous*. Birds are organized for flight; but this remark, like many general remarks which we make, has exceptions. The ostrich never rises on the wing, and the wings of the penguin are formed into paddles as nicely as the tail of a muskrat or of a beaver. Mammals all suckle their young. This fact gives them their name. Whales and porpoises are commonly called fishes. They possess, however, all the characteristics of mammals if we express them in general terms. They are warm-blooded, viviparous, and breathe by means of lungs. Their teeth and other organs correspond also with the organs of mammals in their structure. The only thing they have in common with fishes is, that they are organized for swimming. The bat is also a mammal, and not a bird, though it is organized for flight. This class, then, seems to be formed in some of its orders to occupy the three elements, the air, the earth and the water.

The class of mammals is divided into nine orders. We cannot do more than mention them. There are the Bimana—two-handed—including man; the Quadrumana, four-handed, containing all apes, monkeys and baboons; the Carnivora, flesh-eaters, containing cats, dogs, wolves and bears; the Marsupials, animals with a pouch for their young—containing opossums and kangaroos; the Edentata, animals having no teeth in the front part of either jaw, containing sloths and armadillos; the Rodentia, grinders, animals with only two front teeth in either jaw, containing squirrels, beavers and rabbits; the Perchydermata, or thick-skinned animals, including the horse, the hog and the elephant; the Ruminantia, or cud-chewers, containing the ox, the deer and the antelope; the Cetatians, or sea monsters, including the whale and the porpoise.

Each *order* has its *genera*, as the Ruminantia has its Ovidæ, or sheep tribe; its Bovidæ, or ox tribe; its Cervidæ, or stag tribe. Each *genus* has its *species*, and each *species* is composed of individuals. We have then the classification which pertains with little modification, to all material objects, each term including the following: kingdoms, grand divisions or departments, classes, orders, genera, species and individuals.

My next number will be upon the nature of species—a knowledge of which is important to every man. _____ O. M.

For the New England Farmer.

THE TAP-ROOT--DECAY OF PEAR AND APPLE TREES.

When a seed of the apple or pear is planted, it throws down into the loose soil a long, slender root called the radicle, and sends upwards a stem called the plumule. The root, however, throws out laterals, and the stem also puts forth side branches. Undoubtedly, the cause of the root making so direct a descent, is the want of moisture, which it cannot find within an inch or two of the surface. How far it would, or should go down for its own welfare, independent of its lateral or accessory roots, is a question. When the young tree is transplanted, it is usually thought advisable to shorten the tap-root, or radicle, so as to multiply the laterals—thereby giving greater power of absorption of vegetable stimulants, as each delicate spongiolæ has a mouth at its termination, by which it sucks in its liquid nourishment. As the tree advances in growth, we frequently cut off the leading stem to give the top greater expansion. It is generally conceded that the operation does not in any way impair the tree or bridge its life. Does the shortening of the tap-root injuriously violate the tree's natural laws any more? Is the knife more repugnant to it below than above? But it is said the tree needs a long radicle in a drought to reach the moisture of the earth. If such is the case, then the tree has the power to strike one, and probably does so, just as it possesses the power of forming a new vertical stem. In these respects, the plant will take care of itself. There can be no doubt, however, that the roots of a tree are more spreading than the external branches; in other words, that the roots never go down so deeply as the limbs extend upwards. And I very much question, if two old apple or pear trees—one having been planted *without* clipping the tap-root, and the other with it *shortened*—could be taken up with the roots entire, both having had equal treatment, any marked difference could be distinguished. I regard the single long tap-root as a thing pertaining to the tree's early growth, and that clipping it gives it new vitality in transplantation, however the tree may subsequently vegetate or restore itself. Unlike the limb of a man, the vital part of a tree, when shortened, will grow again.

I was led to make these remarks by lately seeing in the *Farmer* some observations deprecating what seemed to be regarded the injurious mutilation of the tap-root; also from an article by Mr. J. M. Ives, of Salem, whose writings no one reads with more pleasure than myself, published in the last Report of the "Agriculture of Massa-

chusetts." Speaking of pears, this gentleman says:

"Most of our newly introduced fruits show symptoms of decay, while many of the old varieties which are scattered here and there throughout New England are still in a bearing and healthy state." Mr I. is disposed to attribute the decay of the pear tree to curtailing the tap-root, to severe pruning, and to the "enfeebling process," practised by Van Mons, by which some of our first varieties have been produced. That we get our best pears at the expense of longevity of the tree, I have sometimes been inclined to believe, though not decided as to this point. The most common and hardy old pear trees we see around us, are the old "Iron," or "Black Worcester" variety. The fruit, as is well known, is not fit, in an uncooked state, for a felon to eat, and no one now propagates it, hardy as it is. The demand at present is, good varieties at all hazards. These old trees were undoubtedly transplanted, as we see them set in order; and if transplanted, they probably lost (intentionally, or otherwise,) a portion of their tap-root, besides having their trunks denuded. They were, of course, grafted, as we do not imagine the Iron pear will re-produce itself from seed. We see a less number of the St. Michael, a very fine fruit when free from cracks; also some Jargonells, Harvards, &c. The St. Michael trees are long-lived, though the pear is now worthless. Sixty years ago, only little attention was given to the culture of the pear; but undoubtedly proportionate failures and decay were difficulties to be met with then as now. We do not see the trees which have prematurely perished, but only those which have lived. A half a century or more from now, it will be something worthy of a record in history, if cultivators do not complain of the premature decay of trees; and they will point to some of those which are now being planted, as evidence that it was not so formerly. Will they not see the Fulton, the Buffum, the Dix, and even the delicate Seckel, besides others of our natives? and also the Vicar of Winkfield, the Louise Bonne de Jersey, the Flemish Beauty, the Glout Moreau, and others of foreign origin? And seeing them in hardy old age, what more natural than for them to conclude that ours was the golden age of fruit culture?

There will always be feeble varieties of apples and pears—it appears to me—whether we preserve the tap-root, and keep the knife and saw from the top or not. And there will always be others which will show their hardy nature in defiance of mutilation. It is true these hardy ones may not always be good, but we feel assured that they need not be necessarily bad, nor the feeble ones, without exceptions, excellent. Diseases and decay are frequently induced by poor culture and bad position; and some seasons, in spite of the best of treatment, the pear tree remains dormant, (even before bearing,) its leaves small and yellow, and its general indication deathly; and then in another year or so, it will make a heavy growth, and all without any obvious reason.

Whatever may be said of the hardness of seedling pear trees with their tap-roots undiminished, I have not been so successful with some young ones in a nursery row, as with those which were grafted. They are liable to spring blight, uncon-

stant in growth, and I think more liable to be winter-killed—so that I have grafted some stocks and given them a regular course of treatment, to save them from death. The tap-root, surely, is not the stronghold of vitality.

In travelling in the woods and uncultivated spots, I have frequently met with seedling apple trees, of the existence of whose radicle there could be no doubt. They were scraggy, with many low and frightfully decayed limbs, and numerous suckers growing up around their trunks. Occasionally some of their branches will hang full of poor fruit; yet they show little evidence of longevity, or that they would not die of premature old age. Certainly, we do not want such trees as these in our orchards and gardens. No; we need trees which have felt the influence of intelligent cultivation—the mind and hand of man—manure, the saw and the pruning-knife.

Many trees seem to have no central root, but rather roots very divergent and near the surface; yet they grow rapidly. Notice the plum tree, the Ailanthus, and the Abele. If these trees do so well, may we not find encouragement in clipping the radicle of the apple and pear?

But even granting that pear trees are decaying from causes noticed above, have we any remedy? It is true we can preserve the central root in the stocks; but how can we get the best sorts of Europe or of our own land, without we accept of scions that are the result of that "enfeebling process" which alone is supposed to generate a good variety? Shall we use these scions, or shall we fall back upon the enduring tap-rooted trees, with their harsh and worthless fruit?

D. W. LOTHROP.

West Medford, July 15, 1859.

For the New England Farmer.

SECURING CORN—CORN FODDER.

MR. EDITOR:—In the *Farmer* of July 9 I notice an article under the heading of "Corn and Corn Fodder," by J. Wood. He seems to favor the old practice of cutting the stalks, both on account of the grain and fodder and on account of the saving of labor in harvesting. I contend that it is not more than two-thirds the work to harvest an acre of corn to cut it up at the roots that it is to cut the stalks as your correspondent would do. I consider it as much work to cut an acre of stalks, bind and shock them, as it is to cut up the same amount of corn at the roots and bind and shock it. Therefore, I think our friend Wood loses his time and labor entirely in cutting his stalks, for I know from my own experience that corn well secured in the shock will cure as sound and bright as that which is suffered to ripen in the butts. My method for curing corn is this: as soon as the outside husk on the ear begins to turn, I commence cutting. I place from four to six hills in a bunch, after which I bind and put four bunches in a shock. I then turn the tops of the tassels down and bind them, which prevents the water from getting inside the shock. I let it remain from two to four weeks, when it is sufficiently cured to haul to the barn.

I think I have the advantage of my friend Wood in two or three respects; first, in the saving of time and labor, and again in having the

stalks and butts together, which is not only a great convenience, but is evidently better on account of their both being cut in a greenish state, while in cutting the stalks only, the stalks are secured green and the butts are allowed to remain till they are perfectly dead and dry, which renders them of little value. Although I disagree with my friend in some respects, I agree with him in others. I fully endorse his practice of feeding his corn fodder in the winter. I make a practice of feeding to my stock one or two bunches a-piece per day, making it last nearly through the winter. My cattle eat it with a relish that assures me it is a pleasant, and I think must be a wholesome diet.

W. M. L.

Sullivan, N. H., 1859.

SEASONABLE FARM WORK.

The best season in all the varied round of the year for seeding land to grass, is probably the month of August. The days are long, and if the weather has not been marked by drouth, the land is usually sufficiently moist to make the operation of plowing easy and agreeable. It is a hot season, to be sure, but such advantage can be taken of this, by working early in the morning and a little late at night, as to overcome any objections on this account. It costs something to break up an exhausted field, and re-seed, but it is better economy than to mow over the same land for a succession of years, and get less than a ton of hay to the acre, and that, quite likely, upon the best lands. Let us look at the items:

Horse and oxen 1 day.....	\$3.00
Man and boy.....	1.50
Use of plow.....	.25
Harrowing and levelling.....	1.00
One bushel red top seed.....	.75
One peck of herbs grass.....	.87½
Six pounds of clover.....	.75
	\$8.12½

An expenditure of eight dollars and twelve cents will put an acre into excellent condition to give one and a half tons of the best hay for six years in succession, at least, with the aid of a little top-dressing. We say nothing of manure, as that is a farm product replaced by the crops.

Now for the items again: The acre just plowed has produced three-quarters of a ton, annually, for the last five years. At \$16 per ton this would give \$12 a year, or \$60 aggregate for the five years, \$60.00

The acre newly seeded and properly laid down, will give one and a half tons annually, and at \$16, would be \$24.

Or in the aggregate.....	\$120
Deduct value of old crop.....	.60
Balance.....	\$60

in five years in favor of reseeded.

Then there is another item of importance in the saving made by working less land—because if the crop is doubled, it is necessary to cultivate only half as much breadth.

Another item of farm labor for the autumnal months, is that of preparing lands for cultivation. We do not mean to speak now so much of subduing the forest or the swamp, as of clearing up fields that have been cultivated, but which were only partially reclaimed.

That farmer's profits must be large, who can afford to plow, hoe, mow and rake over and around stones that might be sunk or removed. And now that the mowing machine and horse rake have been introduced, it is more important than ever before, that our fields lie smooth and fair, that we may avail ourselves of the advantages which these machines offer.

For removing the large stones that lie in the way in so many of the fine hay-fields of New England, there is nothing that we have ever seen equal to the *Stone Lifter* which was figured in our columns last year, and of whose operations we have once or twice given an account. There should be one of them in every rocky town in New England. With this machine, a stony field of ten acres may be cleared in two or three weeks, and the stones laid into a substantial wall, and we think this may be done at less than one-half the cost it would require to do the work in the common way, with powder, iron bars and oxen. These machines have been taken into New Hampshire and Vermont, and we advise our friends to avail themselves of the first opportunity to see with their own eyes what they are capable of accomplishing.

There are some other items of autumnal business which we will speak of at another time.

For the New England Farmer.

EXPERIMENTS WITH THE CORN CROP.

I send you the following note copied from the Secretary's Report on Massachusetts Agriculture, Abstract of Returns for 1858, page 203.

"Mr. Solon Carter, of Worcester North Agricultural Society, reported the last year, his experiment of the year 1856, with the following result, viz., Three lots of one hundred hills each, the date of harvesting, husking and shelling being the same. After husking, the ears were spread about six inches deep, and remained so until shelled.

Lot No. 1—Cut up whole and stooked. Weight of ears, 189 lbs.; of corn, 139 lbs.; of cobs, 24 lbs.; shrinkage, 26 lbs.; 14 per cent.

Lot No. 2—Top stalks cut. Weight of ears, 200 lbs.; of corn, 155 lbs.; of cobs, 26 lbs.; shrinkage, 19 lbs.—9½ per cent.

Lot No. 3—Left standing whole. Weight of ears, 196 lbs.; of corn, 141 lbs.; of cobs, 23 lbs.; shrinkage, 32 lbs., or 16 per cent.

As in 1856, so now, the corn which had the top stalks cut, weighed most at harvesting, and shrunk least before shelling.

The lots for the above trial were selected by Col. Phillips, when examining the field for the committee of which he was chairman."

For the New England Farmer.

VISIT TO MOUNT HORRID.

MR. EDITOR:—After the labors which confine us to the drudgery of farm-life for the spring are accomplished, it is sometimes delightful to wander away into the solitudes of nature, and enjoy communion with the bright scenery of earth, which is so beautifully seen from those elevated peaks of the Green Mountains, spreading far and wide on each side of the green hills of our childhood; those enchanting elevations, which excited our curiosity in our youthful days, but where in riper years we behold

"This elder Scripture, writ by God's own hand,"

illustrating the changes of our planet since its primary form in the incandescent state. O, what a mighty change does the infinitude of a past eternity impress upon the mind! Yet, now, the same workings of natural law, and the same forces, are elevating one part of our globe, and depressing another; and yet, the unmaturing mind sees no change in all this wreck of matter and crush of former worlds,—while the beauties of the landscape spread out before his vision, with all its enchanting scenes of light and shade, awake no emotions in the soul, send no thrill of joy to the heart; and even when we call on those people who live on the skirts of this beautiful mountain, and have wandered o'er these hills from boyhood's happy days, we find no emotions of delight exhibited, and an utter ignorance in directing us where we can go to enjoy these beautiful views of landscape and mountain scenery. Here we were left to take our own course, and find our way to the summit of Mount Horrid, as best we could.

It was on the beautiful morning of the last day of May, that our little party, consisting of four, started from Brandon at about eight, A. M., on a visit to Mount Horrid—that awful looking escarpment which lies a little north of the gorge, through which the road passes from Brandon to Rochester. We rode to the highest habitation of man on this side of the mountain, and there left our team and pursued the journey on foot. The morning was clear and the air salubrious at the time of starting, with all the prospects of a bright and sunny day; but before we reached the summit of the mountain, we observed the forming cirrus faintly intercepting the brilliant light from the golden god of day. At noon we stood upon the utmost height of the gorge, on the highway south of Mount Horrid. Cirrus had begun to obscure the sky, and soon there appeared a solar halo of unusual brightness. We were neither weary nor hungry, but intended to dine on the margin of some crystal rivolet near the summit of Mount Horrid. We were now in sight of that rocky escarpment which lies to the north from where we stood. We stood at the termination of a hill, bearing a north-westerly direction, and connected with the western side of Mount Horrid. Then up its eastern slope and across a rocky chasm, we wended our way to the rocky ruins beneath Mount Horrid.

Here, it seems, nature in her wildest mood scattered her rocky ruins in the most fantastic manner. Here, the frost of ages has been crumbling the rocks from the brow of this awful eminence, and scattering them in rich profusion on

the side of the valley below. Above us, fire had done its work of destruction, and the bodies of the scattered spruce forest were strewn over the barren and broken rocks, far above the rich foliage of the valley below. But where did these monarchs of the forest grow? There was no soil save here and there a crevice, filled by the torrent formed by some mighty shower; and carried from the realms above. Here, perhaps, the lightnings of heaven have spent their fury, and sent their thunderbolts among this rocky mass.

Ascending about half way up the rocky eminence, and looking down, we saw one of the pigmy inhabitants of this lower world, travelling down the mountain turnpike in a one-horse buggy. Huge rocks grew steeper at every step; we clung to the decaying arms of the giant but prostrate spruce, and climbed the rotten trunks over the rocky defile. At last the summit of Mount Horrid was beneath our feet. With a telescope we saw farms and farm-houses, scattered far to the eastward, while in the distance lay the imposing outline of the White Mountains of New Hampshire. South of us, and across a deep valley, stood another mountain of equal height with Mount Horrid, clothed in the most beautiful foliage. The woodman's axe had apparently never rang through its solitudes, and its beautiful foliage will probably bloom there for many years to come.

The rocks are of a coarse, granular texture, composed of several ingredients, of which silica is one of the principal; hornblende and felspar, I think, enter into its composition, with a very minute quantity of mica. They appear to be unstratified, metamorphic rocks, ground down to small particles, and again cemented in a solid form. Here was a delightful region for a botanist. Thousands of wild flowers beautified the scene, and such a carpet of soft, velvety moss, does not exist in the lower regions of earth. This might with propriety be called the region of moss, for it was the most luxuriant growth I ever saw. It was above the region of maples, and the principal growth of timber was spruce and birch, with a small variety of shrubbery. I gathered a few wild flowers, promiscuously, for samples, but they were dead and withered before I arrived at home. As near as I can judge from the withered specimens, the little modest flower dedicated to the immortal Linnaeus shone conspicuously upon Mount Horrid—the *Linnea borealis* or twin flower. It is the first time, I think, I ever saw this little modest flower, and it brought to mind the memory of the celebrated founder of the Linnæan system of botany.

I left the summit of Mount Horrid about three, P. M., and wended my way in a south-westerly direction, toward the foot of the mountain. When part way down, I came to an opening in the forest, where with the telescope I had a splendid view of the landscape far to the westward. Yonder, in the distance, lay Lake Champlain, with its bright and shining waters, like a long white ribbon of silvery brightness, stretched on the verdant landscape, while nearer lay Lemontane, like a bright gem, amid the surrounding scenery of green foliage. In the far-off distance lay the blue and rugged forms of the Adirondack Mountains, whose lofty summits have an impos-

ing look, as they lay piled up beneath the dark canopy of heaven. Long ere this the sky was overcast with clouds, the token of an approaching storm, which had gathered gradually through the day. They wore a smooth aspect, like the approaching nimbus, but did not entirely obscure the sun, when I left our beautiful station on the mountain's side. I then started homeward, but before I arrived, a few sweet drops fell in advance of the approaching storm. My journey was delightful, but far too short to study into the mysteries of nature. Every flower had but a passing notice, and every rock a cursory examination. My time was far too short for the purposes of scientific investigation. D. BUCKLAND.
Brandon, Vt., 1859.

THE NIGHT BEFORE THE MOWING.

All shimmering in the morning shine,
And diamonded with dew,
And quivering with the scented wind
That thrills its green heart through—
The little field, the smiling field
With all its flowers a-blowing,
How happy looks the golden field!
The day before the mowing!

And still 'neath the departing light—
Twilight—though void of stars,
Save where, low westering, Venus sinks
From the red eye of Mars;
How peaceful sleeps the silent field,
With all its beauties glowing,
Half stirring—like a child in dreams—
The night before the mowing.

Sharp steel, inevitable hand,
Cut keen—cut kind! Our field
We know full well must be laid low
Before its fragrance yield.
Plenty and mirth, and honest gain
Its blameless death bestowing—
And yet we weep, and yet we weep,
The night before the mowing!

For the New England Farmer.

A NON-BEARING ORCHARD.

I suspect, Mr. Editor, that your correspondent "E.," who complains, in the *Farmer* of July 16 that his thrifty orchard of apple trees does not come into fruit-bearing, is like too many fruit-growers—too impatient. If his trees are, as he says, twelve inches in diameter on twelve years' growth, they are, indeed, very thrifty trees, and the reason why they do not bear is to me very plain. *They are making wood, instead of making fruit.* When they have come to their growth, or nearly so, they will bear all the better for not bearing now. It is the opinion of experienced nursery men, and I fully coincide with it, that early fruiting is, as a general rule, an indication of disease in a tree. Some varieties, it is true, come into bearing earlier than others, without showing indications of disease, but, as a general thing, early bearing trees are smaller in size at maturity, and shorter lived, than those of more tardy development of fruit-bearing qualities. It is often the case that a young apple or pear tree will "take to fruiting" for a number of years, and for the time, nearly cease its growth of wood; then it will stop fruiting, "take to growing," and

become a good sized tree before it bears another particle of fruit. It seems to be out of season that trees should grow thrifty and fruit heavily at the same time; and my advice to your correspondent is, to wait patiently a few years longer, and let his trees grow. They are doubtless paying a much better interest on the investment, in that way, than by an earlier development of fruit. If they are of the kinds which ordinarily bear well, there is little danger but that they will, in a very few years more, amply repay all the patience and care which their owners may devote to them.

I know there are exceptions to all rules, in fruit-growing, as in everything else. There are some soils, though they are very rare indeed, which will not apparently produce apples or pears. It is generally supposed that such soils lack entirely the ferruginous principle. Perhaps if your correspondent would try the experiment of scattering iron filings, or cinders from a blacksmith's forge, freely around two or three of his trees, digging them freely into the earth so that they may come in contact with the roots, he may soon ascertain whether his soil lacks the essential element of iron. I have known iron spikes driven into plum trees, to produce fruit when they had long been apparently barren; the iron acting, evidently, as a kind of *tonic* to the sap. But the instances are very rare in which thrifty, well cultivated trees, of the right varieties, fail to produce fruit at the proper stage of their growth.

E. C. P.

Somerville, Mass.

A FINE GRAIN SIFTER AND ASSORTER

There is a great deal written and said nowadays about agricultural education, and agricultural colleges, just as though a young man could be put through a course of academic instruction, and then through the routine of college learning, and be turned out upon the world a good farmer, or in fact, a good anything else. Few men ever reach the quarter-deck excepting through the fore-castle. Genius outruns mere learning every day, and gathers the harvest, while learning, or book education, merely, lags behind. But genius and learning combined, master all things.

The idea extensively prevails that it is hard work, year in and year out, *that makes the farmer*,—hard hands, neglected dress and contempt of refinement. This, too, is all folly. At his work he should have whole, but strong and substantial garments suitable to the occasion,—but at church or town-meeting, why should not his dress be as fine and fashionable as any respectable person wears?

Then the farmer should be something of a merchant, too, understanding the qualities of the products in which he deals, their prices, and how best to arrange and prepare them for market, in order that they shall return him a fair profit.

We are acquainted with two men occupying

the same range of land, and their farms opposite each other, who happened to carry one hundred and eighteen barrels of apples, each, to market the same fall, and during the same time. One of these men got a certain sum for his apples, and the other got just \$118,00 more, or an average of one dollar per barrel more! One had sufficient mercantile skill to lead him to assort his crop into grades, put them into clean and uniform barrels, and fix a price upon each class, and in consequence of this skill realized nearly double that his neighbor did on the same amount and quality of article.

We saw a man in South Market Street the other day, sifting beans, and as he seemed to have an interested audience about him, we joined the group to look, listen and learn. He had several barrels before him and a sort of tray-like box made of pine board, and filled with wire sieves. He rattled his sieves and chatted fluently about his business, telling his audience that he purchased the lot of beans before him, had sifted out *four* bushels of defective and small ones, worth as much as four bushels of the best yellow corn, and had sold the remainder for what the whole lot had cost! It had taken him two hours to do the work, and he had realized \$2.00 an hour for his labor! These are but examples of one kind of learning which the farmer needs. Boston market is the best institution in which to acquire it, of any that we are acquainted with. Such was the train of thought suggested by witnessing the operations of our friend, the bean assorter.

We had a further curiosity, however, to gratify, beside listening to his speech. The little machine—if machine it could be called, that had not a bolt or screw in it—was before us, and on examination we found that the operator could mix half a pint of *twelve* different kinds of seeds, such as marrowfat, blue pod and pea beans, split beans, peas and split peas, coffee, buckwheat, rye, oats, linseed and grass seed, and in less than two minutes from the time the mixed contents were put in, they were again separated and discharged into twelve boxes with almost unerring certainty.

If these simple contrivances were in common use among farmers, what a mass of unsaleable oats, barley, wheat, rye, buckwheat, coffee, rice, peas, beans, &c., might be kept at home and fed to stock, the cost of freight to market, and frequently back again, saved, while the good article, separated from the bad, would bring more money than the whole, when sold together.

An Oswego, N. Y., dealer brought a lot of beans to Boston market, and in consequence of imperfect cleaning up, and of shrivelled beans, they were unsaleable. He passed them through a sifter and assorter, got out six bushels of defe-

tive beans, and then found a quick sale at a high price for the remainder.

These sifters are made and sold by Mr. SANFORD ADAMS, Lincoln Street, Boston, who is a hard-working, ingenious man, and who has probably never eaten a pound of bread or meat since he was six years old, before he had earned it. We wish he had eight or ten platoons of young *gentlemen* and *ladies* under his charge, who think they have a right to eat and drink without first having earned what they eat or drink.

For the New England Farmer.

ANALYSIS OF SOILS--MANURES.

You hear, everywhere, from men learned, perhaps, in some branches of knowledge, but who never have experimented in agricultural chemistry, that agricultural science is merely this:—Analyze the plant and see what are its elements; analyze the soil, and see if the ingredients of the plant are there, and if not, supply them. This is seemingly easy to comprehend, and seemingly easy to execute; and many farmers have thought that their sons could learn to be their own practical chemists in one, or at most, two terms at an academy. I think that the establishment of nominal agricultural departments in our little academies have encouraged the idea; though in the end it must have the reverse effect. Agriculturists should be disabused of this false notion, and know that it requires as much time to learn to make reliable analyses, as it does to acquire the legal knowledge necessary for a lawyer, or the medical knowledge necessary for the trusty physician.

When the student of agricultural science is able to make reliable analyses, and hardly till then, can he understand the difficulties of the task he has undertaken. He will find that chemical analysis alone cannot enable him to direct with any considerable certainty, the best method of treating a particular soil—no man can do it. The chemical reactions in the soil are so complicated, and so little is known of the manner in which plants grow, that science, in its present state, cannot positively decide the matter. We quote upon this point, Prof. G. W. Johnson, of Yale College, and Consulting Chemist to the Connecticut State Agricultural Society. "He says:—"We are every day drifting further from what but a few years ago was considered one of the most fixed and beneficial principles of agricultural science, viz.: that a substance is chiefly a fertilizer because it directly feeds the plant, and are learning from the numerous recent and carefully conducted experiments with manures, that in very many cases we cannot safely venture to predict what will be the influence of a given application; but find in practice the strangest and most discordant results, it being literally possible to show from the experience of the farm that almost every fertilizer in use has in some instances proved beneficial to every cultivated crop, and in other cases has been indifferent or even detrimental." "We are, therefore, compelled more and more to regard the indirect action of manures." This indirect action refers to the changes

that take place between the elements of the fertilizer and the elements of the soil. To illustrate, we quote an example which he has given: "Wolf found that the ashes of the straw of buckwheat, grown with a large supply of common salt, (chlorine and sodium,) compared with the ashes of the same part of that plant grown on the same soil, minus this addition, contained less chloride of sodium, but much more chloride of potassium; there having occurred an exchange of basis in the soil." The chlorine had changed from the sodium of the salt to the potassium of the soil. This may explain the various effects of gypsum. If it is put upon a soil in which an ammonia salt will be decomposed and the ammonia set free, it is beneficial; but if it enters into other combinations, or remains inactive, it will be, as it very frequently is, of no value.

We would not, then, have the agriculturist expect too much, on easy terms, from science, nor would we have him expect too little. Do not think that because science blunders, and is not sure-footed, that it is worth nothing. It is young and not perfected; but already, it has taught much that is valuable to every man that has a rod of land, and there is hardly a man in New England but has been more or less instructed, though unwittingly.

Do not think because your sons cannot become masters of chemistry in a term or two, it does them no good to study at all. They need a knowledge of chemistry to understand fully the article we have written, and so much can be given at an academy or high school. There is much knowledge that can be given by a competent teacher, in a single term, to a class in agriculture. To have it valuable, the teacher should not be a mere book man, a theorist, but one who has applied his science. O. M.

Wilbraham, Mass., July 21, 1859.

CLEAN MILKING.—It is sometimes forgotten that the last gill of milk drawn from the cow's udder is the best part of every milking. Careful experiments made in England show (according to a report lately published,) that "the quantity of cream obtained from the last drawn cup from most cows, exceeds that of the first in the proportion of twelve to one." The difference in the quality also is considerable. Hence, a person who carelessly leaves but half a pint of milk undrawn, loses in reality as much cream as would be afforded by six or eight pints at the beginning; and loses, too, that part of the cream which gives the richness and high flavor to his butter.

PAINTS.—Pure paint is always better than adulterated; most of the grinders of white lead and white zinc grind these pigments with sulphate of baryta; avoid such paints. The baryta cannot hold the oil and soon rubs off. In painting wagons, plows and other implements, use no spirits of turpentine. Wait a little longer for the paint to dry, and it will last longer when dry. Use pure linseed oil, and none of the patent rosin oil mixtures. For many utensils, common shellac varnish answers as well as paint, and maintains the original color of the wood.—*Working Farmer.*

AGRICULTURAL REPORT OF PLYMOUTH COUNTY.

Every Secretary of an agricultural society who has attempted to make up a report, can fully sympathize with the worthy Secretary of the Plymouth society, in his remarks upon the statements of committees and competitors. It is too often true, that "very few statements of any accuracy or importance, come into the hands of the Secretary."

"Let it be understood now and always, both by the exhibitor and the committee man, that our agricultural societies do not, and were not designed to give premiums alone for the accident of a fat ox, or a fat field, or a twenty quart cow, but they give a premium in return for some information accompanying the ox or cow, as to the *how*, the *when* and the *wherewithal*, which is what the farmers want to know, and which alone, in the reports of the society, can be of any benefit to the community." This is the true doctrine, and we are glad to see it made prominent by the Secretary.

The committee on premiums appear to have caught the spirit of this officer, for we notice that three competitors for premiums on grain crops, lost their premiums by not sending in their statements seasonably.

Plymouth has a high reputation for its large grain crops. Its corn crops have never been excelled in the State, and we are glad to see an attempt to place the yield of this crop on a basis which shall prevent all doubt hereafter, as to the accuracy of the reports. The corn is to be shelled in January, and weighed, allowing *fifty-six* pounds to the bushel. Mr. G. P. WOOD'S corn, raised in 1857, was estimated by harvesting, and weighing two rods, at *ninety-eight* bushels per acre. On being shelled and weighed in January, 1858, it yielded 75 15-56 bushels, of fifty-six pounds each, which shows a great shrinkage between harvesting and January.

Fine crops of barley and oats were also presented and received premiums. We have no doubt that the successful cultivation of grain crops in this county is due, in great measure, to the liberal premiums that have for many years been paid for them. We are glad to notice that premiums were awarded for the skillful manufacture of the largest quantities of compost manures. CHARLES G. DAVIS and JONATHAN HOWARD were well entitled to the premiums they received, and especially for the accounts they furnished of their methods of operation. An interesting essay upon the culture of corn, by that sound farmer, MORRILL ALLEN, will repay perusal.

Two married ladies and three single ones displayed themselves on horseback, no doubt to the

gratification of most, if not all, the young men and boys assembled. Eleven premiums were awarded for the exhibition of flowers, nearly all of them to ladies. We do not hesitate to record it as our opinion, that a beautiful bouquet, or basket of flowers, is a more appropriate exhibition for a lady, than the exhibition of her person on a fast horse before a gazing crowd.

The report closes with a list of premiums offered for the year 1859. We notice that this practice is becoming common, and it strikes us as a good arrangement. The only objection to it is, that the meeting of the Trustees must be held, before the report can be got out. But, perhaps, this is the best way. With the incidents of the last exhibition in their mind, the Trustees will be better able to make arrangements for the coming one.

For the New England Farmer.

GRAPE VINES WHICH CAN NEVER BEAR.

Most persons are aware that a flower is perfect in structure when the stamens and pistil or pistils are present. It matters not whether the corolla, that brilliant circle of colored leaves, which in popular language is called the flower, be present or not; a flower is perfect in structure when the organs which are essential for the production of seed are present, and these organs are the stamens and pistils. Classifying by structure, we shall find most of the finest flowers of our gardens are very imperfect, their elegant double nature being gained at the sacrifice of the stamens, which by a beautiful metamorphosis, have changed to petals; on the other hand, a classification founded on structure increases our interest in many trees and plants. Few, probably, are aware of the most abundant flowering of the elm tree. These flowers precede the leaves, and while some wonder at the interval which elapses between the bursting of the dark brown bud and the appearing of the leaves, that noble tree is centering all its energies in performing the most delicate and intricate work of the round year, the perfecting of the organization of its myriads of seeds.

The statement that stamens and pistils are all that are necessary to form a true flower, may appear to some merely a theoretical truth, possibly of some value in science, but of no practical value. If this be so, I would ask such an one to explain how I can sustain the absolute assertion made at the head of this article, viz.: That there are grape vines that cannot bear? And this statement can be made as absolutely of strawberries and other plants as of grape vines. Nature is no waster of her resources; with her primary end of our edible fruits is to protect the seed, and therefore, if the parts necessary for the perfection of the seed are not present, rarely, if ever, shall we find fruit.

For several years we have had growing upon our trellis two seedling grape vines, which had been selected for the superior vigor of their growth from a large number of seedlings. All of

these seedlings had produced specimens of fruit, but these two, which bloomed most profusely, as yet would never set a grape. Struck by the phenomenon of vines abounding in fragrant blossoms without setting fruit, I gathered the blossoms and compared them with those from fruit-bearing vines. The difference was at once apparent; the blossoms of the two vines which had never borne were not perfect in structure; the stamens were present, but the pistil was wanting. Such vines cannot bear—it is a physical impossibility. Had the pistil been present they might have borne, though the stamens had been wanting, receiving pollen from the stamens of other vines; as it was, the only practical use that could be made of such vines was to use them to impregnate other vines with a view of obtaining a larger variety of grapes from the seedlings to be raised from them.

I have thought, Mr Editor, that the fact that some of the most vigorous seedlings are non-bearing vines might be new to some of your readers, and be a fact worth the noting by those enterprising men who are now engaged in raising new varieties from the seed.

J. J. H. GREGORY.

Marblehead, Mass., 1859.

EXTRACTS AND REPLIES.

NIGHT SOIL—SAND ON MUCK LANDS—FOWL MEADOW AND BLUE JOINT GRASS SEEDS—TALL OAT GRASS—MEADOW FESCUE.

I wish to know if night soil is injurious to land?

I have been told that sand put on low land in quantities is injurious. Is it so?

Where can I buy fowl meadow and blue joint grass seed, and at what price?

How much seed per acre, and what other seed would do well on moist land that can be plowed?
Nashua, July, 1859. J. C.

REMARKS.—Pure night soil is too pungent and quick for any crop. Well mixed with loam or muck, there is little danger of using too much of it.

So much sand may be applied to a wet piece of land as to keep out the action of the sun and air, and stifle it, so that it will remain inert for years. Every operation on the farm requires, not experience, only, but the exercise of a sound judgment. We once knew a good farmer to cover a piece of muck land with sand, and in order to make a capital thing of it, he put the sand on four inches deep all over it; the consequence was, an inactive, dead piece of land partially covered with a minute, greenish moss. The land was imperfectly drained, and was kept moist by showers and capillary attraction, so that there was just enough of the breath of life in it to clothe it with the vegetation we have just mentioned. Low, black muck lands are greatly benefited by the application of sand,—but it must be applied judiciously, in proper quantities, and spread evenly upon the surface. Half an inch

to one inch in depth is sufficient for a coating that will operate beneficially for several years.

You can purchase any of the grass seeds at Nourse & Co.'s, 34 Merchants' Row. Fowl Meadow Seed is \$4,00 per bushel—Blue Joint \$2,25. Mr. Gwineth, the seedsman of that establishment, thinks one bushel of the fowl meadow, and the same of the blue joint, would not be too much for an acre. That would be expensive seeding—but if the crop were allowed to ripen occasionally, the land would keep seeded for many years. There is very little fowl meadow or blue joint grass seed brought into market.

The Tall Meadow Oat Grass and the Meadow Fescue would probably be good grasses to mix with the fowl meadow and blue joint.

SUPERPHOSPHATE AND GUANO.

At what season of the year should superphosphate be applied to produce the greatest effect upon grass land? How should it be applied to corn—after it comes up, as we apply plaster, or put into the hill and covered before planting? Upon what kind of soil does it produce the most beneficial results? I wish to make the same inquiries about guano. A. R. S.
Cornwall, Vt., 1859.

REMARKS.—Apply guano or superphosphate in the spring on grass land during a wet time. Upon corn put it into the hill. They are useful on any soils that we plant corn on.

HOW TO MAKE GOOD BUTTER.

Skim the milk as soon as it sours, and before it thickens, if possible; stir the cream faithfully, especially when new is added. Set the jar in a cool place; if the cellar is not cold and sweet, set it in the spring, or hang it in the well—any way to keep it cool. After the last cream is added before churning, then "go a visiting" if you please, as cream should not be churned the day it is taken off. At night fall, fill the churn with cold water, and start the churning at early dawn and my word for it, you will soon find a solid mass of golden-colored butter, free from white specks, and when properly salted and packed, fit for the table of our friend the *Farmer*, or any other.

N. B. After the buttermilk starts, pour in cold water, a little at a time, turning the crank slowly and carefully back and forth; this prevents the butter from closing too rapidly, does not break the grains, and gives every particle of the cream a chance to form into butter.

"In a multitude of counsellors, there is safety."

AUNT RHODA.

North Cambridge, Vt., July 25, 1859.

TO CURE KICKING COWS.

My way is this: if a cow kicks when I am milking, I slap her smartly with my hand two or three times or more upon the flank, and speak sternly to her, and do this at the time, never for a moment leaving her, keeping my hold of the

teat if possible; when she becomes quiet I caress her with the hand, and soothe her by gentle words, thus letting her know what I want. This will, I am sure, prove effectual, for cows are like school-boys, who, if they know they can overrun the master with impunity, will continue to do so. A cow once thus subdued will become gentle and docile.

E. F. B.

Enfield, Mass., July 25.

EFFECTUAL REMEDY FOR POISONED SHEEP.

Open the sheep's mouth and with a sharp-pointed knife, bleed the sheep in the third or fourth bar or ridge from the entrance of the mouth, and the work is done, and a cure effected without pining away or loss of flesh, as in most other remedies. I have applied the above remedy to several sheep that were flat on their sides and appeared lifeless, and have not lost one sheep.

E. G. ALLIS.

Whately, Mass., July 26, 1859.

TRANSPLANTING EVERGREENS.

Seeing a paragraph in your columns from one of your subscribers concerning transplanting pines or evergreens, I will give my plan. As early in the spring as possible, I selected a few small trees from the woods, (a pine, a hemlock and cedar,) and took them up with the native soil which adhered to them, and planted them near the house. I gave them a little attention, keeping them well watered, and I have now the pleasure of seeing them prospering finely.

GEORGE C. LAWRENCE.

Vineyard, Winchester.

PICKLES.

Will any one who knows, tell me how, with good cider vinegar and cucumbers, I can make pickles that will keep hard the year round, without salting them down? I have tried it several times and in a little while they grow soft and are unfit for use.

A LOVER OF GOOD PICKLES.

Putney, Vt., 1859.

REMARKS.—The "cook-books" give directions how to make pickles, but we believe people generally consider that salting cucumbers is the best mode of keeping them for a long time.

A RUPTURED COLT.

I have a mare colt, six weeks old, that has a bad breach at the navel. Can you, or any of your readers, tell me what to do for it? If a pad can be put on to do any good, how must the rigging be fixed to keep it in its place? The opening through the membrane is nearly an inch and a half in length.

W. C. B.

Putney, Vt., July, 1859.

IOWA FARMERS' COLLEGE.—This institution has been located in Storer county, thirty miles north of Des Moines city. The site is said to be one of the most beautiful to be found in the State. There are 640 acres of land connected with the buildings.

For the New England Farmer.

TOPPING CORN.

Some of your contributors differ relative to the practicability of cutting off the tops of corn.

My limited experience in the culture of corn, much inclines me to favor the practice of cutting off the tops at an early day. The reasons for so doing in brief are as follows:

As soon as the corn is full, remove the top. The hot sun soon sears the cut end of the stalk, and what supply of nourishment was intended for the top, is saved for the ear; consequently, the ears will ripen fuller than it otherwise would. If the tops are removed previous to the high winds accompanying autumnal storms, the corn will be partially, at least, protected and saved. The corn will ripen sooner, and, I think, sounder.

The tops will be worth double what they otherwise would be to remain until the corn is sufficiently ripened to put into shocks.

The sugar contained in the stalk is its real value. The sooner the top is cut after it attains its full growth, the more is saved. If suffered to remain, nearly all of its value, escapes by evaporation.

True, if you cut up and shock before the corn is quite ripe, you save a trifle in the value of the butt stalks; but not enough to compensate for the loss in the top stalks. The increased labor in tying up and shocking will quite balance that of topping.

Georgetown, Mass., 1859.

MILDEW AND FRUIT.

MR. EDITOR:—My friend, Mr. Saunders, of Philadelphia, says that the cracking of the pear is the result of a species of mildew, and it may be found that applications of sulphur water will be a surer prevention of this disease than those special manures which have been recommended, and which have not been found to remedy this evil, or give indications of a curative process.

The peculiar mildew seen on the foreign grape under glass, on the gooseberry, lilac, &c., is induced by atmospheric aridity. This mildew develops in the form of a moldiness on the upper surface of the foliage, and frequently extends and envelops young growing shoots, in which case the bark seems to contract and crack into lengthened openings. Here can be traced a close resemblance to the cra king of the pear, going far to prove that it has the same origin. In sheltered city yards, where drying winds are arrested in their sweeping progress, and where a quiet and more humid atmosphere prevails, the foreign grape will frequently attain to a fair perfection.

So also the White Doyenne pear is annually produced in its greatest perfection on trees similarly located, while in open exposures a few miles distant a fair specimen cannot be procured. No reason that has ever been brought forward on the probable cause of pear-cracking is so philosophical, or so much in accordance with recorded facts, as that which connects it with mildew. The mildew seen on the native grape is apparently a different fungus from the above. Here the "under" side of the leaf is attacked, destroying the vitality of the tissue, which is then ten-

er, and is speedily scorched by the sun, and the leaves decay and wither. When this occurs during the ripening of the crop, the sudden loss of foliage prevents it from maturing, and hence many bunches will show one-half the fruit black and the other green. This apparent scorching is most noticeable during the months of August and September, when heavy night dews are succeeded by hot sun, or after a few dull or rainy days.—*Prairie Farmer.*

BUDDING.

Budding, or inoculation, is the same as grafting in its effects, as in both cases the young shoot starts from a bud. It is performed at a different season, and usually on small stocks. It has the advantage of grafting in the more rapid multiplication of a variety, in being more expeditious, in allowing, frequently, of a repetition the same season, in case of failure, and of the operation without injury to the stock, and it is surer than grafting on stone fruit. It is the most common mode of propagation in nurseries, but it is not much practised on large trees, nor even on small standards, (excepting stone fruit, peaches in particular,) as grafting is preferable.

SUBJECTS FOR BUDDING.—Stocks or limbs from $\frac{1}{4}$, $\frac{1}{2}$ or $\frac{3}{4}$ of an inch in diameter are suitable for budding, and even those of an inch will answer, but they are more proper for grafting. It is of great importance that the stock be well established and in vigorous condition, that it may send up a strong, straight shoot, forming a good trunk for a standard, else it will be stunted and scraggy, and difficult to form into a good tree.

TIME FOR BUDDING.—Much depends on various circumstances, such as age and thrift of the stock, the weather, the season, &c. Judgment must be constantly exercised, (and then we may fail,) for we can no better set an exact time for budding than for cutting grain in future years. In this climate, if the stocks are young and of common vigor, and the season and the weather as to moisture about as usual, the time for budding is generally from the 1st to the 25th of August.

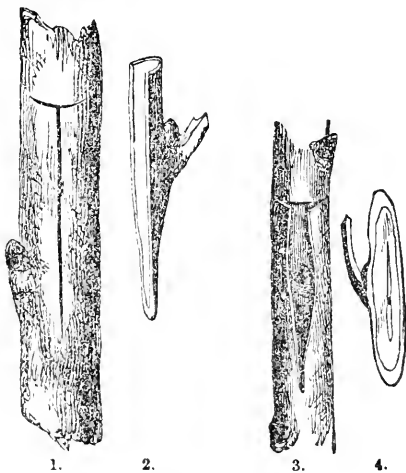
PREPARATION OF SCIONS.—As soon as the scion is cut, trim off the leaves, leaving about one-third of an inch of the foot-stalks, else the leaves, which transpire moisture rapidly, will absorb it from the buds, and quickly spoil them. In hot, dry weather, they may be spoiled in this way in two hours.

If the scions are to be used soon, wrap them in a damp mat or cloth, or, for convenience, put them in fine grass or leaves, and wrap in paper. To send a distance, pack in damp moss, or in damp sawdust, in a box. To keep awhile, wrap up or pack as above, and lay in a cool place, in the cellar, or bury a foot deep in the ground, in a cool, shady place. They will keep longest in the moss or sawdust. They may



Stick of Buds.

be kept several days in grass or leaves, and a week or more in moss or sawdust.



1. The stock prepared for the bud.
2. The bud with the wood taken out.
3. The stock with the bud inserted.
4. The bud with the wood in.

MODE OF BUDDING.—The most common and the best is T budding. With a sharp budding knife, make a perpendicular slit, just through the bark, about an inch long, then a cross-cut, in the form of a letter T. It is well to make the cross-cut in a circular form, that the band may cross the cut. With the ivory at the end of the handle-knife, raise the bark a little at each corner, below the cross-cut. If one has not a budding-knife, this may be done with a piece of sharpened hard wood or with the knife-blade. Lift up the bark, not force the instrument between the bark and wood, and disturb the *cambrium* or new layer of soft matter.

Hold the but of the scion from you, and insert the knife about one-half an inch below the bud that is next the but-end, and with a gentle curve cut about to the depth of one-fourth the diameter of the scion—more in small, soft or rather green scions, and less in large scions of firm and ripened wood—and bring out the knife about half an inch above the bud. Then put the bud under the bark, and slide it down the vertical slit till the bud is a little below the cross-cut; then, if any of the bark remain above the cross-cut, cut it off there, making a neat fit. Some make the cross-cut below the perpendicular slit, and run the bud upward, but this is less convenient, and no better.

Wind the matting closely around the stock, so as to cover all the vertical and transverse cut, barely leaving the bud uncovered; tie with one bow-knot on the same side as the bud. Bud on any side excepting the south, where the sun may injure the bud in warm days in winter.



The bud tied in.

BANDS.—Mats such as are used around furniture, new and strong, are cut into suitable lengths and used for bands. The soft, pliable, inner bark

or rind of any trees, like bass or linden and elm, is good. Suitable materials can be had at agricultural stores. Some use cotton wicking. Woolen yarn will answer. Some budders use strips of cloth listing from the tailor's. This stretches as the stock grows, and needs no loosening. Sheet India-rubber and gutta percha are used by the curious. Matting and such material should be wet before used, to make it soft and pliable.

AFTER MANAGEMENT.—In ten or twenty days after budding, according to the vigor of the stock, the bud will have united with the stock, and if the band binds closely, so as to cut into the bark, it must be loosened and re-tied as before. If the bud has dried and shriveled, the stock may be rebudded, if the bark peels. In about three weeks after budding, if the bud is well united to the stock, the band may be removed. But if it does not bind, it may remain. If it remains on during winter, the ice is more likely to gather around the band and injure the bud. As the bark of the cherry curls, the band needs to remain on longer than on other stocks.

In the spring, from the bursting of buds to the leaves becoming half size, cut off the stock in which the bud is good, to within two or three inches of the bud, and when the bud has started, tie it to the stump, if it inclines off. Keep down the sprouts; and in July, cut off the stump even with the bud, and keep down sprouts and suckers.—*Cole's American Fruit Book.*



Growing bud.

For the New England Farmer.

AN ANCIENT TREE.

Yesterday, in company of friends, I visited the renowned Endicot pear tree. I found it vigorous in growth and fairly loaded with fruit, of medium size; not yet matured. The tree now consists of many sprouts from the shell of the trunk, rising to the height of twenty feet or more. The trunk has a hollow appearance, indicating that the original tree was about two feet in diameter. Tradition says that it grew to the height of 40 feet or more. If my recollection is right, a sketch of the appearance of the tree was furnished a few years since for the *V. E. Farmer*, by your observing correspondent, Mr. S. P. Fowler. As it is beyond doubt the oldest *fruit-bearing tree* to be found on our shores, having been in bearing condition more than *two hundred years*, all reliable acts relating to it are worthy to be recorded.

I could not but regret that the fence, which twenty years ago, or more, was erected for the preservation of the tree, has fallen into a dilapidated condition; which together with the overgrown weeds and meagre crops about, impressed me fully with the belief that the estate had fallen into hands that "knew not Joseph." The site of this Endicot farm is one of the most picturesque and beautiful in the county; and it is a disgrace to the name, that it should be left in a condition so abandoned.

P.

July 29, 1859.

For the New England Farmer

THE IMPROVEMENT OF LAND

BY FEEDING OUT ITS PRODUCTS AND GIVING BACK THE MANURE.

BY FREDERICK HOLBROOK.

It appears to me that, generally speaking, the great aim in farming, here in New England, should be, to devise and perfect ways for expending the various products of the soil upon the farm, so as to get about as much for them in the growth of stock, the meats, dairy products, or wool, &c., into which they have been converted, as though they had been sold off for money; thus giving back to the land the manures the crops may make, increased in quantity, of course, by all judicious modes of composting with them the various unemployed or waste vegetables and other substances of the farm which contain the elements of fertility.

The mistake has been, and still is, too common, of selling off a considerable proportion of the grain crops especially, and converting them into money. If any surplus were left after paying debts and expenses, that has generally been invested either in the purchase of more land, or at interest, or in stocks and other property outside of farming. The farm thus not receiving back a sufficient compensation for the products it has borne, has been undergoing a gradual waste of fertility, and generally has not been as profitable to the owner as it would have been under a more generous cultivation. Indeed, his income, from all sources, is perhaps less than if he had invested more from year to year in the improvement of the soil, looking to a highly cultivated farm for dividends, and less in merely added acres, or in stocks and other outside property. Cases are not rare of men who have worked hard, during the best working period of their life, to get enough income from their farms, over and above expenses, to make an annual investment of money at interest, or in some kinds of stocks, so as to have something, as they term it, laid up for a wet day, or for old age. But the difficulty is, they have been exhausting the farm by so doing, and as life advances and they find themselves less able to labor on the land, the farm is less productive than when they were young, will not reward labor as formerly, and much hard and discouraging work must really be done to get a tolerable return from the investment. They are not so well situated to live easily and pleasantly in old age, and, perhaps, their income or resources, all told, are not as good as though larger investments had from time to time been made in the improvement of the soil, the farm growing more and more productive, and requiring less hard labor than formerly, in proportion to the income derived from it.

There may be instances where it is best to sell off the products of the farm to a considerable extent, and purchase town manures; and this course will do, provided enough manure is bought to compensate the land for bearing those products. But in by far the generality of cases the farmer must mostly rely upon the manure made on his own farm.

The hay and coarse fodder are generally mostly fed out on the farm, but often the principal

part of the grain is sold off directly for cash. Now I have the impression that in the long run, all things considered, it might be better to feed out the greater part of the grain along with the hay and other forage, and let the income of the farm be derived mainly from the stock. The grain fed with the forage adds a peculiar essence or strength and activity to the manure heap, is emphatically "the leaven which leavens the whole lump," and has a very marked influence in increasing the products of the farm generally. The land will be more productive in every kind of crop than if the grain were sold off, and it only got back the colder and less fertilizing manure made simply from hay and coarse forage.

After a few years of this kind of feeding, the products of the farm will be so much increased that considerable more stock can be kept on it, which will, in turn, make more manure for the land. These influences will work back and forth one upon the other, so that in fact the business will grow more and more profitable, and the income will increase more in proportion than it will be necessary to increase the investment. There are hardly any limits to the productive capacity of our farms, if we will only study out ways of expending our crops judiciously, and making the most of the manures they will return to the soil. Sections of country may be pointed out in Europe, not naturally more favored for soil and climate than our own, where the land has been cultivated for hundreds of years, and is now more productive than at any former period, and far more so, acre for acre, than the very best virgin soils and lands of our own country. Another thing deserving particular consideration, land that is in high cultivation, and is judiciously cropped, can be kept at a high mark of fertility with ease, as compared with making exhausted land fertile. The very luxuriance of the crops gives back a large mass of roots and stems to the soil. Especially is this the case when a grass sward has been allowed to form; so that in breaking the sod for a new rotation of crops, we can turn under many tons per acre of matter fertilizing to the land, contained in the roots and stems of the sward. Then, too, land in high condition is much less injuriously affected by unfavorable peculiarities of the season, as to drouth or moisture, cold or heat, than if it were in poor tilth, and indeed is in a good degree independent of these peculiarities. In any season, it will pay a larger profit in proportion to what has been expended to obtain the crop, than can be derived from exhausted land.

In feeding out the grain crops pretty freely on the farm, there will be some years when the growth of stock, the meats, the wool, the dairy products, &c., into which the grain has been converted, will sell high enough to pay considerably more per bushel for the grain than it would have brought had it been sold off the farm; other years the grain may perhaps bring a greater immediate income if sold off; but taking one year with another, and considering the steady improvement of the farm, where the crops are expended upon it, there will be more profit in feeding out the grain than in selling it off. In a period, say of twelve or twenty years, I am inclined to think that seventy-five cents per bushel realized for corn, for instance, fed out on the farm,

and the manure returned to the land, is as good as one dollar per bushel, realized by sending it off to market for cash, and the farm robbed of an equivalent in manure for the corn thus sold off.

Take, for instance, the whole amount or number of bushels of grain of any kind produced on an acre of land, or on the farm, and place it in a pile together. It makes only a small heap, even though the yield per acre be a very large one. Yet that heap, small as it is, contains a large per cent. of the very essence of the fertility of the soil that produced it, and has taxed the land far more than if it had only produced the stalk and leaf of the plant, or in other words, a forage crop of any kind. This grain, fed out with the hay and other crops, adds wonderfully to the activity and fertilizing power of the farm-yard manure, and greatly quickens the soil to renewed efforts at production. Then, again, by feeding out the grain with the forage crops, and thus making manure abounding in gases and salts, you may compost with it much larger proportions of muck, turf, the rich soil washed into hollow places, or other materials gathered up about the farm to swell the manure heap, and have them all decomposed and sweetened and prepared to become the food of plants, than you could properly use if the cattle-droppings were alone composted of the more lifeless and inactive elements derived only from hay, straw and other forage.

Mr. Coke, the late Earl of Leicester, once said, "the more meat a poor land farmer sent to Smithfield, the more grain he would be enabled to sell per acre at Mark Lane. Convert plenty of corn and cake into meat; for the value of farm-yard manure is in proportion to what it is made of. If cattle eat straw alone, the dung is straw alone, the cattle are straw, the farm is straw, and the farmer is straw—and they are all straw together."

Not long ago, I had four cows come up to the stable in the fall, which I thought might yield a good supply of milk through the winter, if well fed. I also had four other animals cows and heifers, which were not expected to give much milk till the following grass season. The first four were tied in the stable side by side, and received each, in addition to hay and stalks, four quarts of small potatoes each morning, and two quarts of corn and oat meal each evening, through the winter. As was expected, they gave a good mess of milk, and came out well in the spring. The manure of these four cows was thrown out of a stable window, under the cattle shed by itself. The other four animals were tied in the same stable, next to the first four, and received only hay and corn-fodder. Their manure was thrown out by itself, at the next stable window, and under the same shed, so that the two heaps lay side by side. The heap made by the four cows that were daily messed with potatoes and meat, kept hot and smoking all winter, and was wholly free from frost. The heap made by the other animals that had only hay and stalks, showed no signs of fermentation, and was somewhat frozen. Observing this difference from time to time, curiosity prompted me in the spring to apply these two heaps of manure separately, but in equal quantities, side by side, on a piece of corn ground. The superiority of the corn crop, where the manure from the messed cattle was

applied, over that where the other heap was spread, was quite apparent and striking; and called my attention, more particularly than it was ever before directed, to the importance of feeding out our best or richest products, if we would have the best kind of manure for our lands and large crops from them.

I might here go on to show that the hay produced by the farm, fed out upon it, and say, seven to eight dollars per ton realized for the same, and the manure given back to the land, would generally, in a term of years, be as valuable thus disposed of as though it were carried off to market and sold for twelve dollars per ton, and the land not compensated by an equivalent of manure. Also, how the feeding of potatoes, carrots, and other root crops adds to the quantity and quality of the manure, and the profit of keeping stock. But these matters would form another branch of the general subject, the treatment of which would make this communication too long.

It may be proper to briefly indicate some of the ways in which the grain crops may be profitably fed out upon the farm, though I can no more than barely mention them at this time.

It is generally good farming to keep at least a few cows, for their dairy products, and in connection with them, about an equal number of spring pigs of a good breed, feeding the skim milk, &c., of the dairy to the pigs, together with grain. When pork brings seven cents per pound and corn one dollar per bushel, I have found it better to feed the corn to March pigs of a good breed, slaughtering them at nine or ten months of age, than to sell the corn off for cash. By supplying the pigs with suitable materials, they will make each five or six ox-cart loads of first rate compost. The pork thus made will bring about a cent per pound more than pork of the average quality in the markets, and meat of the roasting and steak pieces will be about as tender and delicate as that of the breast of a chicken. The skim milk thus fed adds much to the growth and general thrift of the pigs, and is worth a considerable per cent. of what the new milk would bring if sold off the farm for cash. In addition to what is realized from the pigs, there is the value of the dairy products and the manure derived from the cows.

It often proves profitable to buy up, in the fall, weathers of a good breed of mutton sheep, feeding them a portion of grain along with hay and other crops, say till into March following, and then selling them to the butchers. The grain and hay thus fed out will generally bring more money, in the improved pelts and carcass of mutton, than though they had been sold off directly for cash, and there is the manure left to give back to the farm. Then again, sheep manure is peculiarly active, and inclined to fermentation, and mixed with the other farm-yard manures, it quickens the effects of the whole upon the soil and crops. I might say more about this, but must pass on.

There is the feeding of cattle for beef, which has always been successfully practised; and every farmer knows how much more powerful is the effect upon the soil of the manure from fattening cattle, than that from cattle which only have hay and other forage.

It is generally quite profitable to rear young

cattle of a good breed, for their growth and improvement, feeding them a little grain along with the forage crops. Their growth and general improvement often pays a large profit on the cost of making it.

There is the keeping of sheep, to a greater or less extent, for their wool and increase; where things are right for keeping a flock of sheep, how they will make the farm shine!

But I have not space to extend these remarks about feeding. In some of these, or other ways, the principal part, at least, of the grain and other crops of the farm may, generally speaking, be more advantageously fed out, and the manure they will make given back to the land, than to sell them off so largely as is often done. And I think a farmer had generally better have his capital mostly invested and actively employed in farming highly cultivated land, and in good stock, feeding out his crops on the farm, and deriving his income through the stock, than to have it partly in a poor, run down farm, and partly, perhaps, in money at interest, or in stocks and other outside matters.

Brattleboro', July 29, 1859.

For the New England Farmer.

A TERRIBLE WHIRLWIND

MR. EDITOR:—The most violent and destructive whirlwind ever known in these parts, passed through Groton, on the 26th ult. It was a most terrible sight to behold, and powerful almost beyond comprehension. It was sure destruction to every movable object with which it came in contact. My informant, who saw it at its first start, says: "Two opposite winds appeared to meet; the clouds rolled together with terrible force, roaring like some mighty water-fall. Suddenly, there appeared to rise from the earth a black cloud, which, taking an easterly direction, whirled and rolled like the smoke of some great conflagration. The whirlwind was now under full headway; in a few moments the air was filled with branches of trees, then small trees, and finally it increased to such force, that trees apparently two feet in diameter were wrenched from the ground and whirled into the air, like so many shingles or straws. Its path was but a few rods in width, and its course very irregular—first to the right, then to the left, and bounding like a ball."

At length, as it neared the village, it struck a new and commodious carriage shop, belonging to Mr. Almond Clark. Mr. C. and a number of workmen were in the building when the wind struck it; luckily they all got out uninjured; one, however, being a little behind the others, jumped from the door after the building was six feet in the air, and landed in the cellar. The building was carried several rods, and completely smashed to pieces. Before the building started from its foundations, one of the men saw some large stone which lay near, taken completely up and carried several feet. It required two yoke of oxen to draw the stone. Mr. Clark's loss is estimated at seven or eight hundred dollars, the machinery alone costing about half that sum. The whirlwind next struck the upper part of the Methodist church—the hill on which it stood breaking the force, or rather, it bounded upwards,

for its force was not yet abated, and completely uncovered one side of the roof, and breaking in about half the windows, besides otherwise injuring it; probable damage fifty dollars. After leaving the meeting-house, the whirlwind was too high to do any very serious damage, until it passed over the village, although even then it moved every article in its way, which a high gale of wind would scarcely do.

Its next demonstration of power was on a high hill back of the village. It struck two barns belonging to Mr. Whicher, (if I mistake not,) and completely demolishing one, and unroofing the other, besides doing some damage to his house, and tearing up almost every tree in his orchard; and himself and hired hand came near going the same road that Elijah of old did, but however, they managed to keep on terra firma, except their hats, which they knew it was useless to look for. The wind did no farther damage, except the destruction of fences and timber. After leaving Mr. W.'s, it struck Ryegate Mountain, which probably stopped its wild career, as we hear of it no farther.

We are having a hard drouth: the pastures are all dried up, and most of the springs, as well as the cows, corn and potatoes. Hay is mostly harvested, and is good; grain is fair. T. P. B.

South Ryegate, Vt., August 2, 1859.

A FARMER'S SONG.

We envy not the princely man,
In city or in town,
Who wonders whether pumpkin vines
Run up the hill or down:
We care not for his marble halls,
Nor yet his heaps of gold,
We would not own his sordid hoard
For all his wealth thrice told.

We are the favored ones of earth,
We breathe pure air each morn,
We sow—we reap the golden grain—
We gather in the corn;
We toil—we live on what we earn,
And more than this we do,
We hear of starving millions round,
And gladly feed them, too.

The lawyer lives on princely fees,
Yet drags a weary life;
He never knows a peaceful hour—
His atmosphere is strife.

The merchant thumbs his yard-stick o'er—
Grows haggard at his toil;
He's not the man God meant him for—
Why don't he till the soil?

The doctor plods through storm and cold,
Plods at his patient's will;
When dead and gone he plods again
To get his lengthy bill.

The printer, (bless his noble soul,)
He grasps the mighty earth,
And stamps it on our welcome sheet,
To cheer the farmer's hearth.

We sing the honor of the plow,
And honor of the press—
Two noble instruments of toil,
With each a power to bless,
The bone and nerve of this fast age,
True wealth of human kind—
One tills the ever generous earth,
The other tills the mind.

For the New England Farmer.

COAL ASHES.

A few years ago I was impressed with the belief that anthracite coal ashes possessed no little manurial value; hence I placed it in liberal quantities around apple trees and a few currant bushes. I thought they gave some vigor to the latter; but of this I am not confident. Upon the trees I could perceive no effect.

Coal is supposed by geologists to be the result of vegetable compression and decay, or transformation—although this doctrine is questioned. At any rate, it appears to us with more of the characteristics of a mineral than of anything else. The late Prof. Norton analyzed a peck of the ashes of white ash coal, and found only about twelve per cent. of it soluble in acid. Of important fertilizers—it contained only twenty-two parts of one per cent. of soda; fifteen of one per cent. of potash; and eighty-six of one per cent. of sulphuric acid! Nevertheless, some European analyses have shown a better result. The coal across the waters must certainly be richer than ours.

My experience has taught me this. If the soil is in any degree light, it better not be used; because it will accumulate in the soil, and so little of it being soluble, it will show itself for years, without doing any good; for its mechanical effects, in rendering the soil more porous, on such land, is not needed. But if the soil is heavy and cold, its tendency will be to improve it, by making it lighter, besides adding whatever of fertilizing matter it may possess.

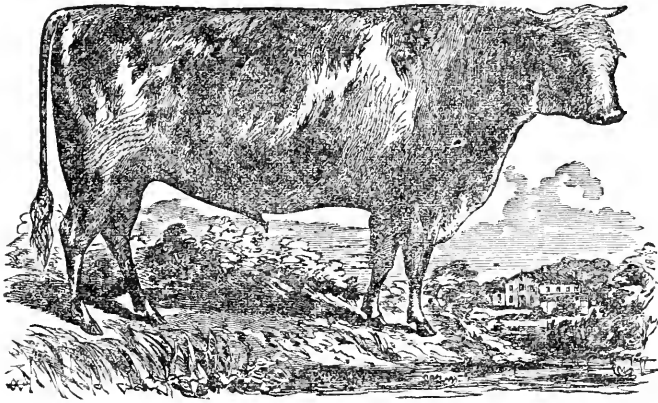
From the above, it will be seen that I entirely disagree with your correspondent F., of July 30th, who advises it upon light lands. No doubt coal ashes are a disinfectant. So is virgin, or even common soil, and perhaps a better. But a special disinfectant around trees, or upon grass land, is quite useless, unless it will arrest the ammonia or nitrogen of the atmosphere, and this, probably, coal ashes will not do.

W. Medford, Aug. 1. D. W. LOTHROP.

REMARKS—See article among selected items in another column.

MAINE STATE AGRICULTURAL SOCIETY.—The Fifth Annual Show and Fair of the Maine State Agricultural Society will take place at Augusta, on the 20th, 21st, 22d and 23d days of September next. There is to be a thorough trial of plows, and a heavy silver medal is offered for the best one in each class. Manufacturers can send their implements on any line of railroad, or forward by any steamer in the waters of the State without charge. We learn that the Trustees have made the most careful and liberal arrangements for the show, and mean to have it excel any other that has taken place in the State.

☞ Vice and folly may feel the edge of wit, but virtue is invulnerable; aquafortis dissolves the base metals, but has no power to dissolve or corrode gold.



AYRSHIRE BULL, "ALBERT."

We present, above, a portrait of the Ayrshire bull "Albert," recently imported and owned by the Massachusetts Society for Promoting Agriculture. The cut is taken from the new edition of Flint's "Milk Cows and Dairy Farming," just issued by Phillips, Sampson & Co.

In our January number, page thirty-three, we gave a portrait of an Ayrshire cow, and also copied Mr. Flint's description of the breed and its qualities. We will not here repeat that description, but copy the following remarks with regard to the superiority of this breed for dairy purposes:—

"The Ayrshires have been bred with reference both to quality and quantity of milk, and the grades are usually of a very high order. The best milkers I have ever known, in proportion to their size and food, have been grade Ayrshires; and this is also the experience of many who keep dairies for the manufacture of butter and cheese, as well as for the sale of milk. A cross obtained from an Ayrshire bull of good size and a pure-short-horn cow will produce a stock which it will be hard to beat at the pail, especially if the cow belong to any of the families of short-horns which have been bred with reference to their milking qualities, as some of them have. I have taken great pains to inquire of dairymen as to the breed or grade of their best cows, and what they consider the best cows for milk for their purposes; and the answer has almost invariably been the Ayrshire and the native. The Ayrshires have by no means been a failure in this country, although I do not think that, as a general thing, we have been so fortunate hitherto as to import the best specimens of them. If any improvement has been made in our dairy stock apart

from that effected by a higher and more liberal course of feeding, it has come, in a great measure, from the Ayrshires; and, had the facilities been offered to cross our common stock with them to a greater extent, there can be little doubt that the improvement would have been greater and more perceptible.

It should, however, be said, that in sections where the feed is naturally luxuriant, and adapted to grazing large animals, some families of the short-horns crossed with our natives have produced an equally good stock for cheese and milk dairies."

For the New England Farmer.

HOW TO BUILD UP A HOME.

MR. EDITOR:—Four years ago a shopmate of mine being convinced that his constitution was fast breaking down from the confinement and close application to his business necessary to afford him and his family a living, conceived the idea that he would invest the saving of years in the purchase of a small farm, in the hope that the out-door labor appertaining to the *profession* of a tiller of the soil might be the means of prolonging his days, as it was evident that a twelve-month more of in-door labor would completely incapacitate him for work of any kind.

Having but little money at his disposal, he went into the northern part of the State and made purchase of a small farm of thirty acres, for which he paid six hundred dollars.

He stocked it with two cows, horse and wagon, pig, a few hens, and these, with a small amount for the necessary tools to work the place, consumed the entire amount he could call his own. After getting comfortably settled, he turned his attention to the collecting and making of

manure, he having the good sense to know that the earth would produce nothing unless kept alive. Of course, the first year was rather tough scratching, but in the second, by manuring *large* and planting *small*, he succeeded in raising comparatively remunerating crops.

The manufactories of the town in which he has settled offered a light and profitable employment to the females and children that compose his family, sufficient to furnish the dry goods and groceries needed.

In the meantime his stock had increased, and, best of all, he had entirely recovered his health and youthful vigor, and was to all intents and purposes younger by twenty years than when enjoying the cool and shady workroom of a city mechanic. I have just returned from a visit to his New England home, and I wish to describe the condition in which I found him after four years' experience in the life of a farmer. In the first place, his family, eight of them, are in the possession of *perfect health*, and as happy and contented as any persons I ever saw. He has made many improvements in the buildings, such as painting, shingling, &c., and has added by purchase twenty acres of excellent mowing land, on which he owes but ninety dollars. His stock consists of seven as fine cows as the town affords, (so the assessors say,) four yearlings, horse and colt, two likely looking pigs and four hundred and sixty hens, the eggs of which find a ready market among the boarding-houses, store and tavern three miles distant. He put sixteen tons of hay into the barn, the past fortnight. He is so "wedded to a country life" that he informed me that five thousand dollars would be no temptation for him to return to Boston and give up the real freedom and independence that he now enjoys. He finds ample time to read the *N. E. Farmer*, and other agricultural works, obtainable at the library in the village. He believes in book-farming, and is assured that in his case he should never have succeeded without reading the ideas and experience of others.

"BRICKS AND MORTAR."

Boston, August, 1859.

REMARKS.—Your friend is a good fellow—a trump. Long may he live to enjoy his happy home and the fruit of his skilful labor. We hope his excellent example will be widely contagious.

TRANSACTIONS OF NORTH MIDDLESEX AGRICULTURAL SOCIETY.

This report commences with an address by Rev. F. HINCKLEY, of Lowell, and a good beginning it is. The address is written in a beautiful style, and is full of sparkling thoughts and human sympathy. The report is got up in a brief, business-like manner. The amount of premiums awarded was \$765.15. The reports of committees and competitors are very short, and do not convey as much information, or contain as many practical suggestions, as they might. Upon such subjects we need line upon line and precept upon precept. Committees should not

hesitate to express their thoughts and make such remarks as occur to them, because they have been expressed by some other persons, upon some other occasion. They may reach some minds that have not seen them, and prove like good seed upon good ground. We say to all agricultural committees, scatter your thoughts broadcast. They will bear good fruit.

For the New England Farmer.

BUTTER-MAKING.

Much has been written of late in various agricultural journals concerning "white specks in butter," and hardly two writers can be found that wholly agree: some assigning the cause to the process of churning, and others to various other causes—a few giving the true theory.

Under ordinary circumstance there is no need of having "white streaks" or "specks" in butter. The streaks are generally the result of the insufficient working of the butter, the salt not being evenly diffused. The white specks, as several writers in the *Farmer* have already stated, are curds of sour milk, the result of skimming in too much milk and letting the cream stand too long before churning, or by getting milk with the cream that is already sour. No harm whatever results from scraping down the cream into the churn as the butter begins to come; the cream thus scraped down, if not converted into butter, remaining in the buttermilk.

To prevent white specks in butter, let the milk always be skimmed before it sours, if possible; if not, after the milk has coagulated and the curd become solid, removing the cream carefully; churn the cream as often as every other day, through the hot season, and in extreme heat, every day, if the quantity be sufficient, and if properly worked and salted, I will warrant sweet, pure butter with no white specks. Such, at least, is the experience of an old and experienced butter-maker, whose butter has the credit of being the "very best in the market." The process truly is a simple one, and it only requires attention to always ensure good butter. Stirring the cream at every time of skimming, to mix it, should be avoided.

The old practice of washing butter I am inclined to consider not only useless but pertaining to the barbarous, and worthy of being discarded in every well conducted dairy. The prime object of the washing seems to be the complete removal of the butter-milk, but a certain change in the butter seems to be wrought at the same time, for it is true that butter thoroughly washed will often keep in good order but a short time, however sweet when first washed. The better way to remove the butter-milk is by working with a wooden paddle, previously well moistened in water to prevent the butter from sticking.

Springfield, August, 1859.

J. A. A.

☞ *Three times as much corn, per acre, as any body else can raise.* If Mr. S. D. BAKER, of Mansfield, Mass., will inform us, in the first place, how he will accomplish the result stated above, we can then decide whether it will be best to publish his challenge, or NOT.

PREPARATION OF SOILS FOR CROPS.

In its genuine signification, the term agriculture means nothing more nor less than the artificial preparation of the soil for the annual production of those vegetables, which, in the various climates of our globe, are required for the sustenance of man and beast. It is, however, properly and naturally divided into two distinct branches, designated, respectively, by the terms, "*chemical*" and "*mechanical*"—the former having reference to the application of those energizing and ameliorating substances which tend to the immediate increase of its productive qualities, by imbuing it with the nutritious properties and juices of animal and vegetable excrements; or by calling into vigorous and effective action those elementary properties, with which, in a state of nature, it is originally enriched. The latter has reference to the "*tillage of the soil*," and the amelioration of the earthy constituents, by the thorough pulverization of its elementary particles—a result ordinarily effected by plowing, digging, or otherwise lightening its texture, so as to afford a favorable medium for the establishment and ramification of the roots of such productions as it is required to sustain, whether belonging to the class of "roots" or "grains."

By the scientific agriculturist, manure is recognized as operating in two ways: first,—by imparting to the soil those fructifying and emendatory juices or principles of vegetable power, of which it was before deficient, and which are essential to the healthy development and sustenance of plants; secondly, by the action it induces among the minerals constituting the earthy part of the soil—effecting their decomposition and re-combination under new features, and imbuing them with new energies more expressly adapted for the immediate sustenance of the growing crop. There are certain substances, which, when applied to the soil, seem obviously to produce but one of these results; while others applied for the same common or general purpose, appear to produce both.

When the agriculturist applies animal excrement, or mineral water of any kind, to the soil, and an increased crop is the result, he logically infers that the application has benefited, or, in other words, has *enriched* the soil.

This, indeed, is the primary object aimed at,—yet, it may be important to the practical agriculturist to ascertain, somewhat more definitely, the specific action of the substances applied; to know, in short, what description of manure or matter may be best adapted to certain crops, as well as what kind will be most permanent in its effects upon the soil. The laws of chemistry in association with those of geology and mineralo-

gy, unfold to us the theory of manures, and the *modus operandi* of their application. "It is only by such assistance," remarks an able writer, "that we can account for various facts of much practical importance, and which, to all appearance, are contradictory. And by this means, only, shall we be enabled to make a prudent and judicious selection of those materials which are used for the enrichment and fructification of the soil when worked for the benefit and happiness of man."

We are all aware that to be productive, with reference to any given crop, the soil on which that crop is grown must contain certain peculiar properties. Lands fitted for the growth and maturation of wheat, for instance, are considered valuable, because the wheat crop is one of prime importance.

Now if we examine soils richly endowed with the principles essential to the growth of this grain, we shall find that they contain certain elements of vegetable re-production in much larger quantities than those soils in which it does not succeed. Popular attention has been directed to this subject in Scotland, and Dr. Anderson, the chemist of the "Highland Agricultural Society," has made several analyses of the wheat soil of that country, a tabular exhibition of which, published in the number of the Society's Journal for May, 1850, shows the following results. The soil was, in this instance, from a field in Midlothian. One hundred parts of the surface soil gave 6.789 of "combustible dry matter or mould," containing,

Carbon.....	4.500
Hydrogen.....	0.215
Oxygen.....	1.866
Ammonia.....	0.268
	6.789

By "surface soil," the reader is here to understand that portion which is considered the medium of the roots of vegetation, or the first ten inches from and below the surface. The *poorest* soil subjected by Dr. A. to analysis, gave the following result:

Carbon.....	0.714
Hydrogen.....	0.033
Oxygen.....	0.256
Ammonia.....	0.059
	1.122

Two parts of ammonia in a thousand may appear a small quantity, yet it will be found on examination, that as an acre of soil, ten inches deep, weighs one thousand tons, there are over two tons of ammonia in the soil of every acre capable of producing a good crop of wheat. Now a heavy crop of wheat appropriates, or requires for its full development and perfection, about sixty pounds of ammonia.

There is, however, a mixture in nature's crucible which we have no power as yet to imitate;

for if we make the most accurate analysis that is possible of a soil, and find in what elements it appears to be deficient, and supply them liberally, we are by no means certain that we shall secure a good crop of wheat. There is still something beyond the skill of the chemist, but something, happily, within the reach of the farmer to supply, that will usually bring a good crop,—and that is plenty of barnyard manure!

EXTRACTS AND REPLIES.

HOW SHALL I RESTORE MY RUN-OUT GRASS LAND?

I have a piece of English mowing land, situated between the upland and meadow, which seven years ago bore bushes, brakes, and the like; since then it has been plowed and planted one year, plowed again and sowed to grass seed. Four crops of hay have been taken off since, the first very heavy, the last very light.

Can anything be done to this piece of mowing land the present month, without plowing, (as it is well and evenly laid down with the land around it,) so that I may secure a good crop of hay for three years, or more? If so, what?

Hamilton, Mass., Aug., 1859.

X.

REMARKS.—Plowing and re-seeding, in our opinion, will be the quickest and most economical mode of reclaiming the piece of land you speak of. In common with most of us, you have probably made two mistakes with it. First in not topdressing a little annually, or at least every other year, and secondly, in not allowing the herdsgrass to ripen one year so as to re-seed itself. The herdsgrass and red-top roots are gone, and top-dressing will not restore them. Plow, manure and re-seed, and then keep up the crop by a fair course of manuring.

REAPERS—SLAKING LIME.

Is Ketchum's machine a good reaper as well as mower?

In composting lime with muck, should the lime be slaked with water or by the air? MAPLE.
Caledonia Co., Vt.

REMARKS.—Ketchum's machine is intended for reaping as well as mowing—but may not be as good as a machine with a reel.

There is no difference, we believe, between lime slaked with water or air slaked. The latter is as much slaked with water as the first, but the process is slower.

PEARS.

Among the varieties of this fine fruit which have been raised, there are comparatively few that are equally good in Massachusetts; from these, if requested to name six of the best, ripening in succession, I should name the Bloodgood, Bartlett, Belle Lucrative, Beurre Bose, Winter Nelis and Lawrence. These will generally do well in all good soils; the Belle Lucrative is,

however, of a higher flavor when grown upon a warm, loamy soil, than upon one of a heavy, retentive nature.

J. M. I.

Salem, Mass., 1859.

HOW TO MAKE GOOD BUTTER.

I have noticed in several numbers of your excellent paper an article treating on specks in butter. The mystery I think I can solve at once. I have lived on this earth half a century and always been in the habit of making butter since I was fifteen years of age. And from experience I found a preventive a great many years ago. I can take the cream from curdled milk and put in a trifle of salt and stir it around the jar with a paddle that I keep for the purpose, and repeat it every time that I add cream, and I will never be troubled with white specks in butter. As to straining cream it seems to me to be entirely useless, if it is properly cared for. In order to have butter sweet and nice, cream ought not to be kept more than three days in hot weather, nor more than six in cold weather.

M. M. SPAULDING.

Cornish, N. H., Aug., 1859.

BUTTER MAKING.

White specks in butter are sour milk turned to a hard curd; and are caused by the milk or cream being kept in too warm a place.

Cream that remains in the churn after the butter has come, should be put into the cream-pot again; if put back into the churn, it will enrich the buttermilk, but will not form the white speck; if the churn is made as it should be, there will be no cream remaining in the churn, unless the cream is very thick. Put sweet cream into the churn with that that is sour, and you will lose the sweet cream, as it does not come to butter so soon as the sour, but does not injure the butter; cream should be taken from the milk as soon as it is sour enough to be removed without milk, and in warm weather should immediately be put in the cellar, or where it can be kept as cool as possible; churn once a week, but the oftener the sweeter the butter. After removing the cream, you may skim off as much more that will be rich enough for biscuit, making a saving of all your cream for butter. L. C. POTTER.

Leyden, Mass., 1859.

N. B. Lettuce makes excellent greens—boil half an hour.

ACTION OF PHOSPHATES.

I am much pleased with the remarks of Judge French about phosphates, analyses of soils, and the like. It is high time that we back out from scientific nonsense, such as is taught by many a would-be professor, and take up the lessons of practical common sense. If it be true, as averred by Mr. F. and admitted by Prof. Mapes, that there are some phosphates that nourish plants, and others that do not, all of which are composed of the same chemical ingredients, then what reliance can be placed on chemical laws, for the advance of vegetation? None at all, until demonstrated and illustrated by experiment.

Aug. 1, 1859.

P.

ISABELLA GRAPE.

In an article on the cultivation of this fruit which I forwarded you some months since, I then recommended that, in order to prevent the injury which the warm, sunny days in winter, or the alternation of heat and cold to which vines when trained upon our buildings are often subjected, they should be taken down late in the fall and laid along their whole length upon the ground—they will there ordinarily require no covering. The Isabella grape vines in our neighborhood have suffered greatly the past winter; large numbers are destitute of fruit; I have, on the contrary, two vines, one trained upon a fence, the other upon my barn, both having a southern exposure, that were laid down the past winter as recommended above, and they are loaded with fruit. It is not, I apprehend, the extreme cold days of winter so much as the alternation of heat and cold which produces the mischief. The sap of the grape vine, as said by Dr. Lindley, "is always in motion, at all seasons, and under all circumstances, except in the very coldest days." Can we wonder that, in a climate so variable, where the thermometer at night may descend to zero, and the next day an unclouded sun with the warmth of spring, a susceptible plant should be thus affected?

Salem, Mass., 1859.

J. M. I.

HEIFER HOLDS UP HER MILK.

I have a two-year old heifer that calved about the middle of July; and lately she holds up her milk. Can you, or any of your readers, inform me if there is a remedy, and what it is?

Can you inform me where I can get some eggs of the Dominique breed?

C. C. L.

Rockingham, Vt., Aug., 1859.

REMARKS.—Give the heifer a little meal, sweet grass or grain, when you milk her. Cannot tell you about the fowls.

THE CULTIVATION OF VINEYARDS.

Can you, or any of your readers, tell me where I can find full information relative to the methods practised in this country, in commencing and cultivating vineyards, the processes used in preparing wine for the market, expenses, &c.

New London, N. H., 1859.

REMARKS.—A work entitled "The Culture of the Grape, and Wine Making," by Robert Buchanan, tells the whole story in a compact form. For sale at this office—price 62½ cents.

TO CURE A KICKING COW.

Your correspondent "Cit" seems to ridicule my plan of curing kicking cows. For his benefit I will inform him that the rope is to surround the cow, as a girth is put on a horse, just behind her shoulders. He says he don't see how it can prevent her; that is not my fault. At all events, it has always cured mine, and will probably cure his, if they can be cured.

Boston, Aug., 1859. A BELMONT FARMER.

West Westminster, Vt., July 30, 1859.—The rass crop is very good in this vicinity, and oats

look remarkably well; corn is just tasseling out, and if we do not have too early frosts, we shall get a fair crop.

G. C.

For the New England Farmer.

THE WHEAT SEASON AT HAND.

MR. EDITOR:—The past season has probably been one of the most prolific ever known, in the development and securing of the cereal harvest. Our own great grain country proclaims it from every quarter, and all Europe echoes the welcome sound of overflowing granaries. This looks like cheap, home markets. On either side of the water a large surplus may remain, but it is that kind of farm product, that will keep without salt, and with very little care. It were wise in all farmers, that they always have six to twelve months stock in advance. This would be preparation against want, in the loss of a crop which so frequently occurs.

Now let us suppose abundance, cheapness, easily obtained, perhaps for this year only, (while the two following years may result in short crops and high prices.) would it be good policy for our New England farmers to relax their efforts, to stack their arms? Abundance is generally followed by reverse. We have been a suffering, panic-stricken people, when the "rich man" could not "glory in his riches;" when labor had not its reward; when the waxed ends were hung up to dry; when the mill, from trundle head to breast wheel, became noiseless, and silent as a cavern. Now, the village becomes dull, dim and dingy. The demand for farmers' hay, butter and eggs has ceased, but he has been reminded that "the flour is gone;" (sorry news for him, and he almost resolves to raise his own flour.) "Well," (he says,) "butter and eggs wont pay for a barrel of flour, I must broach the money laid away to pay taxes; it's like drawing teeth." Now, to provide against this kind of dentistry, if the farmers will put down two to five acres of wheat annually, his flour bills are easily paid. It would not be so much like "drawing teeth."

It is a well known fact, that four and a quarter bushels of wheat, is equal to a barrel of flour to every family. Every expense, from the plow to the granary, is the same as other grain crops. You can make it cost no more; more bushels of wheat can be grown to the acre than of rye, on a good strong soil, and an equal quantity on poor soil. Half of the rye lands scarcely pay expense of cultivation. Some of your rye fields are a burlesque on farming, yet followed up with great persistency, year after year.

Hilly or sloping lands are best for winter wheat. Clover fallow, old mowing or pasture sod, are better than old pulverized soil. In Maine, Vermont and New Hampshire, wheat should be sown last week in August. In Massachusetts, first week in September. Early sowing and two to three inches depth is sure against winter-kill. Late sowing is dangerous. Soak twelve hours in salt pickle to kill insects, (if any,) and skim off foul seed. Rake the seed in ashes; sow one and three-fourths to two bushels to the acre.

I have the satisfaction to learn from many farmers, that they have had complete success in raising winter wheat. Reliance on his farm ca-

pabilities, should stimulate him to the work. There are no obstacles to overcome, saving prejudice, or a long established supineness that has become a chronic disease.

It is now a good time to look over and see how many patches in the old mowing fields can be turned to profitable account. Once begun, we think your wheat crop will take the lead in the grain calendar.

Brooklyn, L. I., 1859.

H. POOR.

For the New England Farmer.

MEASUREMENT OF LUMBER.

MR. EDITOR:—I have noticed in the *Farmer* several pieces relating to the incorrect measurement of *milk*. There is another subject allied to this, which concerns many farmers as deeply as this: I refer to the measurement of lumber.

Most farmers out of the vicinity of the city have hard-wood trees in their pastures or mowings which they wish removed. Accordingly, they cut them, have them sawed into plank, and sell them. Now, the miller saws both sides of the plank, and will have pay for all be saws; and it seems right that he should, but when we come to sell our plank, the measure falls short. The surveyor measures on the narrow side, allowing us only what the plank will square. Some thick plank fall short of the mill measure 20 per cent.

When we buy *beef*, we pay for the weight of the bones, or if there is a deduction, it is made in the price, not in the weight. So we should have pay for the whole of our lumber; if the wain lessens the value of the lumber, let the deduction be made in the price.

The surveyors profess to give us *board measure*; yet we know that a 4 inch plank, 8 inches wide on the narrow side, and 12 inches on the wide side, would measure a good deal more, if we should conceive it to be made into boards and then measured, than it will as they survey. Our laws respecting the measurement of lumber are very indefinite and loose. The legislature should attend to them.

J. A. E.

Groton, Mass., July 30, 1859.

WHAT ARE FLOWERS GOOD FOR?—"I have said and written a great deal to my countrymen about the cultivation of flowers, ornamental gardening and rural embellishments; and I would read them a homily on the subject every day of every remaining year of my life, if I thought it would induce them to make this a matter of attention and care. When a man asks me what is the use of shrubs and flowers, my first impulse is always to look under his hat and see the length of his ears. I am heartily sick of measuring everything by a standard of mere utility and profit; and as heartily do I pity the men who can see no good in life but in the pecuniary gain, or in the mere animal indulgencies of eating and drinking."—*Coleman's Agricultural Tour.*

THE HORTICULTURIST.—The number for August is excellent. It has a fine engraving of the Nabours Pear. It has a long and capital article on the "Orchard House, or the Cultivation of Fruit Trees in Pots under Glass."

AUTUMNAL FARM WORK.

In a former article we mentioned two items of farm labor that ought to be attended to in the autumn, viz.: *seeding lands to grass* and *preparing rough lands for cultivation*. The next item to which we find pleasure in calling attention, and which, strictly, ought to precede all others, is that of

DRAINING.

And we beg of the reader not to come to the sudden conclusion that we make a hobby of this subject, but to give it thought, observation, and such careful investigation as his opportunities will permit. All of us have been taught to believe that manure is the great essential in farming; it is so; but thorough-draining follows close upon it in importance, and we are convinced that we cannot do any farmer a better service than by pressing upon him a sense of its great value. Judge FRENCH'S new work on *Farm Drainage* is finding its way into the farm-houses in every direction, and will be the means of adding large profits to the agricultural productions of New England.

It is not our intention now to give the details of the operation, as that has been pretty thoroughly done in these columns,—but we desire to call the attention of our readers to the subject, and ask them to consider it well. In the meantime, we advise every farmer to get French's *Farm Drainage*, or Waring's *Elements of Agriculture*, or both, and make them a study as they progress in the practical operation of the work. From the latter work, we give below some of the

ADVANTAGES OF UNDER-DRAINING.

1. It prevents drouth.
2. It furnishes an increased supply of atmospheric fertilizers.
3. It warms the lower portions of the soil.
4. It hastens the decomposition of roots and other organic matter.
5. It accelerates the disintegration of the mineral matters in the soil.
6. It causes a more even distribution of nutritious matters among those parts of the soil traversed by roots.
7. It improves the mechanical texture of the soil.
8. It causes the poisonous excrementitious matter of plants to be carried out of reach of their roots.
9. It prevents grasses from running out.
10. It enables us to deepen the surface soil—by removing excess of water.
11. It renders soils earlier in the spring.
12. It prevents the throwing out of grain in winter.
13. It allows us to work sooner after rains.

14. It keeps off the effects of cold weather longer in the fall.
15. It prevents the formation of *acetic* [that is, sour,—vinegar contains one or two ounces in a pound of acetic acid.—Ed.] and other acids, which induce the growth of sorrel and similar weeds.
16. It hastens the decay of vegetable matter, and the finer comminution of the earthy parts of the soil.
17. It prevents in a great measure, the evaporation of water, and the consequent abstraction of heat from the soil.
18. It admits fresh quantities of water from rains, &c., which are always more or less imbued with the fertilizing gases of the atmosphere, to be deposited among the absorbent parts of soil, and given up to the necessities of plants.
19. It prevents the formation of so hard a crust on the surface of the soil as is customary on heavy lands.

We will add another item to make out the score, and one of no less consequence than the most important he has named.

20. It prevents, in a great measure, grass and winter grains from being *winter-killed*.

In May last, upon an examination of their fields, farmers were astonished at the amount of their lands which they found bare, in consequence of the winter-killing of grass and grain. We are compelled to confess in fairness, that this destruction was caused by the coating of ice which covered the surface during most of the winter and a portion of March and April. But the question arises, "If the land had been thoroughly under-drained, would the ice have remained upon it so long, and clung to it, like the shirt of Nessus, until the breath of life was gone?" We think not—and look upon this as one of the chief merits of underdraining. But our story is getting long, for a single topic, and we must leave it to say a word upon the subject of

TOP-DRESSING GRASS LANDS.

The annual top-dressing of grass lands, or even doing it once in two years, will save a heavy item of cost in the matter of plowing and re-seeding. Quite moist lands may be kept in grass, yielding a ton or a ton and a half per acre, for fifty years in succession, if they are frequently top-dressed, and seed sometimes scattered with it, or if the grass is allowed to go to seed occasionally before it is cut.

It is an excellent time to apply composted manure as a top-dressing immediately after the hay is carried from the field, as the young grass will grow up and cover it in a few days. It then

supplies the roots with new food, and gives them a vigorous setting for another crop.

If this work is not already done, it should be, before the grass ceases to grow, so that the autumnal rains shall moisten the manure and carry its fertilizing properties among the roots.

There are some other items which we should be glad to present, but our space for to-day is exhausted.

For the New England Farmer.

FARM WOEK FOR AUGUST.

With most farmers, August is a month of comparative leisure, and often a portion of the help employed during the three months previous is dispensed with, as soon as haying and harvesting are done, as a matter of economy, at least for this month. But let Patrick and John remain; there is work enough that should be done on every ordinary farm to fill up profitably the time of this month. True, the demand for the hoe is not imperative now, among the growing crops, and if it was used with good effect at the proper time, perhaps its use now, to any great extent, is not advisable, unless the weeds have been remarkably obstinate. But in the fields and pastures, and meadows, and perhaps by the roadsides, there is a demand for labor that can better be done in this month than in any other, and with better effect.

Nothing looks more slovenly upon a farm than clumps of bushes growing here and there in the improved fields, or corners of fences; mulleins and yellow weeds by the side of the walls and edges of mowing lots, and hedges encroaching upon the adjoining fields, and the road-sides growing up to birches, alders, or other brush-wood. Every day's work with a bush-scythe and axe in the highway adjoining your premises, where it is needed, will tell to the passer-by, more to your thrift than the publication in the newspapers of a premium for a fat hog, or nice steer.

I do not wish to deprive you of your accustomed respite in this month, but with an axe and bog-hoe upon your shoulder, lead the way, and at least tell what must be done, and see that it is done. Grub up the birches and alders and shrub-oaks; hitch the cattle to that bunch of willows that have taken root and shelter almost under the wall, and see if there isn't music in the snapping of the roots, when old Broad and Bright straighten the chain! Have the wall re-built where the frost threw it down last winter, if you have not already done it; and you, Farmer Loose-ends, will do well to clear the stone heaps from that mowing lot that the grass has been growing over these three seasons, and—Eh? "Haven't got time?" 'Twas only last week that, three times, smack went the point of your scythe into them, in one forenoon, and how you sweated after it because you hadn't got time—to stop and grind up! Last year, the boys might have got them off while they were hunting pigeons and woodcock, or fishing for trout and dace, with your assistance.

And the weeds and briers in the highway, or the by-roads over the farm, and along the fences,

should be mown, and, with the trash from the swales, see if they cannot be made to augment the compost heap very materially. By the way, just uproot those alder thickets along the brook that meanders through the meadow, before they seed the land any more; and then see if a week or ten days spent in this way does not pay—in the looks, and the satisfaction with which you can view your premises, as well as in the pocket.

Clear out the old ditches around your reclaimed meadow, and if you have rails to cut soon, cut them this month, and if it is hot weather, peel off the bark, and they will undoubtedly last much longer than if cut in any other month.

Farmer Fearful, just underdrain that piece of wet mowing land, or invest a little in reclaiming that alder swamp; cut wide ditches, and throw the muck to landward, for you will want it next winter. Cut up the brush by the roots, and make a fair beginning this season. Perchance there is gold in that meadow; certainly this peat is valuable, either in the barn-yard, hog-pen, or on your sandy fields. Persevere, and see if gold will not come out of it.

J. A. A.

Springfield, Mass., August 8, 1859.

INTERESTING TO LOVERS OF PEACHES.—At a recent meeting of peach growers in Mercer county (says the *Camden West Jerseyman*.) it was ascertained that in a space of country about three miles square there would be at least 20,000 baskets of peaches for shipment. In this space there are over 92,000 trees planted, 22,000 of which are bearing. The peach crop in the upper part of Mercer county, and in Hunterdon, promises a large yield. Of late years the region formerly celebrated for this delicious fruit has been abandoned, it being found that peach orchards will succeed but once on the same ground—at least an interval of several years' cultivation with other crops is necessary before a second orchard can be expected to succeed.

LADIES' DEPARTMENT.

PICKLES.

Kettles lined with porcelain should always be used in preference to those of brass, copper or bell-metal. The verdigris produced by the vinegar on these metals is extremely poisonous.

For most kinds of pickles, cold vinegar is the best. By boiling, much of the strength is lost by evaporation—consequently, the pickles are more liable to spoil.

Those requiring hot vinegar poured over them, should remain uncovered until perfectly cold.

Pickles should be kept in either glass or stone jars, and closely covered to exclude the air, otherwise they soon become soft. A small piece of alum in each jar will make the pickles firm and crisp. One tablespoonful of sugar to each quart of vinegar will be found a very great improvement to all pickles.

PICKLED CUCUMBERS.—Wash your cucumbers very clean; make a pickle of salt and water, sufficiently strong to float an egg, and pour it over them. Put a weight on the top of the vessel to

keep the cucumbers under the brine, and let them stand nine days; then take them out and wash them in fresh water. Line the bottom of your kettle with green cabbage leaves, put in your pickles, and as much vinegar and water, mixed in equal quantities, as will cover them. Put a layer of cabbage leaves on the top. Hang them over a slow fire; let the water get hot, but do not allow them to simmer, as that would soften them. When they are perfectly green, take them out and let them drain. Wipe them dry, put them in jars with some allspice, cloves and a few small onions, or cloves, or garlic. A piece of alum in each jar will keep them firm. Cover your pickles with the best cider vinegar—tie them close and keep them in a cool, dry place. By adding one tablespoonful of sugar, it will be found a great improvement.

PICKLED PEACHES.—Throw your peaches, a few at a time, in hot lye; let them remain in it but two or three minutes, then put them in clear water, and wipe off all the down.

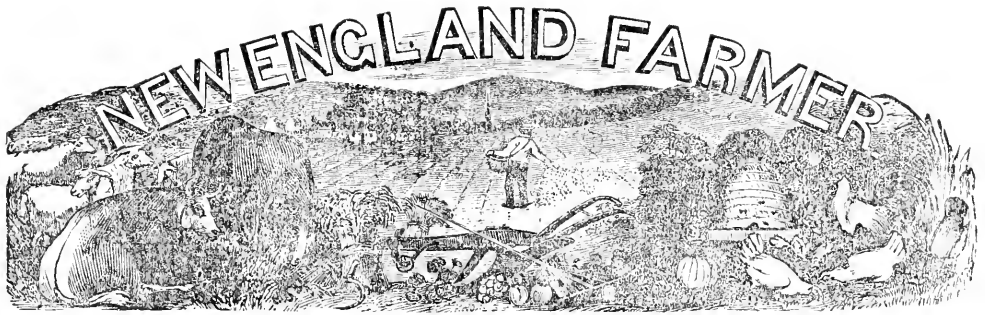
Make a strong brine, lay them in, and let them stand for two or three days. Take them out, wash and wipe them. Place them in jars, and cover with white wine vinegar and loaf sugar, in the proportion of one quart of vinegar to one pound of sugar. Put them in glass jars, cover close, and keep in a dry, cool place.

PICKLED TOMATOES.—Take a peck of tomatoes—the small ones are best—wash them, pierce each one with a fork, put them in a deep pan and sprinkle salt between each layer. Let them stand two days, then rinse them in clear water. Put them in stone jars, cover with vinegar and water in equal parts, and let them remain till next day. Allow one gill of mustard seed, half an ounce of cloves, half an ounce of pepper grains, half an ounce of whole allspice with two heads of garlic. Separate the garlic and take off the skins. Take the tomatoes out of the vinegar and water, empty the jars, put the pickles into them again, alternately with the spices, until the jars are three parts full. Then cover with cold vinegar, and cover close.

PICKLED GREEN TOMATOES.—Puncture the tomatoes with a fork, place them on a dish, and sprinkle with salt. Let them remain for two or three days, then rinse off the salt in clear water; put them in a preserving kettle, cover them with water, which keep scalding hot for one hour; then take them out, let them drain, and put them in jars.

Boil the vinegar, with some cloves, allspice, and stick cinnamon. When cold, pour over sufficient to cover them.—*Widdifield's Cook Book.*

OLD MAIDS.—Many of the satirical aspersions cast upon old maids tell more to their credit than is generally imagined. Is a woman remarkably neat in her person, "she will certainly die an old maid." Is she frugal in her expenses, and exact in her domestic concerns, "she is cut out for an old maid." And if she is kind and humane to the animals about her, nothing can save her from the appellation of "old maid." In short, we have always found that neatness, modesty, economy, and humanity, are the never-failing characteristics of an old maid.



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

OCTOBER.

"Splendor is on the bough !
The withering leaves fall fast ;
Yet wilder beauty crowns the forest now,
Than through the summer past.

"A more resplendent blaze,
Of rich and radiant hues,
Gleams through the autumn haze,
Than 'mid the summer dews"—*Wm. Howitt.*



OCTOBER, with its bright sunshine, its bracing air, its gorgeous coloring, would be one of our fairest months, only that a shade of melancholy is thrown over all, by the thought that this beauty is but the last gleam which precedes the gloom of death.

We do not like to see our old friends, the fresh young leaves of last MAY, getting old and dropping off one by one ; nor do we like to read the lesson which Autumn teaches to all thoughtful souls.—

There is a sad significance in her symbols which we would put aside if we could—but

"It is written on the trees,
As their young leaves glistening play,
And on brighter things than these—
Passing away !"

But, apart from considerations like these, what a splendid panorama OCTOBER stretches out before us ! It is true, there are no blossoms on the trees, and few flowers by the wayside, save the golden rod and "everlasting," or in some sheltered spot, where the sun lies long, warming the earth, and the frost is late, the

modest aster is still bright, and spreads its clusters to the autumnal breeze : but we can well spare these, when every leaf is crimson and scarlet and yellow, and the meanest shrub at our feet is hung with rubies.

During the exhibition of a painting at Boston, some years ago, one of the spectators was heard to remark by way of criticism, that a certain portion of the foliage was too bright to be natural. Probably no one would have doubted the correctness of the criticism, had it not afterwards been discovered that the foliage referred to was a broken bough from a real tree, and so placed as to seem a part of the picture ! And this was the only thing about the painting that seemed too brilliant to be natural. Nor is this necessarily a reflection on the acuteness of the critics. Nature paints in colors so bright, in a style so *original*, that the artist who should copy her faithfully, might well be liable to the charge of exaggeration.

From our window we look out upon a hill in the distance. We have seen it all summer, and it has seemed to be nothing but an eminence covered with trees—but every fall that forest is changed to a regiment of red-coated soldiers, marching, and over the hill we plainly discern the British Regulars retreating from our village ! If we would carry out the fancy, we may easily find a counterpart for the "old continentallers" in the groups of hardy looking pines, and scrubby apple trees scattered here and there !

The grapes which grow over your sunny trellis have hitherto been hidden by their large green leaves, but now you can see the rich purple clusters all ready to shed their blood in your behalf. There is something exceedingly picturesque, too, as well as rational, in the loads of corn and pumpkins bound to their winter quarters, and the little boy who is perched on top of them enjoys his ride better than many a rich man in his coach.

Somebody calls Indian Corn "the *Golden*

Plecco found by our Pilgrim Fathers on their first landing." It has certainly always been an important article in the productions of the United States, and is still much used in the "brown bread" of the North, and the "corn cakes" of the Southern States.

It is possible we are writing for some who may remember the "huskings," which have become almost traditional among us now, when the great barn-floor was swept as clean as the floor of the good wife's kitchen, and the whole scene was made brilliant by tallow-candles hung up in tin lanterns at a safe distance from the hay-loft, while the party below, consisting of young people of both sexes, sat around on the floor, on such seats as could be easily improvised, and stripped off the husks amid much laughter and merry talk. A red ear was said to give peculiar privileges to the finder, but of this we would not be supposed to know any thing from experience. The festivities of the occasion were wound up with a supper, and perhaps an eight-handed reel, for we are speaking of times when "the sinfulness of dancing" had not been made an article of faith in all our country villages—when even the parson himself might look on with an approving smile.

Whether more business was accomplished by a husking of this sort, than by a good, steady, gander-party, we are not prepared to say, but certainly there must have been a good deal more fun, and we have great faith in uniting the "useful with the agreeable."

Belonging to the same category, were the "apple-bees" of the olden time—and we cannot say they may not be in vogue in some of our rural districts even yet,—when neighbors met at each other's houses to help prepare the winter "sarse,"—and sour enough it was, if we may trust the memory of our early days.

It is wonderful how an apple-paring taken off whole, and thrown over the head, would always form the initial letter of your "true-love's" name. It never comes any thing but a long crooked S!

Now, with the gathering in of the harvest, and preparations for Winter, OCTOBER is a busy month. It is a month, too, when the farmer sees the reward of his past labor spread out before him—for it is only the "fowls of the air" who are privileged to expect food or clothing while they neither toil nor spin. On man it devolves to win his bread "by the sweat of his brow."

In an old volume of the *New England Farmer*, dated 1822, we came across the following:—"In a country where the springs are backward, as in the northern parts of New England, farmers should do all they can in autumn to diminish or lighten the labors of the following spring, when

they will have much work to perform in a short time."

We offer the quotation as "a word to the wise," which is said to be "sufficient."

For the New England Farmer.

FOWL MEADOW GRASS.

Your issue of to-day contains an interesting article by Mr. Holbrook on the cultivation of fowl meadow grass, at the close of which he calls for the experience of others.

I am now fifty years old, and have been acquainted with this grass all my life, and cannot understand why it has received so little attention from farmers. Without going into a general discussion of the subject, I will state a few facts which can be relied on.

1. For cows and young cattle, there is not a better or more economical hay grown in New England.

2. Under the most favorable circumstances the yield is very large. I have seen more than three tons to the acre.

3. It does best on natural moist meadows, which are properly but not too much drained.

4. It should never be cut until a portion of the seed is sufficiently ripe to fall and re-seed the land. *This is indispensable.*

5. It is not injured by standing until the seed is all ripe. I have known it to ripen, lodge and sprout at the joints, yet in a ton of such hay fed to cows and young cattle in the winter, there would not be one pound of waste. In fact there is no waste in this grass.

6. Fowl meadow is never ready to be cut until all the other haying is over.

These facts apply only to the grass as raised on moist meadows. I know nothing of it as an upland crop.

I would advise farmers to procure a few quarts of seed and sow it as early in September as possible, on their rich, moist meadows, plowed if dry enough, if not, unplowed, and if it grows, watch it with the greatest care, and let every seed ripen for their own use.

Aug. 27, 1859.

T. P. C.

MILK WHICH DOES NOT YIELD BUTTER--MEANS TO REMEDY IT.

M. Deneubourg addresses those who are chiefly interested in cases in which there is no disease of the mammary gland or loss of milk, but a want of oleiginous matters in the fluid. In the causes of this deficiency of butter-making quality, he concludes that there are two principal ones, viz.: idiosyncrasy and alimentation. But there is another which cannot be so easily defined, and which occurs in animals that are well kept, and whose milk has been previously rich in butter. It is to these that the remedy is principally directed. The remedy consists in giving the animal two ounces of the sulphuret of antimony, with three ounces of coriander seeds, powdered and well mixed. This is to be given as a soft bolus, and followed by a draught composed of half a pint of vinegar, a pint of water, and a handful of common salt, for three successive mornings, on an empty stomach.

The remedy, according to the author, rarely fails, and the milk produced some days after its exhibition is found to be richer in cream. The first churning yields a larger quantity of butter, but the second and the third are still more satisfactory in their results.

A letter from a farmer states that he had fourteen cows in full milk, from which he obtained very little butter, and that of a bad quality. Guided by the statements of M. Deneubourg, which had appeared in the *Annales Veterinaires*, he had separately tested the milk of his cows, and found that the bad quality of it was owing to one cow only, and that the milk of the others yielded good and abundant butter. It was, therefore, clearly established that the loss he had so long sustained was to be attributed to this cow only. He at once administered the remedy recommended by M. Deneubourg, which effected a cure.—*Veterinarian*.

REMARKS.—We publish the above in order to call the attention of farmers to the subject. The statement is a strong one, that the milk from a single cow should so modify that from *thirteen* others as to spoil the butter. Still, the milk from a cow who gives a large mess, and that of a thin, watery character, does have, to our personal knowledge, a bad effect upon the milk of other cows, in butter-making.

BLASTING ROCKS.

An account of a new invention for facilitating rock blasting, and to prevent premature discharges, is going the rounds of the newspapers. It is said to be the invention of J. G. Buckley and S. B. Mosher, of Schaghticoke. This is very like an invention or suggestion of Eli Whitney, who, in response to a request from government, if we mistake not, proposed that a wooden cone, having a hole through it for the fuse, should be lowered down directly upon the powder, and then a few coarse, angular stones should be dropped in to wedge down the cone; upon these smaller stones and earth could be filled in. When the powder is ignited, the effect is to force the base of the cone to lift a little, thus wedging it firmly in the hole, and splitting and spreading it somewhat to fill the whole; thus very cheaply effecting what must be attended with considerable expense in the contrivance described as follows:

“As is well known, after a hole has been drilled in the earth to be blasted, and the powder inserted, it has to be “tamped,” that is, the hole is filled up with some substance, which is rammed down in the most solid manner—a process that consumes a great deal of time, and is attended with much danger, the blast often exploding prematurely from the blow struck in tamping. This invention obviates the trouble and risk of this process. It is a plug of steel, somewhat in the shape of a syringe. A small hole extends down through the centre. The plug tapers from the bottom towards the top, but as it is partially sawed into four parts, and capable of expansion, a rod worked from above and passing through the centre, fitted to a cone-shaped

screw, spreads out the plug so that if placed over the powder it completely fills up the space excavated by the drill, and of course none of the explosive power of the powder is lost. A second hole in the plug allows the passage of a safety fuse. It has two or three rings around it, and can be wrapped with two if necessary, so that its hold is perfect. The plug can be lowered into the hole above the powder, or placed in a lateral drill, the rod be turned, the plug spread out—all in a few minutes, and after the explosion, it can be taken out uninjured.”

For the New England Farmer.

CROPS IN CHESHIRE COUNTY, N. H.

MESSRS. EDITORS:—The season is now well advanced, and I am prepared to place upon the record a statement of the crops. The last winter, with its 30 snow storms, 83 inches of snow, 120 days of uninterrupted sleighing, and the thermometer 41° below zero, has not only destroyed many a pair of good lungs, but left the fatal print of its icy hand upon the whole face of the vegetable world.

The weather is now delightful, save the cold, chilly nights, which we have had through the season up to this moment. The hay crop is nearly in, well cured, and a good one. Wheat is remarkably good—the best and heaviest I ever saw in this vicinity. In consequence of the high price of flour in the spring, nearly every farmer has his field of wheat, and it has proved a worthy effort—one step more towards his independence!

The sharp frosts of May and June nearly destroyed our corn crops, and a very small harvest must be the result. Many fine fields were plowed in and sown to Dutch wheat, to the profit of the farmer even. This crop is fast coming into favor with our farmers. It has the advantage of an alternative crop, as it does best when sown as late as the middle or last of July, after the long, hot days have past, and yields well. I am trying some corn this season where I grew a fine crop of buckwheat last, which looks like the boy's calf, “kind o' gi'n out.” Barley and oats look well. Potatoes, (don't tell the Irish,) are vibrating between good and bad.

Fruit trees seem to present the shadowy spectacle of a “dissolving view.” The great depth of snow during the winter kept the frost out of the ground, which set the sappy fluids in motion and predisposed the trees and buds to the killing effects of the frost. Never before have I seen so many trees “killed and wounded” in one season. I believe the fruit buds of the apple and pear will successfully resist the action of the frost of the severest cold of our climate if the ground be sufficiently frozen to hold the sap in a dormant state. The alternate cold and warm days of early spring are much more destructive. Then, again, after blossoming, the cold, easterly wind, sharp lightning and heavy thunder will cut off the fruit with an electrical nicety. Immediately after the extreme cold of January 9, 10 and 11, I discovered by a black spot upon the ovary of the blossom bud that the peach crop was destroyed.

L. L. PIERCE.

East Jaffrey, N. H., Aug., 1859.

For the New England Farmer.

KEEP THE BOYS AT HOME.

If the farmers scattered over our land would but mind this simple injunction, how much happiness would they lay up for themselves, and how many of their sons would they save from a life of shame and disgrace. Keep the boys at home! Why? For the following reasons:—

First—Keep the boys at home, because it is the best place on earth for them. If you are a good intelligent farmer, and if you make your home what you ought to, a place where love and harmony, pleasant words and kind acts are ever to be found, what place is there, north or south, east or west, that is so well calculated for a young man? It is the best place for them, away from the temptations that meet young men at every corner of a city. A young man that leaves a comfortable home, with fair prospects in life, to mingle in the turmoils of cities, steps from a path of roses to one of thorns; steps from the side of true and loving friends to seek the acquaintance of those that are friends only for a brief day, while the sun of prosperity shines, and at the approach of sickness, misfortune or sorrow will disappear like shadows on the wall.

Second—Keep the boys at home, because you want them to share the labors and pleasures of life. How pleasant the sight to see an aged man going smoothly adown the declivity of life, supported by his sons. Many a father has looked forward with heartfelt joy to the time when his son would stand by his side, sharing with him the storms and sunshine of life.

But how shall I keep the boys at home, exclaims many a reader. Very easily. Many a young man has been driven from the parental roof by excessive labor, by "all work and no play." I have seen many a father more careful of his noble horse, or a favorite yoke of cattle, than he was of his own son; these he would work with moderation, allow them a fair nooning, and provide liberally for their wants. But how is it with many a farmer's boy? Called up early in the morning, hard at work before breakfast, with tools that no man would work with, yet good enough for the tender hands and growing muscles of a boy; his breakfast hastily swallowed in about a quarter of the time that the horse is eating his, and then away to work, straining every muscle in his body to keep up with men double his size. Cross words and sometimes blows are added to these, year after year, until he grows sick and discouraged with a farmer's life, and so looks forward with joy to the day of his majority.

What wonder is it that so many of our young men are not willing to stick to the farm? What wonder that they look with distrust on such a life of servitude? And who wonders that so many fathers exclaim, "I can't make my boys like farming!" The remedy is simple; remember that they are boys, not men. Bring all the light, learning and science of this enlightened age to bear on your noble profession—a noble profession, notwithstanding you make it a life of slavery. Buy labor-saving machines, not every new-fangled notion that is offered you by every travelling peddler, but those that have been tried in the field as well as puffed up in the city papers.

When such a machine has been pronounced just the thing, buy it, and if you have farmed it for so many years, and have not as yet laid up money enough so that you can afford to buy it get your next door neighbor, with one or two others in the village, to purchase it with you, and use it by turns; you will soon afford to buy one yourself. Make the boys feel an interest in the work of the farm—let them have a share of the profits of some field. Subscribe for the *New England Farmer*, and let the boys read it; you will soon find the excellent advice contained in its columns will make them feel contented with a farmer's life, and if you yourself glean no useful knowledge from its pages, the boys will, and they will soon begin to make a change for the better in the old homestead. The cattle will be cared for in a better manner, your work done at the proper season, according to the monthly calendars, and you will have at last to join in singing

"A farmer's life is the life for me,
I own I love it dearly."

When you do this, you will find no difficulty in keeping the boys at home, and you will thank the editor of the *Farmer* for publishing the article entitled—"Keep the Boys at Home."

J. F. K.

For the New England Farmer.

HOW SHALL WE LEARN WHICH IS THE BEST GRAPE?

MESSRS. EDITORS:—The great interest now aroused in the culture of the grape, with a view of producing new varieties, whose good qualities are more available in our northern climate than those promised by the long cultivated Isabella and Catawba, has induced many enterprising cultivators to raise young seedlings, hoping to secure the one prize that must be hidden among thousands of blanks. Such enterprise is very praiseworthy, but the result will be that about every experimenter will be fully persuaded in his own mind that he is the fortunate man, that he has obtained *the* new variety which the liberal premiums of our agricultural societies have in view: an early grape, a sweet grape, a spicy grape, a good bearer of well-set bunches, and, withal, a hardy variety, whose wood shall not be killed by the colds of winter, nor its fruit mildew in the reeking heat of summer.

Now, who is to decide when a thousand positive men shall be endeavoring to persuade us that they have secured *the* variety? Within a year I have seen a circular which set forth the merits of a new variety, one of the weightiest arguments in which was the fact that it was the best of about forty seedlings, and therefore must be a desirable grape! Why, if a thousand seedlings will reward the enterprising cultivator with one really desirable variety, he is a very fortunate man, and will be most royally paid for all his outlay of time, trouble and expense. Mr. Dana, of one of our northern States, (of Lebanon, N. H.,) has taken a step in the right direction to test the comparative merits of rival competitors, in offering one hundred dollars for the best new grape, of which a vine or cuttings shall be sent by each competitor, to be fruited by that gentleman himself. To say nothing of certain im-

possible conditions on which this premium is offered, (the time in which the award is to be made rendering it utterly impossible to determine some of the desirable qualities which are needed in a good grape,) the fact that a single individual is to have so much to do with the award of it will detract greatly from the value of the experiment, in the judgment of sensible men. In making this remark, I will cast no reflections on the gentleman offering the award; he is entirely unknown to me, and his idea of testing the comparative merits of new varieties on a large scale is an excellent one; but what the public want is, that the question as to which is the best grape for general out-door culture, shall be settled by some responsible body that have a wide reputation, and in whom we all have confidence.

The Massachusetts Horticultural Society could place the public under lasting obligations, should they take this matter in hand, with such variations from the plan of Mr. Dana as their extensive knowledge and large experience might suggest. No prophet is needed to foretell that in the course of a few years a large number of new seedling grapes will be in the market, the successful sales of which may depend more on the financial capacity of the parties by whom they are introduced, than on the merits of the grapes themselves. Would not the Massachusetts Horticultural Society fill an honorable sphere by taking the burden of an experimental test upon themselves, thus saving thousands of enterprising men from a costly and annoying experience?

Marblehead, Mass. J. J. H. GREGORY.

For the New England Farmer.

A VISIT TO THE HOMESTEAD OF FARMER ALLEN.

To one accustomed to the heat, noise, dust and effluvia of a large city, the coolness and quiet of a night in the country is eminently refreshing. An exhausted frame with the fatigue of a day's ride, induced me to retire early to rest, and my dreams were pleasant, indeed. The gladsome crowing of the cocks, the singing of the merry birds, the echoing of the lowing kine, awoke me with their melodious sounds at an early hour, and I witnessed a joyful sight at sunrise in the country. The sun peeping over the eastern hills, and a thousand voices from all animated nature poured forth a volume of music to my ears. Bold chanticleer, perched on the garden-fence, commenced the morning concert by one of his ringing proclamations; he was answered by his brothers from all the neighboring barn-yards; the meek looking cows arose and welcomed the milkers with their bright pails, who were soon draining the sweet milk from their flowing udders; the birds gayly singing from the tree-top, and the swallows twittering from the eaves of the barn, the satisfied grunt of the swine in their well-cleaned pens, all broke upon my sight and ears, and produced such harmony as I never experienced before, and the notes still linger, like a half-remembered lay, in my ear.

I attended the country church on the Sabbath, and was forcibly struck with the solemnity that pervaded all. The people seemed to come not to display the latest fashion, or the skill of their

dressmakers, but to refresh their souls, and to gather new courage to battle with the trials, disappointments and sorrows of the coming week. The next morning, after partaking of a plentiful breakfast, my friend proceeded to show me over the farm. We first inspected the barn, and the first thing that I noticed on entering was the neatness that pervaded the entire premises.—Every harness, rake, pitchfork, everything in the tie-up, the horses' stalls, and even the calf-pen, were as neat and in as good order as if the barn had never been occupied. Mr. Allen informed me that he often harnessed a horse after dark without the aid of a lantern, thus avoiding the danger of setting the building on fire. The barn is 100 feet long and 50 wide, with a light and dry cellar under the whole. He told me that he obtained many of his valuable ideas about his farm by inspecting the large barn of Hon. Mr. French, at Braintree. The tool-house next claimed my attention; here, also, "order reigned supreme." On looking round, it made me think of one of our Boston agricultural warehouses. Here I saw one of Willard's patent root-cutters, which Mr. Allen considers a valuable machine for cutting all kinds of roots for feeding to the stock; even pumpkins are easily cut with it previous to cooking for the swine; it is easily operated by a good sized boy, and is a durable and labor-saving machine both to man and beast.

But I cannot describe a quarter of the tools and utensils that were hanging from the walls and reposing on the floor in their respective places, all ready to perform good execution in lightening the labor of man.

Emerging from the tool-house, I passed into the orchard, with its regular rows of trees, all in bearing condition. Mr. A. told me that when he purchased the farm at about half of its present value, of the former owner, there were only about 50 old apple trees on the place; he immediately commenced digging round the old and half-dead trees, and setting out new ones, and the result has been in producing one of the finest orchards in the neighborhood. I asked Mr. A. if he ever used strong potash lye on his trees. "O, no," said he, "I tried it once on that tree," pointing to the meanest looking tree in the orchard, "and the result has satisfied me of its utter absurdity." I admired the straightness of my friend's trees, and in reply to a question, Farmer Allen told me that when his trees were about as large as his wrist, he cut some crotched limbs, sharpened one end, and sticking it into the ground, put the crotch part against the trunk or limb of the tree; a little old matting is placed between the tree and the stick to prevent it from chafing the bark of the tree. My friend takes almost as much pains in training up his trees in the way they should go as he does with his children.

Among the summer apples that he recommends, were the Early Harvest, which succeeds well in all our northern States; the Sweet Bough—this is also a valuable apple; it is a large, roundish shape, sometimes conical, of a pale greenish yellow, flesh very tender, and of an excellent sweet flavor; succeeds well in all the northern States; the Golden Sweet is a fine apple. Of winter apples, Mr. Allen recommends the Belmont, the Hubbardston Nonsuch, a large, round-

ish apple, striped with light, rich red streaks, flavor, mild sub-acid, excellent, succeeds best in the northern States. Peck's Pleasant is a large apple, good bearer, fruit always fair. The Jonathan, so called, is a great bearer; color a deep, bright red, of an excellent flavor; the Baldwin, Rhode Island Greening, Northern Spy, Newton Pippin and Roxbury Russet are all too well known to need a description. These are a few varieties which my friend recommended with a good deal of confidence, as we were standing under the branches of a large Porter apple tree. Of pears, the following are always good; viz.: the Bartlett, Napoleon, Veiar of Winkfield, Dix and Seckel. These are all good varieties, and will amply repay the care of cultivation.

My friend now wanted me to go and look at a piece of land that he had reclaimed, and we were preparing so to do when the pleasant sound of the dinner-horn broke on our ears, and as our morning exercise had given us a keen appetite, we concluded to postpone the visit until after dinner. In my next, I will give you an account of the visit to the reclaimed land, and my observations in the hay-field, not forgetting to speak a good word of the utility of the hay-caps.

FREEMAN.

For the New England Farmer.

BARN ARRANGEMENTS.

MR. EDITOR:—I will give you some idea of the way in which I intend to build a barn. I propose to have it of sufficient size to accommodate my stock of three horses, three cows and a yoke of oxen, leaving room for hay, grain, granary, store room or tool house, &c. I intend to have upon one side my granary, and a large bay for hay, &c., and on the other side stalls for my stock of cattle and horses, a tool room, &c. Underneath the stalls I propose to construct a tightly cemented manure cellar, of sufficient capacity to contain about two hundred loads of manure, and so arranged as to receive all the manure, both solid and liquid, from the stalls. I shall have adjoining my barn a building so constructed as to contain a henery, store room with cellar underneath for roots, a room for cooking food for hogs, hens, &c., and a pig sty, to connect with the before-named manure cellar. I shall give my hogs the range of the manure cellar, and shall, from time to time, put into it muck, leaves and other matter, as often as it shall be necessary. I also intend to have a drain or pipe running from my house (which is on a higher level than my barn,) to the manure cellar, and to carry into it all night-soil, soap-suds, and all kinds of liquids valuable for manurial qualities.

I hope, with the above named conveniences, and the assistance of three or four of the hog kind, to keep a small farm in a high state of cultivation.

What say the editor and my brother subscribers to the *N. E. Farmer*, to my plan?

Boston, August 5, 1859.

C. C. H.

REMARKS.—Your plan appears well in description, but a ground plan would have given us a better idea of it. When the barn is completed, give us an invitation to look at it.

BARNSTABLE AGRICULTURAL FAIR.

In looking over the account of this fair, there are two things that strike us very agreeably at the outset.

The fair was held on two days, and the annual meeting for the choice of officers and the transaction of business was held on the forenoon of the first day. While the articles for the show were being arranged in the hall, and the stock in the pens, the members met, and deliberately transacted their business. This gives them time to do all that is necessary, without the hurry and confusion that usually attends these meetings after the dinner, at the close of the fair, when every one is in haste to get away. Under such circumstances, the business is apt to be done hastily, and with too little thought, and important matters are forgotten, or referred to committees. Could the affairs of our county societies be transacted more deliberately, and the views of all the members be brought out, there would be more union and harmony in their management. When a fair is held two days, we think the Barnstable plan is an excellent one.

The second thing to which we refer is the appointment of a committee to superintend the setting out of ornamental trees upon the grounds of the society. This matter has been too much neglected. Most of our showgrounds might, by proper attention, and with little expense, be converted into beautiful and attractive places. Ornamental trees tastefully arranged, and paths skillfully laid out, and a smooth, green surface between the walks, would render them much more attractive, and add much to the comfort and pleasure of the occasion. It would tend to foster good taste in the minds of the members and visitors. We hope the example of this society will be followed by all societies which own grounds devoted to the purposes of an annual fair.

We infer from the report that the directors determined to have a good time at the fair, and fully succeeded. What was wanting to make their *Agricultural Show* attractive, they made up in attractions of other kinds. They bought together His Excellency the Governor, and various notabilities from all points of the State. The Ancient and Honorable Artillery company from Boston were there, and the Boston Brass Band, with various side shows, such as a revolving swing, the Ethiopian troupe, big oxen, &c., and last, but not least, a splendid ball on the evening of the second day. J. B. Smith got up one of his best dinners. Gov. Washburn made an eloquent oration, and there was the usual variety of speech-making, and other talk, interspersed with songs and music by the band.

But amidst all this display and show, we fear

that the farmers themselves showed rather small,—that they were pushed, or fell into the background—and but little was actually done, to promote the growth and improvement of agriculture. When the energies of a society are expended in getting up a grand festival, the real object of its organization is apt to be overlooked. We take it, the “chief end” of a country agricultural society is to awaken in the people a deeper sense of the *importance of Agriculture*, and to stimulate the farmers to greater efforts to develop the agricultural capacities of the country. For this purpose, the best specimens of stock and other farm products are brought together, that they may be seen and examined, and the improvement, from year to year, noted. Premiums are awarded to reward and encourage effort. If military displays, military music, and fancy balls and other side shows, *are needed* to accomplish the legitimate objects of the societies, then let us have them, by all means.

“The whole programme of exercises for the occasion was entirely and splendidly successful,” and “Wednesday and Thursday are days long to be remembered in the history of the Barnstable Agricultural Society.” Well, we shall see.

WOMEN IN THE GARDEN.

Much in these days is said about the sphere of woman. Of the vexed question we have nothing now to say. The culture of the soil, the body and the soul are our themes. Rich soils, healthy bodies, pure, cultivated souls, these are what we are aiming at. And to this end we recommend that every country woman have a garden that she keep and dress with her own hands, or that she supervise and manage. The culture of strawberries, raspberries, blackberries, gooseberries, currants and garden vegetables is as delightful and profitable as anything in which a woman can engage. She may sprinkle her garden well with flowers. All the better for that. A snowball in this corner, a rose in that, a dahlia bed there and a moss border here will not be out of place. Only let the substantial and useful constitute the chief part. A touch of the ornate, like a ribbon on a good bonnet, is not in the least objectionable. In all the schools the girls study botany. In all families the women ought to practice botany. It is healthful, pleasing and useful. The principles of horticulture are the principles of botany put into practice. Farmers study agriculture, why should not their wives and daughters study horticulture? If any employment is feminine, it would seem that this is. If any is healthy, this must be. If any is pleasurable, none can be more so than this. A rich bed of strawberries, a bush of blackberries or currants, a border of flowers produced by one's own hand, what can well afford a more rational satisfaction? We say to all our country sisters, have a garden, if only a small one, and do your best with it. Plant it with what pleases you best, with a good variety, and see what you can do with it. What woman

cannot raise beets, tomatoes, melons, onions, lettuce, and furnish her own table with them? What woman cannot plant a raspberry bush, or currant, or gooseberry and tend it well? Come, good women, study your health, your usefulness and happiness, and your children also.—*Valley Farmer.*

For the New England Farmer.

IS THERE ANY PROFIT IN FARMING?

MR. EDITOR:—I have been some seven or eight years engaged in the business of agriculture, and have generally found the answer to the above question to be in the negative in most of my direct operations on the farm. I have been also somewhat observant of the progress of my brother farmers in this section, and New Hampshire, to some extent; also, I have taken some pains to inquire of those whom I meet from other sections of this, and other States; and if I should tell what I honestly believe in the matter, I should say that not one farmer in ten is making a living, unless he has some resource besides the farm, and laying by three per cent. on the capital invested.

Perhaps you will say, it is not good policy to publish this to the world, as most farmers are in debt, and, as the Frenchman said, “they are growing no better very fast.” Now, if what I say is true, that agriculture is not a paying business in New England, that the farmers are working hard and long, to no profit, that they are generally in debt, and many hopelessly so—that farm property is deteriorating in value, (I mean the real property,) in three-fourths of the towns where farming is the principal pursuit; that the report on the poor in this State shows that it costs nearly double according to the population for their support in the agricultural, than in the manufacturing and mechanical towns and cities of the commonwealth; that no poor man, however industrious, can expect to succeed in the business; if he makes the attempt, it is only to his sorrow; that, while catering to the wants and comforts of others, he can but illy afford to enjoy them himself; that, in short, while seeing the thrift and prosperity of the different classes all around him, who are non-producers, he must remain content.

Now, says the reader, is this so? I supposed that the farmers all the time lived in clover; that they were almost the only truly independent and happy people amongst us; that they had nothing to do but to pluck and eat. What made you think so? Have you been in the habit of listening to the speeches of some official or ex-official, (who is anxious to cut off the ex,) at some County or State show, or perhaps on the eve of an election, or is it some “three-cow gentleman farmer” who has told you about the “six bright milk pans which reclined against the fence,” or “the angel cow that stood in the yard?” All this is very pretty to talk about, and it is undoubtedly highly agreeable to farm when one has money to spend that he never earned, or having earned a fortune at some other pursuit, is willing to spend a portion of it in this way. To make a show, or for the public good, either of which is highly detrimental to the true interest of the farmer. Perhaps this class of farmers of whom I am now

speaking, take a good deal of pride in showing folks how things *can* be done, and what monstrous crops *can* be raised, and what mammoth cattle *can* be produced. The reader will recollect that it is the *profit* that we are looking at, and not that great things can be done, or that farming is not a very agreeable way of spending money.

I never heard of but one man who had made anything like a fortune at farming, and this was an *honest* old deacon, who was so highly elated with his great success, that he concluded to lecture on it before the town society. Of course everybody was on the *qui vive* to know how it was done, so he had an anxious auditory. I will not undertake to follow him in his remarks here, but will merely state that he closed evidently with as much satisfaction at his success at lecturing, as at fortune-making. The lecture had no other effect that I could see, than to create a smile on the part of the listeners, and reminding one of the anecdote of the lawyer and the iron kettle. The lawyer arose in court with a good deal of pomposity, and says, "Your honor, my client here is accused of stealing an iron kettle, now, may it please the court, I shall prove in the first place, that this plaintiff here never owned an iron kettle; and in the second place, that the kettle was broke when he took it; and in the third place, that he never took the kettle at all." This was about the way with the deacon's fortune.

The reader will please excuse this seeming digression, although it is not really so, for we have just this class in the community, who, like this deacon, imagine they have great success, and never find out their mistake, till it is too late to remedy the evil.

Does the reader want any facts to prove what I have said? If so, and he will listen one moment. I will give him a few of the many that are now on my mind. Go into the rural districts and see what proportion of the farms have been long in the market without a customer, price them, then figure up the improvements, and see if the soil is not a free gift. Go further than this, and price the yearling heifer you see in the yard. Now ask what it cost to raise it, and you will be told, I don't know. This is true, he don't know. But Dr. Bartlett, of this town, will tell you that it costs twenty-three dollars to raise a yearling and this is probably about double the price named. Then ask what he gets for his milk? Two cents per quart. Is this the cost? I don't know. Hear what the Secretary of the Board of Agriculture in this State, says in the matter. "By actual experiment at the State Farm at Westboro', it has been proved to cost twenty-five cents per day for the six cold months, and six cents per day for the other six, to keep a cow." This would make the cost of keeping a cow one year, fifty-seven dollars and twenty cents. Now, how much milk will a cow give in a year? Our farmer says he don't know. And he tells the truth, undoubtedly. But what will our authority tell us has been proved to be the fact? On the average for each day in the year, a good cow will give four quarts per day, or 1460 quarts a year, which, at two and a half cents per quart, amounts to thirty-six dollars and fifty cents a year, making a loss of twenty dollars and seventy cents a year, for each cow, calling the manure sufficient compensation for taking care of them.

I might carry these remarks to a much greater extent with about the same result, but fear I am getting tedious, and intend to refer to the subject again, if the *Farmer* will give me the privilege.

Now, I want to thank the editor of this paper for bringing up the subject in his last issue; for it is the profit of farming that we want to talk about, and not what we can do. But the grand question with the farmer is, will it pay to do it? I have the very best authority for saying that no business that does not pay, is useful and healthful.

T. J. PINKHAM.

Chelmsford, Mass., July 25, 1859.

For the *New England Farmer*.

UNFRUITFUL GRAPE VINES.

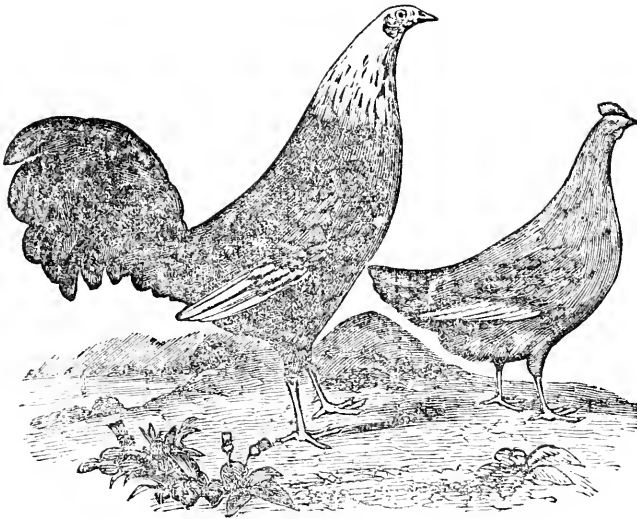
I noticed in the *Farmer*, some time since, an inquiry why a particular vine of the Isabella grape could not be made to bear; and in reply, an intimation that the cause might be its standing at a distance from any other vine. I have proved by numerous experiments, that the grape does not need the vicinity of another vine, as each flower has all the organs necessary to fruitfulness. I will suggest that exposure to the cold of winter sometimes injures vines without killing them. In this case the vine will leave later in the season, but afterwards may make a luxuriant growth. In such cases the flower buds, though perfectly formed before, develop only leaves. This is almost uniformly the case in all attempts to cultivate the peach in Maine. The trees will grow rapidly, and one acquainted with the peach will find abundance of flower buds perfectly formed in the fall; but in the spring these buds throw out only leaves, the flower germ having been killed by freezing, while the leaf germ, (if I may use such a distinction,) survives. Grape vines must be sheltered in winter to secure fruit. When the Isabella, left without proper shelter, succeeds in making fruit, it will be a fortnight later in ripening than the fruit of a properly protected vine.

J. S. SWIFT.

Farmington, Me., August, 1859.

REMARKS.—Mr. J. J. H. GREGORY, of Marblehead, in a recent communication on this subject gives as a reason why some grape vines do not bear fruit, that they are imperfect ones. He says: "Struck by the phenomenon of vines abounding in fragrant blossoms without setting fruit, I gathered the blossoms and compared them with those from fruit-bearing vines. The difference was at once apparent; the blossoms of the two vines which had never borne were not perfect in structure; the stamens were present, but the pistil was wanting. Such vines cannot bear—it is a physical impossibility. Had the pistil been present they might have borne, though the stamens had been wanting, receiving pollen from the stamens of other vines."

There is an average of 300 bushels of whortleberries brought into the Boston market each day. The consumers do not, however, all reside in Boston.



THE SCOTCH GAME FOWLS.

The beautiful specimens of fowls which are figured above, we do not present to encourage any propensity for the cock-pit or prize fight, or because we think that, upon the whole, they would be more profitable, as a breed, for our poultry yards generally; but because we suppose the Game Fowl is a pure breed, and that such blood infused into our common fowls would greatly improve them.

In Dixon and Kerr's excellent work on Poultry, it says—"Of all the varieties of domestic fowls, except, perhaps, the Smooth-legged Bantans, the Game Fowl is the most symmetrical. It is more slender in the body, the neck, the bill and the legs, than other kinds, and the various hues of the plumage are more brilliant and showy. Their flesh is white, *compact*,—like that of the race-horse compared with the scrub,—delicate, and very nutritious.

"There are evidently two varieties of the game fowl, if not more. The first occasionally seen in the yard of the farmer, is a bird over the average size, and rather heavily formed; rather too much comb; breast quite black; neck, back, and wings a very deep red; tail, glossy green. The hen plain brown, with a lighter colored neck, sometimes a little streaked with ochre; legs light-colored or white.

"The other variety, which I much prefer, and now possess, is a smaller fowl, of a peculiarly light and elegant make; head very small and fine; neck, light orange red; breast richly spot-

ted, as are, also, in a degree, the wings; back, a very rich red; tail, glossy greenish black; legs, dark. Hens, brown, of various shades, feathers being streaked with pale ochre down the middle, the same as pheasants; comb, in the cocks very small, and not large in the hens."

The eggs are a little smaller than those of our common fowls. The hens are good setters and mothers. A cross with the game fowl would undoubtedly give stamina and value to most of our common breeds.

For the New England Farmer.

"COPELAND'S COUNTRY LIFE."

MR. EDITOR:—I have rather hastily examined the above work, particularly the author's remarks on the cultivation of Fruit Trees. There are many excellent hints and directions regarding their culture, but in his "wholesale denial," as he terms it, of scraping and washing the bark of any tree, it seems to me he is entirely at fault; for although, with him, I believe that lichens and mosses of various kinds are not the cause, but generally the consequence of a diseased state of the tree, still the woolly aphid, called in England the American blight, which is occasionally found in the forks of the branches of our apple trees if suffered to multiply, does injury, seeming to burn the bark upon which it fastens; then, again, we have another insect, somewhat allied to the above, which has been termed the scale, or miniature tortoise, found upon the bark of our young pear trees, fastening themselves closely upon the bark. They are white externally, but when rubbed off emitting a red liquid; this insect, when

abundant, will surely destroy the limb or check the growth. Their first appearance, some years since, with me, was upon young trees received from Long Island, and my neighbor Manning observed to me that the first time he found this insect was upon trees he received from Flushing.

As for lichens and moss being a benefit to a fruit tree, I can hardly admit. To the eye of the botanist it may be that the beauty of color, is so great, particularly when united with the delicate ferns, that he wishes to preserve them, the same as a true lover of nature may be willing to forego the pleasure of eating a fine pear, thus merging the useful in the beautiful. I cannot subscribe to his conclusion, that "no insects which harbor in the outer bark of trees, and can be removed by scraping and washing, are really injurious to the tree," and also that, "No tree has ever been with certainty benefited by scraping and washing."

I do admit with him, that many insects which are found in the rough bark are not necessarily injurious to the trees, such as spiders or their larvæ, and that the rough bark is not of itself detrimental to their growth, as it is often thrown off by nature; and still, it is undoubtedly at first, as he says, a protection against heat and cold. I shall take another opportunity to speak of his directions, &c., on the culture of our small fruits

Salem, August, 1859.

J. M. IVES.

GATHERING AND PRESERVING FRUIT.

BY ROXBURY RUSSETT.

Whoever would derive large profits and prices from his orchard, must be prepared to take care of his fruits, as after they are grown they have to be gathered and preserved; and the better this part of the work is done, the more profits will be obtained. Besides, it is the preservation which enables the fruit-grower to put his valuable varieties in market when they are worth the most money.

The best mode of gathering as yet known is by hand with the aid of self-supporting ladders, and small baskets, cushioned on the inside. There are various contrivances, and some of them really meet all the requirements wanted, with the exceptions that they use up too much time. These contrivances answer for amateurs, but not for farmers. Every fruit taken from the tree should have its stalk unbroken, it should be gathered by hand, and placed in the basket, carefully and lightly, not allowing it to drop, or to knock against other fruit, or against any substance that would bruise it in the slightest degree. The same care should be taken in removing the fruit when gathered to the fruit room, or place where they are to be kept. They should not be removed in a wagon or a wheel-barrow. They should be carried in large baskets on a hand-barrow, for that is the only method by which they can escape a certain amount of jolting.

The sooner winter fruits are removed to where they are to be kept, after being gathered, the better. The usual place of storing them is in cellars, where there are no special fruit rooms provided for them. If they have to be kept in barrels, each barrel should be clean and dry before the fruit is put into them. Then they should be laid

in as carefully as if they were eggs, for good keeping winter apples are worth as much, and good winter pears are worth a great deal more. But though it is the practice to put fruit in barrels to keep, it is not one that can be recommended, unless the fruit is about to be sent to market within a short time. When in barrels also, fruit cannot be inspected and watched, the decayed or decaying ones removed, and good supervision maintained.

Shelves are much better, and these shelves might be so arranged and divided that each subdivision would hold the produce of a single tree. By thus keeping the fruit of each tree separate, there would be less danger of spoiling. Trees of the same variety frequently grow fruit very different in quality, and while the produce of some will be scabby and wormy, the fruit of other trees will be free from these defects. A range of shelves, each one capable of holding from five to six bushels or two barrels, would accommodate an orchard very well. For a tree that produces two barrels of choice fruit worthy of being kept over, may be considered a first rate tree; and an orchard that contains fifty of these trees is a first rate paying investment. By keeping sorts separate, and even the growth of each tree from each other, much sorting and picking will be avoided. No fruit should go upon shelves that is not first rate in quality. The cullings, which may be used or sold, could be preserved either in barrels or on the floor, till got rid of by sale or otherwise.

The fruit room should be a cellar, capable of being well ventilated, and made dry before the fruit is placed in it, but afterwards it should be kept close, dark, and the temperature should at all times range between 35° and 45° Fahrenheit. Light and heat both act on the fruit and cause it to mature; and maturity is always followed within a short period by decay. Hence all fruit should be gathered at a period before they become quite ripe. The low temperature and the exclusion of light delays the time of maturity, hence the keeping quality.

A French writer, in the *Revue Horticole*, also claims that all the carbonic acid evolved from the fruit, should, if possible, be retained in the room. Hence after the fruit is put in its place, the room ought not to be ventilated, as this would permit this gas to escape, and also change the temperature. The same writer also charges on good grounds that all moisture or humidity should be kept out of the fruit room, as it likewise promotes decomposition, but the air should not be too dry, as then the fruit would dry up and wither.

It is calculated that a room 15 feet long, 12 feet wide and 9 feet high would hold shelves enough for 8000 large sized winter apples or pears, allowing each one to occupy an area of four inches square, so that no fruit would touch each other. Allowing 150 apples to a bushel, would make room for about 600 bushels of apples, not one of which would touch the other, or at least 1200 bushels where they were piled two in height. Those who have good cellars for fruit will now see the advantage of them; but we should prefer a room in the orchard built under the shade of the trees, in the manner of an ice-house, with double walls, doors and windows.—*Michigan Farmer.*

EXTRACTS AND REPLIES.

WINTER-KILLING OF TREES.

In a recent number of the *Farmer*, one of its most closely observing correspondents offered a few suggestions relative to statements which I had made in relation to the winter-killing of fruit trees in Maine. His suggestions are important, and in the main, correct. He is, however, mistaken in supposing that the killing alluded to was effected by the hard frosts of autumn. One proof is found in the fact that no loss was suffered in any grade of nursery trees, in any situation below the surface line of the snow as it lay at the time when the thermometer sunk to the fatal point. The rapid growth of the Baldwin is not the only cause of its winter-killing. I cultivate other varieties which make more growth than the Baldwin, which are not injured by cold that causes mercury to congeal. The Baldwin is a tender variety, I fear too tender for reliance in Maine. But I agree with your correspondent that it is not best to be discouraged, or another generation may pass before we have another winter as fatal as the last, and that two years preceding. At any rate, the Baldwin must not be forced too hard in its culture in northern latitudes.

J. S. SWIFT.

WHEAT—TOP-DRESSING.

Can you give me any information with regard to a kind of wheat called weevil-proof winter wheat, and whether it is true to its name or not. I have often thought that if there is such a kind of grain that would be suitable to our climate, it would be a blessing to us farmers to have it to cultivate. There is also another kind of grain called Speltz, a kind of wheat, I believe; the heads grow very long, and when threshed, the kernel remains in the shuck. I had a few kernels of each of these kinds sent to me in a letter, and I sowed them in my garden; I see no signs of weevil about them, but how it would be as a field crop, I do not know.

Is there anything that would make profitable top-dressing for grass land where there is not enough manure to go over all? Would lime, superphosphate of lime, guano, or any of the numerous fertilizers, be profitable for such? Should all top-dressing be put on in the fall?

Barnet, Vt., Aug., 1859. SOME ANON.

REMARKS.—We have never heard of the wheat you speak of.

A top-dressing for grass land of clear yellow loam is valuable. Lime would undoubtedly be useful, but whether it would be profitable, would depend upon circumstances. So with superphosphate and guano.

TO "A LOVER OF GOOD PICKLES."

My plan is to select cucumbers of small size, throw them in cold water a few hours, place in a small tub; cover with vinegar that is not very strong—in about two weeks pour it off and replace with good vinegar that has been scalded, skimmed, sweetened slightly and spiced with ginger, cassia-buds, lemon-peel, &c. Pour the vinegar over the fruit while hot; when cool, set it in the cellar and stir often enough to prevent

a scum forming over it. Should the vinegar become flat, replace it with more prepared in the same manner. I have so preserved them the last two or three years, and find no difficulty in keeping, unless placed upon the dinner-table.

Pudney, Vt., Aug. 8, 1859.

H. E. H.

CROPS OF THE SEASON.

I just now met my neighbor Huntington, and inquired of him as to the prospect of the crops of the season. He said he should have very little, comparatively, for the market—full three-fourths of his onion crop having been destroyed by the maggot. I asked him what he thought of the use of guano, as a preventive of the maggot. "Nothing at all," said he. "The best onions I have, are on a part of the Whittridge lot, where I applied no fertilizer of any kind. It happened in this way—my manure gave out before I got through planting, and I thought I would try the remaining rows without any manure at all. I shall have more good fair onions on these rows, than on all the rest of the lot. I give you the facts as he stated them." There is no mar among us, whose word would go farther than that of Benjamin Huntington.

Aug. 4, 1859.

SOUTH DANVERS.

THE WILD CARROT.

Can you inform me the most ready way to exterminate the wild carrot, so called?

Chilmark, Aug., 1859. JOHN HAMMETT.

REMARKS.—Where the wild carrot has become quite numerous, we doubt whether it can be exterminated short of plowing and cultivating the ground with other crops. If the land is well plowed, manured and cultivated, and given a crop of potatoes or corn, and then properly seeded to grass, the grass will be quite likely to take precedence of everything else.

TWO YEARS' OLD PICKLES.

HENRY J. DURGIN, Shaker Village, N. H., has sent us a bottle of pickles which he states are two years old. They are hard, sound and fine flavored. He also states that it takes but forty-eight hours from the time they are taken from the vines to make them perfect. Any one desirous of knowing his process may communicate with him as above.

THE MASSACHUSETTS DOG LAW.—Our legislature, at its last session, passed a pretty stringent dog law, which we hope has gone into vigorous operation. In some towns we have been gratified to see that its provisions have received decided action, and that there is an evident diminution of that worse than worthless property. Read the extract below.

WHAT OUR DOGS COST US.—We extract from the Assessor's returns to the County Auditor, says the Belmont (Ohio) *Chronicle*, the amount

of sheep killed and injured in the county, during the past year. The result is anything but encouraging to the canine species. The whole number of sheep killed was one thousand and nine. The number injured was one thousand, one hundred and twenty-five. The amount of injury done, in killed and damaged, is estimated at the round sum of *three thousand five hundred and eighty-nine dollars*. Add to this the amount it cost to keep the dogs of this county, and we have them costing more than perhaps any luxury—if such they be—indulged in.

For the New England Farmer.

FOWL MEADOW GRASS AND ITS CULTIVATION.

BY FREDERICK HOLBROOK.

The late Hon. John Lowell, in a communication to the old *New England Farmer*, Vol. 9, for the year 1831, remarked of the fowl meadow grass:—"If this truly Yankee grass could be translated to all the meadow bottoms, the naturally moist, cold, half-peaty lands of New England, their produce would be at least doubled. Low meadows are chiefly furnished with the different species of carex, a coarse, sharp, worthless grass, on which no animals but those which are nearly famished will feed, and on which those who do feed constantly decline. We have then one species of grass not usually cultivated, which is of inestimable value. It is no idle speculation, but sober fact, our agriculture has much to gain by the active, earnest, assiduous propagation of this grass."

Having in former years read several interesting articles upon the fowl meadow grass, I have been led the more closely to examine, from time to time, its habits and qualities, as I find it growing in the lower and more moist portions of the intervals of the Connecticut river; and I think it will bear all the favorable commendation Mr. Lowell has bestowed upon it. This grass grows in patches here and there in the interval lands near my residence. Until within the last year, we have made no systematic efforts to cultivate it. Still it has come in, of itself, and held long possession in certain places, and grows very vigorously wherever it has foothold. It somewhat resembles redtop in general shape and appearance of stalk, head and seed, but the head is of a lighter or paler color, and the stalk grows taller than redtop, and quite slender and delicate, while the bottom or lower foliage is very abundant and fine. It undoubtedly excels herdsgrass and redtop for a large product and fine quality of hay. It turns out a full swath to the scythe, the hay is easily cured, remarkably soft, tender, and succulent, excellent for milk cows, and particularly for working oxen during their labors in the spring season.

Observing these qualities from time to time, I was induced last year to procure two bushels of the seed of fowl meadow grass, for the Vermont Asylum, situated near me, with a view to its systematic cultivation on the lowland meadow belonging to that Institution. The seed was sown about the middle of August, a year ago now, on land prepared for it by deep, thorough plowing, with the Universal double or sod and subsoil

plow. The land had been thoroughly ditched, and drained to the depth of three feet, about five years previously, and was at that time stocked down with herdsgrass and redtop. The wild grasses beginning to appear somewhat, it was thought best to plow it up and seed anew. The land being very rich, and in a good state generally, no manure was applied to it last year, but immediately after plowing, it was harrowed down smooth and fine, and the seed sown and "bushed in." A part of the fowl meadow seed was sown alone, and a part mixed with herdsgrass and redtop seed, each in about equal measure, and the mixture sown on the remainder of the plowed land. I obtained the seed of Nourse, Mason & Co., Boston, and would have been glad of more, but was informed by their seedsmen that two bushels was all the seed the market then afforded. How singular that so valuable a grass should be so little cultivated for seed.

On that portion of the land where the fowl meadow seed was sown alone, the grass has come very well indeed; it is now heading out, and I find it corresponds in every particular with the grass growing about in patches in the interval, and which I had always taken for fowl meadow, judging from the descriptions I had read of it. The grass from the new seeding will be ready for the scythe in a week or two, and is thick and of extra quality. On that portion where the fowl meadow, herdsgrass and redtop seeds were sown in mixture, the fowl meadow has vegetated and grown, as well as the other two grasses, and the whole will soon be fit to cut. It is quite apparent, however, that the fowl meadow is to be the best grass of the three.

This lowland meadow embraces a number of acres, the draining and reclaiming of which I have felt much interested in, and have heretofore quite fully described in the *New England Farmer*. As fast as it becomes desirable to plow and reseed this land again, we intend to stock it down with the fowl meadow grass, believing that to be the most valuable of all grasses for such kind of low moist land.

The fowl meadow grass is not liable to injury from the flooding of the land by freshets. That is a great merit, for these lowest portions of our river lands are subject to overflow, and after a winter or spring freshet, the water not unfrequently remains on the land a week or fortnight at a time; and sometimes before one flood has entirely subsided, another succeeds, and keeps the land wet for three or four weeks. I infer that the flooding is an advantage, rather than otherwise, from the fact that wherever this grass has come in, of itself, it has invariably done so on those portions of the meadow that are overflowed. The fowl meadow grass will last in the land for an indefinite period. The self-seeded patches of it, about in our meadow, have flourished there for a long time, in spite of wind and tide, yielding as full and good crops now as at any former period.

It is universally the impression among our farmers, that fowl meadow grass should not be cut till the seed ripens; that too early cutting has a tendency to enfeeble the roots; and that it perpetuates its hold on the soil by annually shedding its seed thereon. I am not able to speak from positive experience on this point; and

would like exact information from any reader who knows the habits of the grass in this respect. This much I have observed, that the quality of the hay is not at all injured by letting the grass stand till the seed is ripe. The bottom foliage seems to thicken up all the more by delaying the cutting till into August, and it holds perfectly fresh and green till after the heads are ripe. In fact, I have noticed occasional little patches, on the sides of the ditches or in corners of the field, which happened to escape the scythe at haying time, that held perfectly bright and green at the bottom till late in the autumn, or until eaten off by the cattle ranging in the fall feed. I have today been down into the meadow and gathered a handful of the grass, to see the stage of forwardness of the heads, and find the seed sheds a little now. From the first to the middle of August, I judge would be a suitable time to cut fowl meadow, as it usually grows in this interval.

August and the fore part of September is a good time to sow the seed. The land should be plowed deep, with a plow suitable for four or more cattle, so as to have earth enough above the inverted sod out of which to raise a deep mellow surface-tilth, free from sods and old grasses. A moderate dressing of rotten compost would be well, spread on the surface and harrowed in. But if the land is rich and mellow, and well drained, it may do without the manure. After harrowing well, sow the seed liberally—six to eight pecks per acre—and work it in with a bush or light roller, which will give it a sufficient covering. Where land has been recently drained, and is for the first time taken up from a wild, wet state, and is encumbered with hassocks, bogs, and other coarse matters, which need subjection, it might be well to till it for a year or two in hoed crops, perhaps manuring it somewhat for the same; and when thus brought to a suitable fineness of tilth, it might be stocked down in the spring with fowl meadow grass, but omitting the sowing of a grain crop with it, as the grain would choke the grass too much, and prevent its thriving, thus adding nothing to the ultimate product or profit of the land.

So far as I have observed, the fowl meadow grass does not grow in an underdrained bog. It wants moist land, such as a lowland meadow, or a swamp or swale, well drained, so as to relieve the surface of all stagnant or standing water.

The name of this grass is a little unfortunate, inasmuch as most persons, on hearing or thinking about the name, without attending to the spelling of it, get the idea that it is a sort of *foul* grass, of a sour, swaley character. Nothing, however, could be further from the truth, as it makes the very finest and sweetest of hay.

The Rev. Doct. Jared Elliot, in an essay written in the year 1751, gives some interesting facts respecting the origin, habits and qualities of this grass. In Vol. 4, old *New England Farmer*, I find the following extract from his essay. "There are two sorts of Grass, (says the Doctor,) which are natives of the country, which I would recommend; one is *Herd-Grass*, (known in Pennsylvania by the name of *Timothy-Grass*;) the other is *Fowl-Meadow*, sometimes called *Duck-Grass*, and sometimes *Swamp-Wire-Grass*. It is said that *Herd-Grass* was first found in a swamp in Piscataqua, (now Portsmouth, New Hampshire,)

by one *Herd* who propagated the same:—That *Fowl-Meadow-Grass* was brought into a piece of meadow in Dedham, (near Boston,) by ducks and other wild water-fowl, and therefore called by such an odd name. It is supposed to be brought into the meadows at Hartford by the annual floods, and called there *Swamp-Wire Grass*. Of these two sorts of Natural Grass, the *Fowl-Meadow* is much the best; it grows tall and thick, makes a more soft and pliable hay than *Herd-Grass*: it yields a good burden, three loads to the acre. It must be sown in low, moist land. Our drained land, when it is of sufficient age, is land very agreeable to this sort of grass. This grass has another good quality, which renders it very valuable in a country where help is much wanting; it will not spoil or suffer, although it stand beyond the common time of mowing. Clover will be lost, in a great measure, if it be not cut in the proper season. *Spire-Grass*, commonly called *English Grass*, if it stand too long, will be little better than rye-straw: but this *Fowl-Meadow* may be mowed at any time from July to October."

I for one should be gratified if correspondents of the *Farmer* familiar with the fowl meadow grass, would give us the details of their experience with it, and call the attention of our farmers to its cultivation. The draining and reclaiming of bog-meadows, swamps, and other wet and swaley places, and converting them into handsome, productive mowing-fields of the cultivated grasses, is now becoming considerably practiced in New England. I am persuaded that much benefit might be realized to our agriculture, by inducing the farmers to stock their reclaimed wet lands with the fowl meadow grass.

Brattleboro', Aug. 5, 1859.

For the New England Farmer.

OIL SOAPS FOR BORERS.

MR. EDITOR:—An article under the above heading, in your August number, has caught my attention. Perhaps Mr. P. refers to an article of my writing; if so, he may be informed I used common whale-oil soap, worth in New Bedford about eight cents per pound. My manner of using it was to clean the trunks of the trees, from three inches below the surface of the ground to six inches above, perfectly clean of little fibrous roots, loose bark, and every extraneous substance, and after doing so, to rub in the soap in an undiluted state most thoroughly, filling all the worm-holes. I also dug out all the worms I could get at, and those I could not readily reach, I probed with a piece of whalebone.

I don't know when the egg is deposited, but from my observation, it is hatched in the early part of June, near the surface of the bark, and the borers are then most easily destroyed by the application of the soap.

I have discovered but two borers in my orchard since my first application, and several of my trees which were very badly injured, are now completely recovered.

I believe it is three years last spring since I made this experiment which has proved perfectly satisfactory.

NATHAN BRIGGS.

Sippican, Mass., August 8, 1859.

FOOD FOR COWS

We would commend the following article to the perusal of those of our readers who have the care of cows, as it presents many important suggestions to which they will assuredly find it for their interest to attend. With those who are familiar with the writings of M. CHABERT, and with his exalted character and high standing as a scholar, any commendation from our pen, further than to bespeak attention to the subject, would be superfluous.

M. Chabert, the director of the Veterinarian School at Alford, England, had a number of cows which yielded twelve gallons of milk each day. In his able publication on this subject, he observes that cows fed in winter on dry substances alone, yield less milk than those that are kept on a green diet, and also that their milk loses much of its good quality. He published the following recipe, by the use of which his cows afforded him an equal quantity and quality of milk during the winter as during the summer.

Take a bushel of potatoes; break them whilst raw, place them in a barrel standing up, putting in successively a layer of bran, and a small quantity of yeast in the middle of the mass, which is to be left there to ferment during a whole week, and when the vinous taste has pervaded the whole mixture, it is then given to the cows, who eat it greedily."

We are inclined to think the present practices of feeding cattle in winter are far from being strictly economical, and will continue to be, so long as they are fed entirely on crude food—on hay unchaffed, and on roots and grain uncooked. Hay cut and moistened with warm water, and mixed with a very small quantity of rasped roots potatoes, carrots, beets, turnips, parsnips, pumpkins or apples, will go twice as far as when fed in its long state. Beside, the cutting will enable the feeder to use up his rough fodder to good advantage—his stalks, poor hay, straw, &c., and to keep more stock, and in better condition than he could possibly by adhering to the old system of feeding.

Steaming is another means of economizing food, and one which is overcoming the prejudices with which its introduction was attended.

A friend of ours made an experiment by feeding his milch cows for an entire winter upon *hay tea*—tea made by steeping hay in hot water in the same manner that the fragrant leaf from the Celestial Empire is prepared for our social cup of tea.

ERADICATION OF STUMPS.—Where it is necessary to remove large stumps, under circumstances which render it impracticable to avail one's self of the assistance of a "stump machine," the work may be successfully accomplished by burning. This is done by digging under them, filling the cavity with combustible materials, and covering the stump, after firing the materials, with

turf, in the same manner that coal-kilns are covered. The fire will in a short time effect the entire destruction of the stumps—even the long lateral roots—unless the soil is very humid, in which case the burning should be undertaken during the dry weather of summer. If the dirt is excavated a few weeks before the burning is undertaken, the operation will be more speedily effected. The ashes produced by the combustion will afford an excellent stimulus for the soil, and should be carefully applied as soon as the operation is completed. But in all cases where eradication by pulling is practicable, the stump machine should be used.—*Germantown Telegraph.*

For the New England Farmer.

LETTERS FROM MAINE--No. 5.

More Apple Tree Philosophy—Time of Pruning—Close Cutting Best—Why—How Nature Prunes, &c.

In pruning apple trees, in high northern latitudes, too much interference with nature must not be presumed upon. Nature ever strives to keep the proper balance between root and top, and in pruning or grafting it is dangerous to destroy that balance by depriving the top of its leaf-bearing twigs, to any great extent, at any one time. I do not regard the time of pruning as a question of so much importance as some of the correspondents of the *Farmer* seem to attach to it. Probably the worst season for pruning is between the middle of July and the fall of the leaf, as all the leaves are then needed to mature the sap for winter.

Careful observation has convinced me that in pruning, branches cannot be cut too closely. A dead, projecting knot is a dangerous appendage to a tree; as the sap which is left out of the range of circulation becomes soured, and poisonous to the tree, and when forced out of the dead part of the knot by the pressure of the circulating sap below it, it has the effect of coloring the bark black, giving rise to the mistaken notion that sap sometimes bleeds out of the living wood when wounded.

Nature sometimes trims living branches from trees, in the winter by pressure of snow or weight of ice, and in autumn by the weight of fruit on the branches. In both cases the whole knot is split out of the tree, making a large, deep wound, but one which generally heals rapidly, with less injury to the tree than commonly follows sawing off a branch. Nature therefore tells us that if we trim close, the season of the year is of no material importance.

In my fruit culture operations it took me a long time to learn the necessity of a large quantity of leaves. It is true that trimming away half the branches on a growing tree will have the effect of forcing larger quantities of sap into the remaining branches, and compelling them to make a larger growth. But it must not be inferred from this fact that the tree suffers no loss; for, in such instances all, or nearly all the growth will be on the top, the roots remaining stationary till the original balance is restored. Nature's efforts are always directed towards restoring the natural balance between top and root, and depriving a tree of superfluous, leaf-bearing branches—though sometimes necessary—always retards

the extending roots. I offer these suggestions by way of theory. If the theory be correct, the proper practice will naturally suggest itself to the reader. SANDY RIVER.

REMARKS.—We give the opinions of our correspondent as he has written them, not because we assent to all of them, as regards pruning, but because he seems to have given attention to the subject, and it is fair to lay these different views before the reader.

For the New England Farmer.

LABOR AS A CURSE.

MESSRS. EDITORS:—Man is so constituted, that labor enough to supply himself with food, by his own hands, is a condition which is beneficial to his health. We read in Genesis, that the "Lord God took the man and put him into the garden of Eden, to dress it and keep it." Does not dressing and keeping the garden imply labor? It does not seem that Adam was formed to live an idle life, as those who "place bliss in ease" understand it, but to take care of his garden like a good horticulturist. This took place before his fall, and of course there was no curse implied in his being located in Paradise to labor for his living.

There appears to be a palpable misunderstanding among theologians and others, about labor being inflicted on man as a curse for disobedience; I can put no such construction upon the verdict of the Almighty pronounced against Adam for his sin. God said, "Cursed is the ground for thy sake;" "in sorrow shalt thou eat of it all the days of thy life." "In the sweat of thy face shall thou eat bread till thou return unto the ground." Now, if any living man, with all his sophistry, can make it appear without doing violence to language, that labor was inflicted on man as a curse, let him shew himself with his evidence. All men are laborers, or ought to be. What is an idle man, rich or poor, more than a clam or snail? Mankind were designed for action, to fill different stations and work at different occupations; some are fitted to labor mentally, and others physically; there is as much necessity for the former as the latter; one class may be deficient in muscular power and endurance, and be well qualified for planning, while another class, with strong bones and muscular frames that defy fatigue, can execute what was not in the power of the other to perform. In New England, there are two classes of manual laborers; one class design and execute, which embrace a greater portion of our agricultural population, the other class are professed laborers who depend upon the income of their labor for a support. This latter class are practically the sinews of the country. What could old folks, lazy folks, sick folks, rich folks and other folks do, without this sturdy class of our practical population? It contains males and females of as good minds as any in the community, and their circumstances are often owing to causes which would not have disgraced any honest man.

The lucky aristocratic gambler, and conceited foppish student, may sneer at the laboring man,

who is in reality of more value to the world than a cart-load of such coxcombs. Labor, as a health-improving exercise, is of more importance to the sedentary dyspeptic than all the medicine in the world. Three hours of manual labor a day would be a good as well as economical substitute for a voyage to Europe, or the West Indies, for sedentary gentlemen, who are troubled with bronchitis and ill health for the want of exercise. It appears that Saint Paul was an industrious man who "labored with his own hands." We read of his perils by sea, and perils by land, but do not read of his voyages to foreign lands as a remedy for inaction, his object being to enlighten the ignorant, reform the vicious and spread the gospel. Paul said in one of his epistles, "This we command you, that if any would not work, neither should he eat;" so it appears that he showed as little favor to idlers in any situation as any of our modern teachers. SILAS BROWN.

North Wilmington, 1859.

For the New England Farmer.

WHY DON'T THAT ORCHARD BEAR?

A correspondent of the *Farmer* inquires why his orchard, the trees of which have attained a large size, will not bear fruit? I do not presume to know the reason, but wish to suggest a fact or two which may bear upon the question. Trees bear soonest, and bear best, where the branches are nearest horizontal in their position. Leaning trees and crooked trees, I think, will be found to be the earliest and best bearers. The reason is, the directly upward flow of sap favors growth of wood and leaves, but not the secretion of matured material for the germ of the fruit bud. The flow of sap is an electrical phenomenon, and those who are familiar with galvanic experiments will see at once why the secretions from the sap are thus affected by position. There is generally a correspondence between roots and branches in point of position. Trees set too deep in the soil, produce a watery, unmaturing sap, and trees set in a soil where the roots strike deep, will be likely to have tops with nearly perpendicular branches, and consequently prove unfruitful, till the size of the tree compels the branches to assume a more nearly horizontal position. Let our friend try the experiment practised by European orchardists, of bending down, and confining in a drooping position, some of the branches of his unbearing tree. J. S. SWIFT.

Farmington, Me., Aug., 1859.

CHAFING UNDER THE COLLAR.—A gentleman who has tried the plan successfully for five years, communicates the annexed method of preventing horses from chafing under the collar. He says, he gets a piece of leather and has what he terms a false collar made, which is simply a piece of leather cut in such a shape as to lie, singly, between the shoulders of the horse and the collar. This fends off all the friction, as the collar slips and moves on the leather, and not on the shoulders of the horse. Chafing is caused by friction, hence, you see, the thing is entirely plausible. Some persons put pads or sheep-skins under the collar; these, they say, do as much hurt as good, for they augment the heat. A sin-

gle piece of leather, like that composing the outside of a collar, without any lining or stuffing, he assures us, is better than anything else."—*Boston Journal*.

RUNNING AND TROTTING HORSES.

A writer, over the signature of "Hiram," in the *Spirit of the Times*, thus alludes to the distinction to be observed between running and trotting horses. He says:

I think it has been fully shown, by good authority, from experience in crossing the ass with the horse, that the sire gives the external form; although the mare brought the seed to life and perfection, still the creature to all outward appearance, is an ass; I contend, in order to have a good running animal, you must have a good running form, and to have a good trotting horse, you must have a good trotting form. I know, also, that there are exceptions to all general rules, and that horses trot and run in all forms; but that does not reach the case, or if it does, it makes no difference what we breed from, as far as form is concerned, for I hold that the form of a full-blooded running horse is directly the reverse of a trotting horse in many respects—some of them I will here notice. The legs, for instance, of the running horse, from the body down, should finely taper, with long yielding pasterns, high-reaching loin, and a long, small neck, and may be yewed at that. Now I hold that the above qualifications are essential to the running horse of good blood, and diametrically opposed to a good trotting horse. I will now give you what I consider the qualifications in the form of a good trotting horse, opposed to that of a running horse. His leg should be strong, holding its size well to the hoof, short, straight pastern, going from the leg into the foot, loin well filled, gently descending from the coupling to the withers, which should be thin and well raised, with a strong, well-proportioned neck, not too thick and chunky.

TO PREVENT CATS KILLING CHICKENS, &c.—Miss Harriet Martineau, in the new London paper, "*Once a Week*," is publishing a very interesting series of sketches entitled "Our Farm of Two Acres,"—in one of which sketches she gives the following as a sure preventive against the killing of chickens or birds by cats:—"When a cat is seen to catch a chicken, tie it round her neck, and make her wear it for two or three days. Fasten it securely, for she will make incredible efforts to get rid of it. Be firm for that time, and the cat is cured. She will never again desire to touch a bird. This is what we do with our own cats, and what we recommend to our neighbors; and when they try the experiment, they and their pets are secure from reproach and danger henceforth. Wild, homeless, hungry, ragged, savage cats are more difficult to catch; but they are outlaws, and may be shot with the certainty that all neighbors will be thankful."

LETTER FROM MR. BROWN.

Attleboro', Mass., Aug. 10, 1859.

MESSRS. NOURSE, EATON & TOLMAN:

Gents:—I was called here this morning to look at a farm with a view to its permanent reclamation, including a thorough system of underdraining. It belongs to a family, one of whom is a clergyman settled over a parish in Worcester county; two other sons are merchants in New York city, while a fourth, with an aged parent, abides at home to guide the plow and feed the kine, to subdue the waste places and make them teem with fertility, and blossom as the rose, and himself to remain one of the Kings of the soil, a position no less dignified, useful or honorable than his brothers have selected, and one of a class to whom the country must always look for defence and support in time of trial, and for those productions which go to make up the wealth of any nation.

With a discriminating judgment, and with great good sense, the minister and the merchants concluded to invest liberally of their surplus *in the soil*, not only with the hope that profit would come out of it, after many days, but that the homestead might be made attractive and beautiful, where themselves and their children could annually return and breathe the sweet odors of new mown hay, of the fresh flowers that nod over the babbling brook, and hear the familiar sounds that closed in the calm evenings, or woke the bright mornings of their early years. The same sound judgment that led them to these wise conclusions, also prompted them to apply to practical men for advice. I referred them to a strictly professional man, but they elected to abide by my decisions, and hence my reason for dating from this thriving and pleasant town.

The farm contains many natural advantages—has a sandy loam upland, beautiful meadows at the base of gentle slopes, and a cold, springy, rocky and repulsive pasture. But the outlets of the water-courses, and the indications given by the character of the vegetation which everywhere met the eye, left no doubt on my mind as to the course that ought to be pursued; so the lines were laid down, the principles of the process discussed and enforced, and diagrams of the whole plan were made of the rushes which grew luxuriantly upon the spot, and placed upon the ground under the shade of an old apple tree, showing the direction of the lines, their distances apart, and giving a distinct illustration of the whole thing.

I felt confidence in assuring my friends that one acre of the pasture reclaimed, would supply as much feed, and of a more nutritious character, than five acres now does, and that \$50 per acre expended upon it, would give one of the safest

and most permanent investments they had ever made.

The farmer is receiving essential benefit from the operations of men engaged in commercial or professional life. If this project, for instance, is faithfully carried out, and is successful, it will afford a valuable example to the hard-working farmer, who feels as though he cannot engage in any enterprise where there is danger of loss,—and this feeling he will naturally have until he has experimented, or seen repeated trials by others. I have no more doubt of good results than I have of the most certain thing that has not already transpired.

I have been delighted with my visit here; not, especially, with anything very new that I saw in the cultivation of the soil, or of marked excellence in buildings, stock, or implements, but in the pure tone of feeling and the sweet affections that exist in country life. Here were gathered portions of four or five families from various sections and occupations. They had come back to the old homestead to visit the scenes of earlier days, to renew and strengthen fraternal attachments, and, by occasional intercourse, perpetuate them to the end.

The twilight had gradually given way to the deeper shades of night, and the peculiar sounds of an evening in the country were hushed—the plaintive note of the whippoorwill had ceased, (for his time of mating and loves had gone by, though he still lingered in his accustomed places,) when the family all came from their respective duties and “sung a hymn.” Then rose the clear and affectionate thanksgivings and petitions of the minister; to Him in whom we live and move and have our being. He plead for the “stranger” that was within their gates, and for his profession, that it might be blessed and prospered, and made fruitful in the earth. None were forgotten, the aged, middle-aged and the young.

How is it possible that blessings shall not rest upon such a household, and that peace shall not remain with them to the end?

Truly yours, SIMON BROWN.

PRESERVING GRAPES FOR WINTER.

While grapes may be grown in such profusion and with so little labor, it is a little remarkable that a supply for every household in the country is not secured, not only in the regular season of them, but to last until spring. There is no trouble in keeping grapes through the winter as fresh as when they are first gathered. In seasons when other fruit is scarce, no greater luxury can be enjoyed than a dish of fresh grapes in winter.

In gathering grapes for keeping fresh, they should be allowed to hang on the vines until they are fully ripe, and then gathered with care, to avoid bruising. The fairest bunches should be

chosen to put away, and with a pair of small scissors all defective and bruised berries should be cut off. They should then be placed in boxes well ventilated, and remain for a few days, when they should be packed in boxes holding six or eight pounds each, first sprinkling the bottom with a layer of mahogany saw-dust, or what is better, turning chips, then a layer of grapes, and then saw-dust alternately to the top. It is not important that the box be tight, it is better that it should not be. These should be put in the coolest place in the house, where the air is dry. On the approach of freezing weather they may be removed to upper shelves suspended in the cellar, or in any dry room where the temperature is as near the freezing point as possible. Some recommend cotton batting in place of the turning chips, but we have always been most successful with the latter.

A most valuable addition to our old stock of grapes has been made in several new varieties. Some of them are well suited to the various latitudes of the United States up to the 43d degree North.

Every homestead should have its half-dozen vines, at least of the kinds best suited to the locality—trained to the out-houses, where they occupy no room. These, if taken care of, will afford an abundant supply for the family during the grape season, and leave a good store for winter.—*Valley Farmer.*

MANURING GRASS LANDS.

In no department of farming is there a more radical call for improvement, than in the management of our meadows and pastures. Good grass crops are at the very foundation of good husbandry. Land which will produce these largely, will produce grain, corn and roots—will sustain a good proportion of stock, and thus furnish within itself the means of keeping up and improving its fertility. These assertions are seemingly so self-evident, that we must beg pardon of the intelligent reader for referring so frequently to the subject. And yet the intelligent reader who looks, perhaps, over his own farm, certainly on the farms around him, will see that no word is out of place, which can attract attention to the question before us. We shall now remark simply on top-dressing meadows—the present being a favorable season for the operation.

For improving the yield of grass, and adding to the permanent fertility of the soil, we cannot do better with our fine manure, than to apply it after haying as a top-dressing to dry land meadows or pastures. It will give new vigor to the growth of grass, and increase the thickness of the sward, so that even were it to be plowed the next season for a grain crop, the manure could not be better timed or applied. For meadow or pasture the product would be largely increased both in quantity and quality. On wet land, draining should precede the application of manure, as no great benefit can be gained from manuring a soil saturated with water during the wet seasons of the year.

On loamy soils the different composts of muck with manure, ashes, lime, guano, etc., will be found valuable, and an addition of plaster to the compost cannot well come amiss. For mucky

soils, manure composted with loam or clay will be appropriate, and these alone—as is the case with muck on upland—will be found a valuable means of improvement. Bone manure, when it can be procured, is an extremely valuable fertilizer for grass, and no farmer should neglect to employ in a broken state, all the bones within his reach upon the farm.

We have seen an account of an experiment where dry straw spread thinly over the surface of a meadow, after haying, produced a large increase in grass—acting, perhaps, as a sort of mulch to the roots, preventing the effects of drouth, adding also a light manuring as it decayed. Turf ashes act very beneficially upon grass land, and some farmers use them largely as a top-dressing for meadows.—*Country Gentleman.*

For the New England Farmer.

CORN-STALKS---POLLEN---SUCKERS.

In the *Farmer* of July 30, there is a communication from Mr. J. M. Ives, on the practice of cutting corn stalks—it appears to me like good sense. I cut the tops from my corn.

Every farmer ought to recognize one great truth, that there is an economy, wise beyond conception, in the Great Producer, that what appears to us superfluous in plants is not so in fact. The effort of everything is to produce its own kind with the least waste. There must be a sufficient amount of leaves and stalks to receive atmospheric influences before the great work of producing seed is done; when this is finished, and the plant comes to maturity, all the seed-making elements leave the stalk and concentrate in the seed.

I have said to some of my neighbors that grass did not grow, (in one sense,) for his horse or mine, but to produce seed and drop it—when that is done, the stalk is straw, and the man that cuts it after the seeds have matured gets straw. I try to cut it when the seed-producing elements are in the stalks, just before it can drop out. If we want the seed of corn in its greatest perfection for planting, we must let the stalks, suckers and all turn to straw.

I love to contemplate the growing corn, “first the blade, then the ear, after that the full corn in the ear.” The main spindle runs up and drops its pollen, so that the slightest puff of air will shake it out to the beards below. If the earth can produce more, the corn suckers and will have one ready just in time with its golden dust to fructify two inches more of the ear; if there is greater fertility, another will be in time, and beards will continue to push out for additional length, and so on until the ear is full of corn. If we see suckers starting freely from the young corn, we may expect long ears—if without suckers, short ears and smuted.

A widow employed a faithful Irishman to do the work on her place. He planted corn too close in a very rich and confined place—it ran up tall. Michael, to let in the sun, cut the stalks as they were on the point of dropping their pollen. I passed it daily, and was much interested in watching the result. The beards came out and pited around the top of the ear like a bunch of curled hair, and there remained for about fifteen days in

the scalding sun of a confined place, fresh as the day they came out. Now the whole energies of the corn were put forth to produce suckers to rectify the mistake, and it did work lively, for in the time mentioned above, it got them out and dropped pollen on patient waiting beards, every fibril was fructified at about the same time, for they were all out waiting, and the corn went on with its work, and it being a good season and a warm place, there was tolerable corn in spite of Paddy.

CALEB BATES.

Kingston, Mass., Aug., 1859.

EXTRACTS AND REPLIES.

THE STAR-NOSED MOLE.

Perhaps you, or some of the correspondents of the *Farmer*, can give information in regard to the name, habits, &c., of the animal I shall mention. A few mornings since I picked up in the barn-yard, a little animal dead. It bore the appearance of being killed by a cat. At first sight I supposed it to be the common mole, but further examination proved it to be different. Its body was plump and round, about 5½ inches from nose to end of tail. Tail stout, 2½ inches long, and sparsely covered with coarse hairs or bristles; hind legs similar to those of a mouse, but stouter; forward organs of locomotion were two large flat feet, in shape like a man's open hand; these were joined to the body without any arm or leg, quite widely separated. Head and snout like a hog, and around the circumference of the snout were numerous cartilaginous joints, one-eighth inch in length, pointing forward; could discover no ears; eyes very small, small as a pin head, black and deeply sunken, teeth very small, one convex, one in front upon both upper and lower jaws. Body covered with fine, thick, glossy black fur.

ALBERT WHEELER.

Somerville, Mass., 1859.

REMARKS.—The animal described above was, undoubtedly, the “Star-Nosed Mole.” It is not uncommon in most parts of New England, but spends most of its time underground.

REMEDY FOR GARGET IN COWS.

In your August number, E. P. Chase, of Deerfield, N. H., over date of June 18, says:—“I have found horseradish, cut and fed in potatoes the same as garget root, a good remedy for gargety cows.” I have found potatoes without the horseradish root a good remedy for the garget in cows, when fed liberally to them. The disease known as the garget is but an inflammatory action, more or less general in the system, and in cows the udder is usually more deeply involved in the difficulty than any other part of the system, because it is more sensitive, and more easily inflamed. What is usually called garget, when the udder is swollen, is but seated inflammation in the suffering part, and any food calculated to produce a free discharge from the intestines and reduce inflammation, is serviceable to the animal. In severe cases of inflammation in cattle, whether general or local, I have used, with good success, the hydrate of potash, one ounce dissolved in three pints of water, and given from one-third to one-half of a glass

two or three times in a day, as the condition of the animal required.

J. G. W.

Aug. 6, 1859.

HOW TO MAKE PICKLES.

When cutting from the vines, leave half an inch of stem attached to the cucumber; pack them in a stone jar, being careful not to break the little prickles which cover them; add sufficient vinegar to thoroughly immerse the whole, and repeat the process from day to day till you have obtained the quantity you desire; then add a small bag of mustard-seed and cloves, covering the whole with horseradish roots, scraped and split into small pieces. Should any traces of a scum appear, add more horseradish immediately, as a good supply of that is a sure preservative, and "A Lover of Good Pickles" will find them as nice at the end of two years as one.

Please inform me where I can obtain the full information with regard to the cultivation and varieties of strawberries.

A FRIEND.

Concord, N. H., Aug., 1859.

REMARKS.—You may find a little work on the cultivation of the strawberry, at the bookstores, by R. G. Pardee.

CURE FOR A BREACH.

Take a piece of half inch board, about the size of a man's hand, round off the corners, and line the side next to the colt with lamb's skin with the wool on, to prevent chafing the breach; attach this to a soft surcingle, and buckle it closely around the colt, with the board directly over the breach—then attach two soft cords to the back part of the board, passing them through between the hind legs, and fasten one of the cords to a girt on one side of the hip, and the other on the other side, which will keep it to the place. Wet the wool twice a day with strong liquor of white oak bark. This will effect a cure in three or four weeks.

A. BRIGGS.

Deerfield, Mass.

APPLES AND PLUMS.

Will fruit and plums improve in size and quality by removing the tree, bush or vine upon which it grows natural or wild, to a warmer climate?

A SUBSCRIBER.

Haverhill, N. H., July, 1859.

REMARKS.—They would be quite likely to, if all other things were favorable.

For the New England Farmer.

COLLECTING CREAM AND CHURNING.

I agree with those of your correspondents who say that white specks are caused by dried cream, formed on the top of the milk by exposure to a current of air in dry warm weather—I say *dry* weather, for this crust is never formed in damp weather—neither am I ever troubled with specks in damp weather; I do not say that sour milk is never found in butter, but it is seldom the case where cream is properly cared for, and sour milk is not adhesive, and easily removed from the butter by washing. Any one can decide as to the nature of the specks by experiment; the

specks formed by sour milk will not rise on water, but those caused by dried cream, will be found on the water after washing the butter. I have proved them to be cream by simmering them to oil, and by other experiments. I think where milk is kept from direct exposure to the air, you will not be troubled with them if the dairy is properly attended to. I will just say that uneven salting is always the occasion of striped butter. I always churn often, whether I have more or less cream.

A READER OF THE FARMER.

Waterbury, Vt., July, 1859.

EDITORIAL CORRESPONDENCE.

VISIT TO MONTREAL.

Montreal, L. C., Aug. 18, 1859.

MESSRS. NOURSE, EATON & TOLMAN.

Gents:—I came here to attend a *trial of agricultural machinery and implements*, projected by the progressive spirit of the Lower Canada Board of Agriculture. The trial has been continued during three days, on the farm of JAMES LOGAN, Esq., three miles from the city. The machines and implements presented were not numerous, and full one-half the whole were from the States. There were some six or eight mowing machines, nearly all of them different modifications of the Ketchum and Manny, four or five reapers, including one with a self-raking attachment,—that is, to rake the grain from the platform of the machine into bundles—some hay-rakes, one tedding, or hay turning machine, three stump pullers, several threshing machines, root and hay cutters, quite a collection of plows, a few harrows, &c., &c.

The mowing machines were set in motion on Tuesday, and operated well. The Ketchum, with Nourse, Mason & Co.'s modifications, cut its acre in 38 minutes; Wood's Manny in 49 minutes, and Moodie's Manny in 52 minutes. The field was level, but laid into beds of only ten feet in width over its whole extent. The grass was second crop clover, and about a ton to the acre. Moodie's machine lost a pin and was detained a few minutes, and Nourse, Mason & Co.'s caught a stone which bent one of the teeth, detaining them six minutes. Wood's Manny, with two wheels, worked steadily, and did it with apparent ease for a pair of horses of less than twenty hundred. The reapers also did good work, if cutting a *large proportion* of the grain and gathering it into bunches may be considered good work. The self-raking reaper cut an arpon, or French acre, which is a little less than our acre, in 29 minutes. The other reaper required a man to ride on it and remove the grain at intervals with a fork, and occupied more time. Neither of the reapers collected the grain sufficiently to make careful raking, either by horse or hand, unnecessary. No clean and careful cultivator would think of

eaving so much upon the ground as I saw remaining after the grain was tied into bundles. If these trials were fair examples of their usual work, the necessity for raking after reaping will prove a considerable drawback upon the usefulness of the machines. It was wonderful to see the self-raker cut down a very heavy barley crop at the rate of an acre in 29 minutes, and claw it from the machine and lay it in bunches ready to be tied up!

The trial of plows attracted much interest, and was going on through two days. The plow-field presented to me an original scene. The judges were composed of portions of the English, French and Scotch population,—while to these were added among the competitors and spectators, the Irish and Italian. Of course, there was a Babel of languages—but nearly all were masters of two tongues, the French and English, and I observed that when two persons met, both speaking English well, and became earnest, they grew eloquent in French,—while those not caring a snap for the decalogue, when they wanted to give a peculiar unction to their expressions, “swore worse than our army did in Flanders,” in pure English. How is this? Has the French language more power in the expression of *feeling*, and the English in *denunciation*, that the common people resort to one and the other at will, or did my imperfect knowledge of the French fail to catch monsieur’s vocabulary of oaths? But the queerest of all, was, when the impassable and pertinacious Scotchman came in contact with the lively and voluble Frenchman, both resorting to common English ground, and discussing the merits of their favorite implements. I shall give no example—it would require the full power of the ablest philologist in the land to do it justice.

Nearly all the land in this region is a clay loam, and therefore does not call for so extended a variety of plows as New England soils. Still, one form of plow will not do good work in all places here. Most of their plowing is done in the *lap furrow* form. For their grain crops they plow in August and September, and leave it until spring—then sow upon the furrow and harrow afterwards. I suppose they must harrow across the furrows, because the grain seems to grow in lines, as though the seed had fallen into the channels on the edges of the furrows. Most of the plows of the country presented were the Scotch—all iron and about ten feet long! The beam is short, curved and graceful; the point very long and slender, the handles some five feet in length, ending in short wooden pieces—sometimes of mahogany—for the hands. I saw several of them at work. They require a stout pair of horses, who move very slowly, plowing only one acre each day and that rarely more than six

inches deep. A Scotchman at my side inquired,—“How much is your average day’s work?” I replied,—“With such a team, on similar land, and with one of our plows adapted to the soil, we should plow two acres at least, nine or ten inches deep, being ten hours in the hooks; and that in a cool day and everything favorable, two acres and a half were not an uncommon day’s work.” The Scotchman did not say that he was incredulous, but his nationality would not allow him to yield. “Ah,” said he, “but ye canna do it so weel as we.”

The English and Frenchmen saw graces and virtues in the American plow that did not commend themselves to the Scot. They clustered around the neatly-made and symmetrical plows from the house of Nourse, Mason & Co., and scanned their work with evident interest and satisfaction. Mr. HOLBROOK, of Vermont, was present, and upon a call from the chairman of this department of the trial, put several forms of his mould-board “through their paces,” and briefly explained, to the members of the Board and spectators, the principles upon which they were constructed, and why the varying soils require differently formed mould-boards. The gentlemen composing the Board, and the intelligent farm-managers who were present, gentlemen who own and direct the affairs of large estates, but do not labor with their hands, seemed to appreciate the force of his remarks, and I subsequently learned that the judges awarded to the Universal Plow their highest prize, though not as a plow coming in competition with others.

Perhaps no part of this field trial proved so satisfactory to our Canadian brethren as that of the plows; they did not hesitate to express in warm terms their obligations to the States men for coming so far, and contributing so much to advance the cause they are striving to promote.

Several threshing machines were on trial, all working well, and one of which threshed and cleaned up the grain from 100 sheaves of wheat in 8½ minutes.

Three stump pullers were tested, and one of them, introduced by Mr. GEORGE KENNY, of Milford, N. H., bore off the palm, and proved itself an implement of astonishing power.

Yours truly,

SIMON BROWN.

DITCHING MACHINE.—The Executive Committee of the Illinois Central Railroad Company, offer \$500 for the best ditching machine for open ditching. The party claiming the offer must exhibit the practical working of the machine at the same places and times with the steam plow, and the Company above mentioned will transport the machine over their road free of cost.

For the *New England Farmer*.

THE AMERICAN ROBIN.

FRIEND BROWN:—Perceiving your great fondness for birds, and love for the beautiful in nature as well as in things of art, and being aware, also, of your willingness to allow free discussion upon all subjects that relate to agriculture and horticulture in the *Farmer*, I venture to offer a plea in behalf of the robin.

In the issue of June 4th, a correspondent remarks, "I do not see as any of the advocates for the preservation of robins advance one idea in their favor, except their singing; no injurious insect do they prove that they destroy. I will admit that for fructiferous birds nature requires some animal food, but the robin never takes any except the angle-worms, where they can be found."

This is a strong assertion, but as he says of the "advocates for the preservation of the robins," proof is wanting to confirm the assertion that "the robin never takes any (insects) except angle-worms." As an advocate for the robin, I will furnish facts of a recent date given by Prof. Jenks, employed under the patronage of the "Massachusetts Horticultural Society."

The plan adopted for the investigation of this subject required that robins should be obtained at day break, mid-day and sunset, both from the village and the country, that their crops should be examined and the contents thereof preserved in alcohol. Beginning with the first week in March, this investigation was continued almost daily until December. Not a particle of vegetable matter was found down to the first of May, but insects in great abundance, both as to quantity and variety of species, for the robin is a voracious eater, as confirmed by an experiment made in Cambridge, last season, which was published in the papers. Nine-tenths of the food during the time indicated, consisted of the larvæ identified as *Bibio allipennis* of Say, as confirmed by Dr. Fitch, of New York, and a Russian entomologist in Washington. From one hundred to two hundred of these larvæ were frequently taken from a single robin, and were usually the only food found in the crops.

Thus did Prof. Jenks demonstrate that the robin consumed daily during March and April, from one hundred to two hundred *Bibio* larvæ, thus rendering an incalculable service to the tillers of the soil. The robin seems to be peculiarly fond of these worms.

The *Bibio* larvæ were not seen after the first of May, from which time to June 21st a variety of insects and worms were found, including spiders, caterpillars and beetles of the family *Elatevidæ*, the propagators of the wire-worm, so destructive to corn. The earth-worm, or angle-worm, as it is also called, was found to be a favorite kind of food for the young, but sparingly eaten by the parent birds.

From June 21st, strawberries, cherries and pulpy fruits in general were found, but in a majority of examinations, were intermingled with insects. Those shot remote from the garden and fruit trees were found to contain more insects and less fruits, leading the Professor to conclude that "the robin is not an extensive forager."

The mixed diet of the robin was found to con-

tinue until October; the vegetable portion, during August and September, consisting chiefly of elderberries and pokeberries. During October, grasshoppers and orthopterous insects generally furnished the diet of the robin.

Early in November, the robin migrates to the South, and even earlier, most of them. Some of them, however, remain through the winter, subsisting on bay-berries, privet-berries, juniper-berries, mountain-ash-berries, &c.

After such an exhibition of facts in confirmation of the robin's habits, may it not be hoped that its accusers will no longer persist in asserting that the robin eschews all insects and worms, except angle-worms, which your correspondent says he "gulps down as if he loathed it, like a child taking Epsom salts," and "only to gratify his vicious destructiveness." The cowardly robin, it is also said, "locates near dwellings," interfering, it would seem, from the remarks of your correspondent, not only with the fruit business, but the traffic in angle-worms, whose "standard price" in certain localities is "one dollar a gill." These would be strong reasons for repealing the law, for protecting birds, including the robin, were it not that there are many more, and much stronger reasons for its preservation, in view of the incalculable good which it does.

He who seeks for good, unmixed with evil, in the things appertaining to this life, I fear will look in vain. Before pronouncing sentence of utter condemnation upon a neighbor, or a robin, because a sinner, on the one hand, and a fruit-eater or poacher on the other, let the question be mentally put, "Who am I, that thus condemneth because of evil?" Let him that is without sin cast the first stone. Weigh the good and the evil, and see if the former does not preponderate in general, and with regard to the robin in particular.

CHARITY.

LETTER FROM MR. BROWN.

MONTREAL lies on the west bank of the St. Lawrence, which is nearly two miles wide opposite the city. It is narrow, but stretches along the bank of the river for a long distance, and contains a population of some 80,000 souls. This population is greatly mixed, and each class is ever striving to make prominent and perpetuate its own national characteristics in customs, manners and language. The struggle, however, is between the English and the French—there lies the tug of war. Their differences often find expression, and will eventually lead to a distinct local government, in the two provinces of Lower and Upper Canada, probably, before they are known as the *State of Upper Canada*, and the *State of Lower Canada*. The feeling strongly prevails with many intelligent persons, that the Canadas will yet become a part of the cluster of United States.

The buildings in the city are mostly constructed of stone, and the dingy walls, full of crevices where the plaster has been washed or knocked out, together with the open cellars and blar-

walls where buildings have been destroyed by fire, give the city an unthrifty and dilapidated appearance. The streets and sidewalks are narrow, and there are few shade trees to temper the solar rays or the parching radiation from the heated stones. The commerce of the city is inconsiderable, though the quay or single wharf extending all along the easterly side of the city, presents at certain seasons quite a lively appearance of business. The prevailing religion is Catholic, so that there are numerous nunneries convents and churches belonging to that sect. The Great Cathedral, with its bell weighing more than twelve tons, and its turrets 250 feet high, is always open, where its votaries assemble, bow and cross themselves, and utter their Ave Marias with all seeming fervor and unction. A thousand things constantly indicate that I am not among *my* people—the language, dress, coins, implements of industry, the presence of soldiery, the carriages, and especially the carts and vehicles used for conveying loads. Last evening I was wondering how they could place a hogshead of molasses on one of their drays, but, while leaning over the iron railing on the quay this morning, the mystery was solved. This dray is made of two pieces of timber, each perhaps fifteen feet long, six inches wide and three thick; these are set edgewise about eighteen inches apart, on a pair of common horse cart wheels; the shafts are long and slender, and attached to the end of those pieces next to the horse by a round iron bar which forms a hinge. In preparing to load a hogshead of molasses the hind end of the long pieces is depressed so as to touch the ground. One end of a rope is then made fast forward and brought back under the cask. Another dray is then backed up, the rope attached to it and the horse started. In this way the hogshead is rolled to the centre, or over the axle-tree, is then canted round endwise, and is ready to be driven off. In unloading, the dray is tipped up as in loading and the cask slid off. This operation required the aid of six men and two horses to load each cask. Only one cask was placed upon each dray.

There is another class of the population that I have not mentioned—that is, Indians. How numerous they are I have not learned. The women and girls frequent the hotels to sell their bead work; one of them touches my shoulder now to call my attention from writing to her basket of wares. They are generally tolerably well clad, and are modest, but not graceful in form or motion. It will not be long before these sons and daughters of the forest will be lost amid the other races that are rapidly whelming over them.

Some of the places of interest to which the attention of the traveller is called in this city are the French cathedral, the Bonsecours and St.

Ann's Market, the Grey and Hotel Dieu Nunneries, the Convent of the Sisters of the Sacred Heart, the Academy of the Sisters of the Congregation of Notre Dame, the Theatre Royal, Champ de Mars, &c. In one of the public squares stands a dilapidated monument to Nelson, England's great naval hero, who received a fatal shot at the battle of Trafalgar. The Lachine canal is a fine work, but the *Great Victoria Tubular Bridge*, across the St. Lawrence River, *one mile and three-quarters in length*, is the crowning work of art and science combined, perhaps of this or any other country. I had the pleasure of walking through nearly a mile's length of the tube that is now finished. The tubes are 22 feet high and 16 feet wide, giving room for two tracks. Every part of the bridge is iron, resting upon piers constructed of a marble stone brought 20 miles from the interior. One of the spans between the piers is 330 feet in length, and the top of the tube is 82 feet from the water! There is nothing whatever to support this but where it rests upon the pier at each end, and then its own sustaining power. The engineers and builders of this stupendous work are Messrs. A. M. Ross and Robert Stephenson, of England. It is estimated to cost \$7,000,000.

The citizens of Montreal ought to be a very pious and exemplary people, for they are surrounded by the *names* of saints, at least. Almost everything bears the name of some patron saint—the river, churches, convents, nunneries, charitable institutions, streets, lanes and markets. St. Michael, St. Paul, St. Patrick and St. Ann, with others, more than I ever supposed were contained in the calendar, are emblazoned pretty much everywhere except on the lamp-posts and paving stones! I have just been through the principal markets, and find them well supplied with meats and vegetables.

In closing my letter, it affords me pleasure to acknowledge my obligations to the President and members of the Board of Agriculture for kind attentions to our little party "from the States," including JOEL NOURSE, Esq., of Boston, and the Hon. F. HOLBROOK, of Vermont, and to give their names and address permanent record in your columns as follows:

J. O. A. STURGEON, President.....	Terrebonne.
E. J. DELLOIS, Vice President.....	Quebec.
JOHN YULE.....	Cham bly.
Major CAMPBELL.....	St. Hilaire.
J. C. TACHE.....	Quebec.
P. E. DOSTALER.....	Berthier. F. E. H.
B. POMROY.....	Compton.
R. N. WATTS.....	Drummondville.
J. PERBAULT, Secretary Board Agriculture.	
T. CHAGNON, Assistant Secretary.	

I also found pleasure in meeting an old acquaintance, the Hon. WM. McDUGAL, M. P. P., and former editor of the *Farmers' Journal*, at Toronto, and in becoming acquainted with JAMES

ANDERSON, Esq., editor of the *Journal of Agriculture*, Montreal, and with WILLIAM EVANS, Esq., of St. Ann's Market, Seedsman, &c. Mr. Anderson is greatly interested in the subject of drainage, drew the act that is now in force in Scotland, and got it through Parliament, and was for a long time the Inspector General of Drainage in that country.

Truly yours, SIMON BROWN.

For the New England Farmer.

THE CUTTER STRAWBERRY.

This is a day of new things, and it is common to hear of a new strawberry better than all of its predecessors.

This is a variety of strawberry not generally disseminated, and but little has been published about it. It was first taken from the wild pasture, and is a native seedling. I named it Cutter, in honor of the gentleman who first cultivated it, some six or eight years ago. It is of excellent quality, possessing the wild strawberry flavor largely. Berries of very even size, many of them four inches in circumference; color, light red; form, obtuse cone, with a neck; easy to hull; fruit stems very long.

I gathered fruit from the plants in June and July last for thirty-five days in succession, or eight to fifteen days longer than the other varieties cultivated on the same soil, and precisely the same cultivation; the Hovey Seedling, Boston Pine, Jenny Lind and Early Virginia. The two last-named varieties were of small size. The two former produced some very large berries, but as a whole, were of very uneven size. None of them produced so much fruit by at least one-half as the Cutter.

I had partly covered with strawberries about one-fifth of an acre, on which was an orchard of apple trees, some of them four inches in diameter; 150 grape vines, part of them in bearing; 130 currant bushes in bearing; 50 hills of rhubarb of the improved sorts, walks, &c. About one-third of the ground was planted with the Cutter, the other two-thirds was occupied by the afore-mentioned kinds. The plantation produced 500 boxes or quarts. Had the whole ground been occupied with the Cutter 600 quarts would have been a fair estimate, considering their relative bearing qualities.

My soil is sandy loam and gravel. I prefer leached ashes as a fertilizer, well mixed in a deep mellow soil. It will pay to make the soil two feet deep. August and September is a proper time to set out the plants, and if so set, much fruit may be obtained the following year.

I have Wilson's Albany, Longworth's Prolific, McAvoy's Superior, Scott's Seedling, Peabody, and Brighton Pine. All of them are growing well, but have not fruited much, having been planted in the spring.

The Cutter strawberry was shown at the Massachusetts Horticultural Exhibition, four weeks in succession—two weeks longer than any other variety. The committee thought it very promising.

J. W. MANNING.

Reading, Mass., 1859.

NEW PUBLICATIONS.

CAMPBELL'S AGRICULTURE. A Manual of Scientific and Practical Agriculture, for the Farm and the School, by J. L. Campbell, A. M., of Washington College, Lexington, Va. With numerous Illustrations. In one volume. Price \$1.00. Philadelphia: Lindsay & Blakiston; Boston: A. Williams & Co.

The introduction of agriculture, taught both as a science and an art, in our public schools, has long been advocated by the editors of the *N. E. Farmer*. This treatise is intended to supply the want of schools, in all parts of our country, of some introductory work, which shall give simple explanations of chemical terms and principles, applicable to agriculture, and also practical directions for their application to the actual culture of particular crops. Besides the chemical definitions, which seem to be based mainly on Stoekhardt's Principles, and so are of the best authority, we have useful directions for the cultivation of crops in general, and of Indian corn, wheat and oats, potatoes, tobacco and cotton, in particular.

The book is not "sectional," but supplies a want felt at the South, of a work which shall include their peculiar crops, as well as the great staples of the North and West.

The chapter on Animal Physiology seems well digested and arranged. Each chapter contains, at its close, questions designed for the use of teachers in the instruction of their classes.

On the whole, this book is interesting to the general student of agriculture, and well adapted to general use in schools. We are glad to see from the southern section of the Union, evidence of increasing interest in agricultural science.

For the New England Farmer.

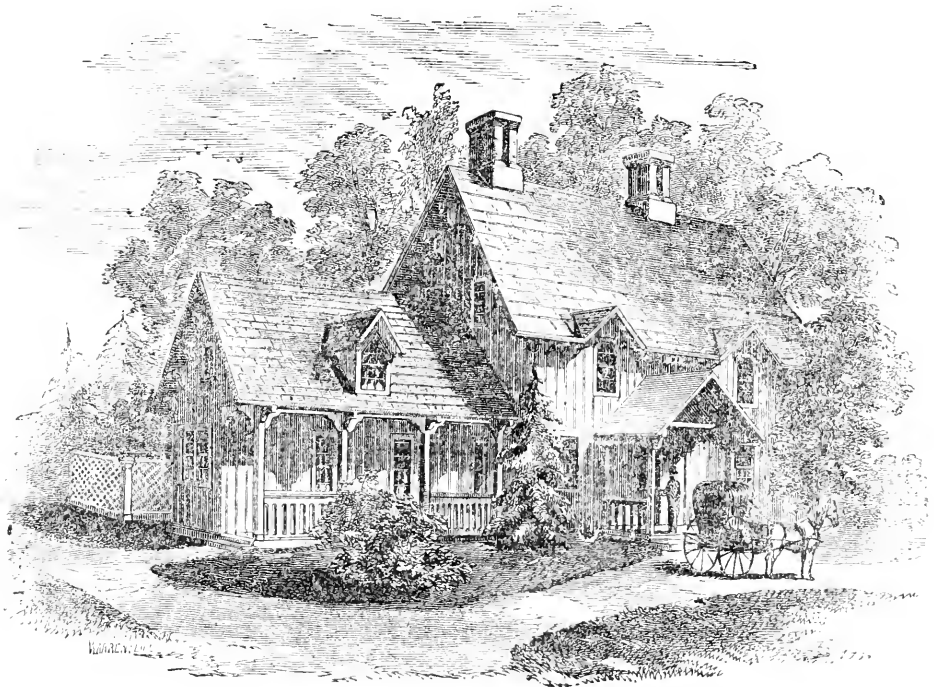
ILLEGAL TRADE IN MILK.

MR. EDITOR:—Having repeatedly seen the fact mentioned in your paper and elsewhere, that a law was passed by the Legislature to the effect that milk must be *bought* as well as sold, by wine measure, I supposed that there would be a change in the size of the cans, or at least in the price of the milk; but no! eight quart cans—beer measure, of milk, are still bought of the farmers and sold for over nine quarts! Is this right? Should hundreds of poor farmers be cheated out of their hard-earned money, simply to gratify the avarice of the few milkmen? Certainly not! Will not some of our enterprising farmers, who love their rights, attend to this matter, for we can plainly see that the milkmen do not respect the laws.

South Groton, Aug. 13, 1859.

TRUTH.

WINDSOR COUNTY, VT.—The Windsor County, Vermont, Agricultural Society will hold its fourteenth annual Fair at Woodstock, September 28, 29 and 30. JOHN L. LOVERING, Hartford, President; LORENZO HUNT, Woodstock, Secretary.



DESIGN FOR A COUNTRY HOUSE.

We herewith present a design for a bracketed country house of two and a half stories. This is the fourth of the beautiful series designed expressly for our columns, by GEORGE E. HARNEY, Esq., of Lynn, and will be found to combine elegance and comfort, with cheapness. Our engraver, in transferring the design to wood has omitted a couple of large sky-lights in the roof which serve partially to light the attic chambers, and add much to the appearance of the building. It consists of a main body and an ell; the main house is square in plan, and measures 36 feet on each side; the ell, containing kitchen and its offices, is 18 feet by 26, and one story and a half in height.

The disposition of the several apartments of the house is as follows:

The front entrance porch, No. 1, opens into a vestibule, No. 2, 5 feet by 9; from this vestibule we enter the parlor, No. 3, which is 18 feet square, and contains a good sized closet.

At the farther end of the vestibule, a door, the upper panels of which may be glazed, opens into the staircase hall, No. 4; this hall contains stairs to the chambers above, under which is a flight leading to the cellar, and opens into the following rooms:

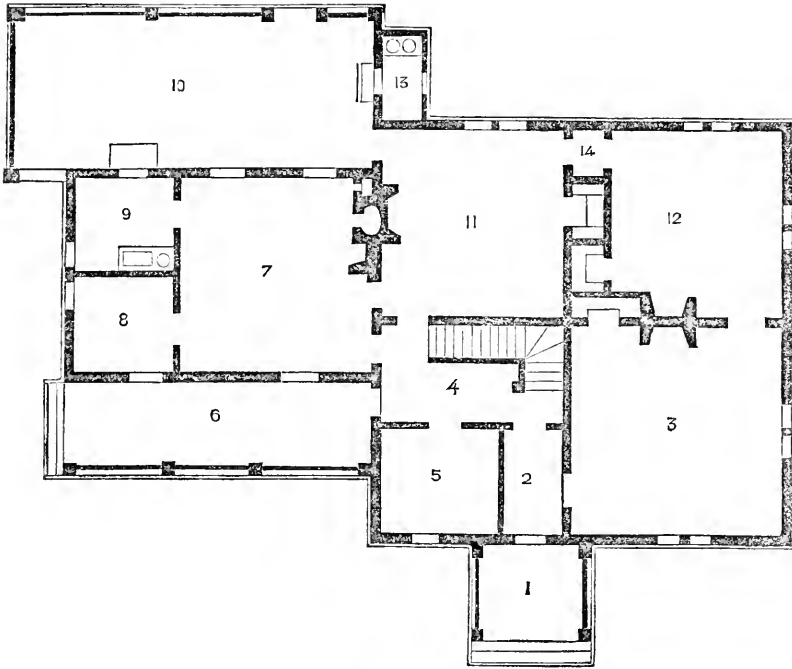
No. 5, office or library for the master of the house, so situated as to be convenient to the door opening upon the recessed veranda, No. 6; No. 7, kitchen 16 feet square; No. 8, store-room 7 feet 6 inches by 8 feet; No. 9, pantry 8 feet square, containing pump and sink, and leading into the private yard, No. 10. This yard is to be enclosed by a lattice fence 7 feet high.

No. 11, living room, 15 feet by 16, containing a large closet, and communicating, by means of a passage way, No. 14, with the family bed-room, No. 12. No. 13 is a privy opening into the enclosed yard.

The second story contains three large chambers and a child's bed-room, besides the hall and several closets in the main body, and a servant's bed-room, a large clothes press, and a bathing-room in the ell.

The third story, or attic, furnishes room for three large bed-rooms and numerous closets.

Construction.—This house is to be constructed in the same manner as those we have before offered, namely, vertical boarding and battens for the outside covering, and plain finish with walls prepared for papering for the interior. All the lower windows of the main part are to be shielded by hoods 2 inches wide. The roof projects



PLAN OF THE FIRST FLOOR.

three feet all around and is supported on plain $3\frac{1}{2}$ inch brackets.

Height of first story 10 feet; height of second 9 feet. The cost of the above house would be from \$3300 to \$3500.

CULTURE OF BARLEY.

This grain is raised to a greater or less extent all over New England, and we think ought to take the place of hundreds of acres that are devoted to oats, as it is better adapted to seeding down land with, than oats, requires less seed, ripens as well, and is admirably fitted to our short, hot summers,—the average product will be nearly as much as oats, and when harvested, is worth a third more for horses, hogs, poultry or cattle. No grain makes a sweeter and more nutritious bread, to be eaten while it is warm. The celebrated Warren Hastings once said “that it is of the greatest importance to promote the culture of this sort of grain—it is the corn that, next to rice, gives the greatest weight of flour per acre.” The cow-keepers about London cultivate it as spring food for their milch cows. The Romans used to cultivate it extensively; made the meal into balls, and fed their horses and asses with it, which was said to make them strong and lusty.

Barley should be sowed early, on warm, sandy or gravelly loams, rather than on alluvial soils. Although a northern plant, like the Indian corn,

it loves the heat of our glowing summer days. We have seen fine crops of it on our granite hills, growing erect, without weeds, and yielding thirty to forty bushels per acre,—and the hot, morning cakes made from good samples of it somewhat excite our gastronomic desires even now! Great care should be used in the choice of seed. It should be of a pale, lively color, and the grains should be plump and fair. Such seed will throw up strong, healthy stems, capable of resisting untoward changes of the seasons, and result in producing a good crop. In England it is often sown as food for sheep, and is said to be far more productive than rye, as it admits of being fed down every few days during the summer. If sowed early, and intended for seed, it may be fed off in the first part of the season, without injury to the crop.

TOADS.—Toads, in common with many other reptiles, cast their skins; but who has ever found the old coat of a toad? He does not leave them lying about, like the unthrifty snake. No indeed; conscious that second-hand clothing is not in demand among the animal democracy, he rolls up his old coat in a pile, and when this is accomplished, packs it away by swallowing it. This is in nowise a suggestion to others to follow his example, but clearly proves our despised friend to be an excellent economist, as well as our benefactor in destroying insects, and should entitle him to respect and long life.

RECOLLECTIONS OF TRAVEL.

By a large portion of the people of the New England States, Canada is looked upon as an inhospitable, out-of-the-way place, and as a cold, rugged, unfertile region. But a journey from the lakes to Quebec, by the St. Lawrence, with an occasional diversion from this noble thoroughfare into the country on each side of the river, would at once dispel any such idea. We never saw a more fertile-looking country, nor one upon which the crops appeared better, than upon a large extent of land northwest of Montreal, and for almost an equal extent on this side of the river. The country is flat, without stones, and the soil is a stiff, clay loam, and when properly cultivated, is exceedingly productive. Approaching the Gulf of the St. Lawrence, Lower Canada is intersected by ridges of mountains, which generally extend from the coast into the interior, with intervening valleys of a fertile and pleasant appearance. The productions are grass, wheat, peas, oats, rye, barley, &c.

The soil of *Upper Canada* consists, generally, of a fine, dark loam, mixed with a rich vegetable mould, and its productions are much the same as those of Lower Canada. It contains nearly *ten million* acres of land. The inhabitants are mainly of English descent, and speak the English language, while in Lower Canada, the French population prevails, that language is preferred, and they are generally Catholics.

The country on the banks of the St. Lawrence, in Lower Canada, is flat, and extends far interior, almost at a dead level, and resembles in fertility the rich banks of the Mohawk or Connecticut rivers. These tracts are well timbered, and the clearings are dotted with fine elms, oaks, and other trees, giving them the appearance of beautiful parks, or widely-extended pleasure-grounds. Some of the farms contain several thousand acres each. That of Mr. JAMES LOGAN, upon which we passed a portion of two days, was highly-cultivated and productive. He had a herd of very fine Ayshire cows, and had just imported three Clydesdale horses, two mares, weighing 1,500 pounds each, and a four-year-old stallion weighing about 1,700 lbs. These horses are just what are wanted for draught in cities, for railroad purposes, and all other places where power is required rather than quick motion. There can be no doubt but that a demand would be found for every horse of this description at very high prices. This matter is worthy the attention of those engaged in rearing horses for the market.

After three or four days of hard labor in the broiling sun in attending upon the trial of machines, in company with Mr. NOURSE, one of the Proprietors of the *Farmer*, we halted on our

way for a day or two at the White Mountains. The weather was clear, hot, and favorable for observation. A hundred horses had preceded us, the day we went upon the mountain, and not a hoof could be procured, so we commenced our march at the Glen House, on the easterly side of the mountain, at 3, P. M., on foot, and stood upon the roof of the Tip Top House, on the summit of Mount Washington, in season to see the sun sink into the Western horizon. A good night's sleep prepared us to be up and witness the sun's rising the next morning. After breakfast, the entire company present listened to the reading of that most sublime of all language the 104th Psalm, and then we took our way down the mountain, through *Tuckerman's Ravine*. This is an amphitheatre whose walls are a thousand feet high, and from whose sides issue hundreds of springs, forming cascades of singular beauty as they fall from point to point. In the bottom of this ravine we found snow fifteen feet deep, and the cascades and the melting snows are the sources of the Peabody River.

Great numbers of people have visited the mountains this season, and that number, we have no doubt, will be much increased hereafter, as they present one of the most sublime features of the works of an Almighty hand. There should be a carriage-road constructed to the top of Mt. Washington, or, at least, a good bridle path, so that aged or feeble persons may go to the summit. The cost would soon be repaid by a toll. We saw and heard many things which it would be pleasant for us to relate, and which might be pleasant and profitable to read, but want of space will exclude any further account of them.

MANURE.

We know a farmer who has used several cart-loads of horn-piths the past two seasons for manuring his potatoes in the hill—a pith to each hill at the time of planting, more than doubles the crop over rows having no manure. As the potatoes are dug, the piths are thrown into heaps, and afterwards carted off and deposited in a safe place for next year's use. They will last for this purpose many years. The farmer pays about \$1.50 a cart-load. He also, occasionally, obtains from the same yard the lime, after having been used for starting the hair and skins, as well as some of the fleshings and poor quality of hair. These are made into compost by mixing with loam or muck, and make a good and lasting manure, and at a cheaper rate than he could procure stable manure.

The waste wool from woolen factories and carding machines can sometimes be had at a trifling expense. Wool and cotton rags contain a large per cent. of nitrogen, and above five per cent. of sulphur. One hundred pounds of wool contains about seventeen pounds of nitrogen—as much as there is in the very best guano, and

more than there is in three thousand pounds of fresh cow dung. Wool and woolen rags decompose very slowly in wet, stiff soils; therefore, if used in their natural state, they should be spread upon sandy, or light, warm, loamy land, and plowed in. On such land they are lasting and valuable manures. Great quantities of waste wool and woolen rags are used to manure the hop grounds in England, and the hop-growers there readily pay \$25 to \$50 per ton for them as a manure for their grounds. From the slow decay of wool and rags, they probably can here be most economically employed when previously rotted by being made into a compost, and then applied to the wheat crop.—*Dansville Herald*.

For the New England Farmer.

FRUIT VERSUS ROBINS.

The robin question is becoming one of serious moment, or, certainly, of more importance than those not directly concerned seem to be aware. The Bird Law, sent through the Commonwealth on hand-bills last spring, was received, in this neighborhood at least, as a very pretty specimen of Imperial Legislation. Most people here think that a man should have an undisputed right to his own fruit. They fully believe that a free citizen, of a moderately free country, should be allowed to protect his own fruit in his own garden, against the depredations of any wild beast, or bird, that runs or flies. But, although they claim the right, they do not unduly exercise it. Farmers are not devoid of all humanities.

The cultivators of the soil are the tried and special friends of birds, and only when necessity compels, do the farmers of this State destroy or disturb them. They are not the class of men who kill robins for the paltry purpose of making a meal of them. They are no enemies to a law against wanton destruction, but the fault of that law is, that it ignores all cases of necessity. It punishes us for destroying certain birds in places where they have already become a positive evil; and yet provides no other remedy.

Giving robins the absolute freedom of the fruit garden, not only insures a waste of fruit, but deprives us of the services they would otherwise render. If kept away from our fruit, they must seek their food in field, pasture, apple-orchard, and cultivated portions of the farm. But, if left undisturbed, wherever fruit is grown they will congregate. They will build their nests in the immediate neighborhood, rear their young, and all feed and fatten on fruit that human beings ought to have. With undisturbed possession, each brood will waste enough to supply a family of six persons with all the fresh fruits they need.

But some say that they pay for the mischief they do by protecting fruit from insects, &c. From what do they protect it? In this neighborhood it is from *angle-worms*! Yes, angle-worms, and nothing else, save from the rightful owner.

"Save from the curculio." Indeed! Under the very beaks of a hundred robins I cannot get one plum per tree. "Protect from canker-worms." They don't even keep the leaves that cover their nests from being covered by canker-

worms. As to their making such havoc among canker-worm grubs in spring, allow me to say that I never have yet seen a fruit-grower who places any reliance upon such protection. Very few grubs, beetles, bugs or insects, need other life-insurance than plenty of fruit and fish-worms within fifty rods.

Being omnivorous, robins *can* feed upon almost any thing, but where their choice is to be had, fruit is chosen. They feed their young for a few days with worms, or grubs and insects, if more readily obtained. But soon as the first strawberries ripen, they begin to feed upon fruit so costly that few human beings can afford to eat it. From this time, through the entire season, they are, in many gardens, an unmitigated nuisance. They also do much harm by keeping away more useful, and really insect-eating birds. Very few of these will stay where the noisy and quarrelsome robins are very numerous. A shepherd who sets a sheep-stealing cur to guard his flock, might consistently advise fruit-growers to keep robins to protect fruit. But I insist that not he or any Legislature has the right to compel a man to accept such advice. If any owner of a flock should be compelled by law to keep such dogs as devoured a sheep or lamb every day, instead of better dogs, or, none at all, he might readily understand the workings of the Robin Law.

The physicians tell us to eat more fruit. "Give us more fruit," say old men and young, women and children, rich and poor,—all the denizens of our cities. "Cultivate more fruit, farmers," say Editors, Gentlemen and Lawyers, and then straightway combine to make a law forbidding them the privilege of protecting the fruits they have already taken unwearied pains to grow. A happy measure of encouragement, truly! A murmur of dissent among farmers is heard, and then comes the cry, "Cultivate fruit enough to feed birds and all." That reads finely in the play, but the acting it gives another and very different view.

I have tried that theory a few years, not in a gentleman's parlor, not in a lawyer's office, not in horticultural rooms, nor yet in the Legislative Hall, but in a place most suitable to test its merits thoroughly. Ten years ago I set a few strawberry vines on a farm where many kinds of birds were plenty, but no species exceedingly so. Robins were plenty enough to prevent my setting cherry trees, for those who had full-grown ones, could get little save half-ripened, unwholesome fruit. Two seasons the robins ate some strawberries, but not many. I set more vines, and more birds found them.

I set currants, gooseberries, raspberries and grapes, which lengthened the fruit season, and the robins began to leave the surrounding farms, and come and board with me. They became very destructive.

I would not kill, but tried to frighten them. Young robins don't fear any thing much. The old ones would frighten, and fly, and return and feed alternately, from daylight till dark, if I could spend time to do the frightening. The result was, they wasted so much, that from two bushels of green gooseberries I could not obtain four quarts of ripe ones. I could leave no currants on the bushes for home use—could sell

five bushels green, but could get none fully ripe. Of raspberries, from eight to twenty boxes per day, they would take one-half. These protecting robins would leave the farms, grubs, caterpillars, and all, to eat whatever berries chanced to be ripening. No argument could compel them to leave my garden, no persuasion induce them to stay on farms where they were wanted, no insectivorous theory was theirs, and no Horticultural Committee confined them to *three berries per day*. I can say from experience that there is no profit in this mode of fattening robins. I remember that the "Star" correspondent of the *Farmer* gives no heed to profit or loss, but with admirable coolness, and an easy flourish of his pen, devotes a "large part of our currants, strawberries and cherries" to the robins. Well, that is only a *large part of my means of living*—one little item of his—strawberries. Probably his fruits are not much exposed to their depredations. He admires to see the robin "hopping and chirping about." But, permit me to ask, "Who pays the piper?" If friend "Star" should be compelled to pay, as I do, *three dollars per day* for the "chirping," we should see a "hopping about" infinitely more entertaining than a robin dance.

My communication is already too long, but I beg leave to acknowledge one good feature of the robin law—its philanthropy. It permits whole colonies of robins to rear up large and interesting families in each man's garden, to feed all summer on his finest fruits, and then go forth in autumn all ready fattened for the southern market. Give us thanks—'tis all we get—O, epicures of New York, Philadelphia and Baltimore, for the million birds we send you. It is cheaper to fatten turkeys, but it were a miserly thing to present you with any thing fattened on vulgar Indian corn. The robins are ready. O, what infinite pleasure to southern sportsmen! what ready profit to southern dealers! what exquisite relish to southern palates, what unbounded delight to southern cooks and connoisseurs! Worthy old Bay State! Philanthropic old Bay State! Mother of New York, New Jersey, Maryland, Virginia, Pennsylvania and the Carolinas—step-mother to the citizens of Massachusetts! Complacently folding her hands in the fullness of joy, in view of her great disinterestedness, she sits, like another Mrs. Partington, *in the very shadow of her own benevolence*.

N. PAGE, JR.

Danversport, August 9, 1859.

REMARKS.—We do not wonder at the sensitiveness manifested by fruit-raisers with regard to the "bird-law." The question comes home to them now, whether they shall abandon the cultivation of the small fruits, and thus cut off their source of obtaining a livelihood, or whether they shall have the liberty of protecting themselves against birds, as they do against other creatures that commit depredations upon their property. Mr. Page has very nearly described our own experience in the matter. We have four distinct patches of land planted with the strawberry, and had cultivated them with care, hoping for a fair share of them as a reward.

From three of them we scarcely obtained a pint of ripe fruit, and seeing the destruction which awaited the fourth patch, we covered it with large pieces of gauze cloth,—upon which the robins were so indignant as to scold vociferously, raising every feather upon their backs, like "a hog's bristles in a hurricane." From some twenty cherry trees we did not get a quart of fruit, and so of the raspberries and other fruits. And this was not all, for the green peas, even, were not proof against their rapacity. We like the birds, and encourage their residing near our buildings; but unless the cherry-birds, robins and orioles mind their manners, we shall—not listen to their music with as much pleasure as we have heretofore. Mr. Page is pretty severe, and has cause to be so.

FAREWELL TO THE SWALLOWS.

Swallows, sitting on the eaves,
See ye not the falling leaves?
See ye not the gathered sheaves?

Farewell!

Is it not time to go
To that fair land ye know?
The breezes, as they swell,
Of the coming winter tell,
And from the trees shake down
The brown
And withered leaves, Farewell!

Swallows, it is time to fly;
See ye not the altered sky?
Know ye not that winter's nigh
Farewell!

Go, fly in noisy bands,
To those far distant lands
Of gold, and pearl, and shell,
And gem, (of which they tell
In books of travel strange,)
And range
In happiness. Farewell!

Swallows, on your pinions glide
O'er the restless, rolling tide
Of the ocean deep and wide,
Farewell!

In groves, far, far away,
In summer's sunny ray,
In warmer regions dwell;
And then return to tell
Strange tales of foreign lands,
In bands,
Perched on the eaves. Farewell!

Swallows, I could almost pray
That I, like you, might fly away:
And to each coming evil say
Farewell!

Yet, 'tis my fate to live
Here, and with troubles strive,
And I some day may tell
How they before me fell,
Conquered; then calmly die,
And cry—
"Trials and toils, farewell!"—*Hood.*

EXPERIMENTS ON CURING THE BITE OF THE RATTLESNAKE.—The snakes brought by Prof. Christy from the South, says the Cincinnati *Ga-*

zette, have been used at the Ohio Medical College, in a series of experiments to ascertain an antidote for the poison.

A few days since a dog was introduced to the snake's cage, and was immediately bitten. Prof. Foote administered to him brandy containing five drachms bromine, four grains of iodide of potassium, and two grains of corrosive sublimate. He recovered in a short time. To test the question whether his recovery was due to the brandy or to the ingredients it contained in solution, another dog was suffered to be bitten on the 8th ult., and the bromine, iodide of potassium and corrosive sublimate administered alone. An hour after he seemed to be recovering slowly. The next experiment will be to administer the brandy alone, which is claimed to be an effectual remedy.

For the New England Farmer.

TO MAKE GOOD PICKLES.

MR. EDITOR:—The following recipe, if carefully followed, judging from our experience, will furnish "a lover of good pickles" with an article every way desired. Made thus, we have had them when kept two years, still perfectly hard and brittle.

Take the cucumbers carefully from the vines, leaving the stems on, (a very important part, by the way, as so much depends thereupon that none that are bruised in picking or otherwise should be used,) wash them carefully in pure cold water, rubbing them, to remove the prickles from the stem, as well as the cucumber; then sprinkle a layer of fine salt in the bottom of the jar to be used, add a layer of cucumbers, again a layer of salt, then cucumbers, repeating the process until the jar be full; letting the last layer be of salt.

Then pour upon them a sufficient quantity of boiling water to cover the whole, after which let them stand twenty-four hours, when they should be taken from the brine, wiped dry, and placed in the jar or tub in which they are to remain.

Next scald the vinegar, seasoning thoroughly with salt and as much cayenne pepper as is admissible to the taste. After cooling, pour upon the pickles; stir every day to break the scum, should any rise. If at any time the vinegar should become dead, either add new, prepared in the same way, or if there be sufficient life to keep them bright, scald the old.

A fair trial of this, and it is my belief that "salting down" will be dispensed with.

ANNIE, OF THE BERKSHIRE HILLS.

August 12, 1859.

REMARKS.—"Farmer," of Meredith Village, N. H., says, "to one part 'good new wine,' add three parts water; rub the cucumbers dry with a clean cloth, and cover them with this liquid, adding green peppers and tomatoes; set in a cool, dry place, and stir them carefully once a week for five or six weeks. Put a linen cloth between the pickle and cover."

We have received several other recipes for making pickles, but they so much resemble those already given that it is unnecessary to publish them.

EXTRACTS AND REPLIES.

THE CURCULIO.

Is there any way that I can prevent the mischief of the curculio, either by picking up the fallen fruit, or by pasturing my orchard with cattle or hogs?

Does the insect fly off from neighborhood to neighborhood, so that if I should prevent their multiplying upon my own farm, I should still have a supply from my neighbors? Has the insect any means of propagation except by depositing its egg in the fruit?

By answering the above inquiries you will confer a great favor upon many of your readers in this section of New Hampshire. C. A. W.

Hancock, N. H., Aug., 1859.

REMARKS.—The curculio may be kept from destroying fruit in a few favorite trees, by sprinkling the young fruit three or four times a week when it is wet, with slaked lime or dry ashes, or by jarring the insects down upon a sheet. They fly from place to place. We have never learned that they propagate any other way than by depositing their eggs in young fruit.

CROPS IN VERMONT.

The farmers in this section are looking rather blue. Perhaps you are not aware that we are having the most severe drought that has been experienced here for nine years at least. Early sowed English grain is good; hay about two-thirds of an average crop; corn and potatoes minus, unless we have copious rains soon. In a communication from Hon. Simon Brown, dated Montreal, Aug. 16th, he says "the hay crop is abundant." I think in passing through our place at least, he must have been looking at those "laughter-loving girls," instead of looking out of car windows—or he would have seen that our pastures and meadows are actually dried up. Most of our cattle are nearly in a starving condition, and some farmers say they shall be obliged to sell their cattle, or drive them to the mountains to browse. Grasshoppers too numerous to mention. E. MURPHY.

Middlebury, Vt., Aug., 1859.

REMARKS.—If friend Murphy had been in the cars with us, we will venture to say that the "meadows would not have appeared dry" nor the "cattle starving." But as it was *our duty* to observe, we *did* observe, not only the girls, but the grasses, grains, gardens and fields. We saw that Northern Vermont was suffering somewhat for rain, more so than any other place we visited, and yet some of the best farmers in that State assured us that the hay crop had been good. We were careful to say of Vermont, however, as follows: "The recent refreshing rains of your State [Mass.] did not extend to Vermont, and the way was consequently dusty. Pastures, grass lands and corn are suffering considerably," &c. Take courage, friend M., we hope you have had copious rains before this time, and that your cattle will "be up to their eyes in clover," before

frost comes. But we sympathize with you, nevertheless, in the parching drought you have experienced.

SWARMS OF BUGS.

I send you a sample of bug which I have recently discovered in large swarms passing up and down my apple trees, and wish you would tell me their name, and the most effectual method of destroying them. I have never seen the insect till last summer I found them in a small fir tree near my house, and thought I killed them all by flashing a small quantity of gunpowder underneath the tree; but now my apple trees are swarming with them, notwithstanding that I had my trees thoroughly scraped and washed with soap-suds in the spring, and have quite recently repeated the washing. By replying to this you will much oblige

O. S.

N. B. I notice a few amongst them that have wings which they seem to have just come in possession of.

O. S.

Brookfield, Mass., Aug., 1859.

REMARKS.—The bugs you sent were *squash* when they reached us. Examine them carefully, and then refer to "Harris on Insects," and see if you cannot get their name.

CURE FOR A RUPTURED COLT.

In answer to the inquiry of "W. C. B.," I will give him my experience. One year ago I had a colt about the age of yours, which had a breach similar to that on your colt. As soon as I discovered it, I took a piece of sheet lead five or six inches square, rounded the corners, so as not to chafe him, sewed it to a cloth bandage, and bound it up tightly; I fastened it from working back by attaching a strap to it, passing it around his breast. I let it remain a week, and then took it off to examine it, when it appeared to be well; but to make it sure, I put it on again, and let it remain another week, which effected a perfect cure.

A. DAGGETT.

Farmington, Me., Aug., 1859.

WEATHER AND CROPS IN HILLSBOROUGH COUNTY.

We are now in the midst of a pinching drouth. Corn and potatoes are suffering upon light plain land, especially if choked with weeds, as they abstract largely from the nourishment and moisture now doubly needed by the plants as they are approaching maturity. Hay and grain are remarkably good, and are mostly secured. Apples are very scarce.

C. A. WHITAKER.

Hancock, N. H., Aug., 1859.

ORANGE QUINCE.

In the cultivation of these trees, many think that they require a damp and shady position, and that they do not want manuring; I apprehend this to be a delusion; they require to be planted in good loam, and the earth to be loosened deeply by the subsoil plow, or trenched by double spading, and well manured with a good compost in the drills; shorten in the branches one-half of last year's growth, give the roots a good

drenching with water in setting; leave the soil around the stem concave; place them ten feet apart, and the rows twelve feet, prune just after the fall of the leaf, late in the fall, or early in March. Fork in, late in the autumn, three or four shovelfuls of fresh manure. After digging around the trees in spring give the whole a broadcast of salt.

Salem, Mass., 1859.

J. M. I.

TO CURE DYSPEPSIA.

Make a tea of the herb called Bay or Meadow Fern, and drink freely after eating. This herb is common in this vicinity; it grows in meadow lands, and in low, swampy localities; it resembles the whortleberry bush, and is covered with small aromatic burrs.

Concord, Mass., Aug., 1859.

J.

GOOD BUTTER.

"D." is informed that the facts communicated to him by an "old lady," about butter-making, we have already given in former articles.

For the New England Farmer.

LABOR-SAVING MACHINES.

MR. BROWN:—Some weeks since I noticed a paragraph in your paper recommending all persons to purchase labor-saving machines. We poor farmers in this part of the world, having to practice economy, must in the first place know which the labor-saving machines are. Some persons say that the way to find this out is by experience. Now must we buy machines which we know nothing about, except by persons who crack them up a great deal on purpose to sell them, and if we find them of no value, throw them aside and lose our money? Of course not, we must learn from those who have tried them, and if they can make them profitable, we can. One of my neighbors was mowing with a machine last week, and he asked me what I thought of it. I told him that I thought it would do very well for a rich man, but for me it would not do. It took one man to mow round the edge of the field, one to manage the mower, and the horses were equal to two men, which would make four; and four men would have mowed it quicker, cheaper and better than the mower did it. Ketchum's one-horse mower is the best one that I have seen. It works well on most of our land. Our land is high and the crops generally suffer more from dry weather than from early frosts.

Wesboro', Aug., 1859.

INQUIRER.

REMARKS.—"Inquirer" asks us if he must buy machines that he knows nothing about? Certainly not. Exercise the same sound judgment and discretion that you do in purchasing a horse, a farm, or a plow or cart. Go and see those in your neighborhood or town, and criticise them closely, but fairly.

There is another view to be taken of the value of a mowing machine, beside the one in which you describe it. Suppose you keep a pair of

horses usually on the farm, would they not be quite likely to be idle if they were not in the machine? Suppose, also, that you or your father, are in feeble health, or have seen too many haying seasons to swing the scythe with two or three rugged men—perhaps Irishmen—could you not guide these horses, hitched to the machine, and cut five or six acres a day, when you and the horses would not otherwise have cut a single swath? And pursuing this course, would you not have done more towards securing your hay harvest than any three men could have done? There is no doubt of it. There are several other reasons just as applicable as this, why we should use a mowing machine, and other labor-saving machines and implements; but we must exercise the same good judgment in their selection and use that guides us in other important matters.

For the New England Farmer.

HOW SHALL WE BUILD OUR BARNS?

To answer this important question, we must first consider the objects to be had in view, in building a barn at all. The most important one certainly is stowage; the next is a convenient stable for domestic animals; and lastly, a manufactory of manure. A building that provides for all of these in the best and most convenient manner, and to the greatest extent for the original cost, and at the least outlay for future repairs, will be the best barn, and a great desideratum to the agricultural community.

The form most commonly used with us, is a building from forty to fifty feet in width, with a barn floor or drive-way running length-wise through the centre, and having stalls or cattle-house on one side, with mows for hay, &c., on the other. This makes a convenient stable, but sacrifices to this convenience both the other requisites of a good barn. The floor or drive way, is very expensive to build and occupies the centre of the building, where is the largest and best place for stowage, and gives a cold and unnecessary space, which can only be partially used at any time. The very small amount of convenient room for keeping hay, grain, roots, straw, corn-stalks, and refuse for bedding animals and composting with manure in proportion to the space enclosed and roofed over, is the great objection to this form of barn, and unless the ground on which it stands enables one to put a cellar under it, there is no possible opportunity to manufacture manure. It must be, and always is, thrown out through windows to waste its strength, and become a nuisance in a muddy yard. The liquid portions are also lost entirely, unless expensive and troublesome means are provided to save them. A cellar will remedy these defects, where it can be had; but it is at best an ugly, inconvenient, costly and dangerous affair; and should never be used on a farm.

The digging and stoning a cellar, and building a floor over it, sufficiently strong to be safe, will cost as much as a good barn ought to cost, with ten times the convenience for making and saving

manure. We say, then, that the most approved form of barn in common use in New England is sadly defective in at least two of the essential requisites of a good barn; and that the expensive addition of a cellar is not the improvement wanted to get a good barn.

Again, our common barn is generally built about fifteen feet high from the floor to the eaves, with a roof rising at an angle of forty-five degrees. This is, perhaps, as high as hay can be pitched by hand; but just look at the enormous roof required in this style of building! The roof, too, costing the most of any part of the barn originally, and requiring expensive removal every twenty or thirty years!

In the first place, it is one-third larger than would be necessary to cover the building; the most of its enclosed space is entirely lost for all purposes of stowage, being directly over the floor or drive-way; and the walls are so low that but little of the bulky products of a farm can find room for themselves, without extending the building to the dimensions of a whole block of city warehouses.

Some few barns are built narrower, and have a lintel or lean to, for the cattle. But this requires an additional roof, with no room for stowage under it whatever. In our cold climate, and with the costly and perishable materials used in building, we must inclose no waste spaces; and should expose the smallest possible surface of roof. This may be accomplished as it is done in warehouses in the cities; by flat roofs and high walls, and now that we have the horse pitchfork, the objection to high mows is entirely done away with. The hay can be thrown up thirty feet, as easily as it can be carried up ten; and its exposure to dust and offensive effluvia much reduced, by its compactness and small external surface.

There is a plan of a huge barn given by L. F. Allen, which has been widely recommended in our agricultural books and papers; and in my judgment embraces all the faults of our common New England barn, with several additional errors, strangely palpable. In the first place, he has 12,512 square feet of roof surface, on a barn 100 by 50, with a sixteen feet lean-to on three sides—more than enough to cover a building 110 feet square! and he gets only stowage room enough for about 170 tons of hay under this immense roof. In fact, he says that he has put into the barn 150 tons at a time, "and that it will hold even more, if thoroughly packed." But put the same roof over a barn 110 feet square, with walls thirty feet high, and you will have ample room for 500 tons, besides the requisite space for the cattle, and for the machinery to be used in preparing their food, and for manufacturing any desirable amount of manure.

But he raises the whole of his barn, except the lintels, four feet from the ground! For what possible reason? Every thing has to be hauled up that distance, over inconvenient inclined planes, and the whole space, sufficient to store 50 tons of hay, after being roofed over, is thrown away by building costly floors, for no possible purpose whatever!

And this is another error uniformly adopted in our barns. Why should we have floors in our barns, kept up a few feet from the ground, by heavy timbers, that are continually rotting away,

and occupying the most convenient part of the space covered by the roof? It forms a retreat for vermin, catches and holds the most valuable part of the barn manure, and next to the roof, is the most expensive, and rapidly decaying portion of the barn; subjects us to many accidents and heavy losses, and really does no good whatever, but is in the way, cold, costly and troublesome.

I am in urgent need of a huge barn, and when I build, I want to get a good one, and to get it cheap. How is this to be done? I have already hinted at some of the ideas I have about it. It shall have no floor, and consequently no floor timbers; this will reduce the cost materially, and will be in imitation of the barns in the old countries, which are all built with no other floor than the bare ground, except in some parts a stone or brick pavement.

Prince Albert has recently put up a set of farm buildings at Osborne, without regard to expense, and is said to have a model steading; but in none of the barns, stables or sheds, is there any floor; though the ground is paved with small, round stones in some parts, both outside and inside of the buildings. And what could be better or more durable? The best threshing floors are made of clay and sand and gravel; our open sheds always have a hard, smooth surface of loam for a floor, which is the best floor possible, either to work on, or for storage. Of course, the walls must be so constructed as to exclude the water and the frost.

This all will admit, I think, will answer every purpose, except perhaps for cattle and horse stalls. But here it will be far better than anywhere else. The real farmer wants a manufactory of manure. He does not simply desire a handy chance to get rid of the excrements of his animals; and he finds a barn cellar a poor place to mix and compost the materials required to make manure. But having provided the requisite articles, he can place and mix them as he likes on the ground under his animals, and conserve their health and comfort at the same time that the manufacturing process is going on; and this being attended to daily, a great deal of work is accomplished, in the best manner, and with greater economy, than if left for long intervals and heavy jobs.

We will, therefore, have only a floor of hardpan in our new barn, composed of clay, sand and gravel, well mixed and rolled down all over the bottom, smooth and level, and just even with the ground outside the building. No platforms or steps required to haul up or climb up into it, and no waste room, under the floors, to fill up with hay seed, urine, skunks, weasels, rats and stray hens' nests.

The roof, as already intimated, shall be flat; thus saving one-third in extent; and covered with composition roofing, instead of shingles, which will save another third in cost of materials and repairs. The objection to this, is its liability to become heavily loaded with snow; but this is only a small matter. It does not snow so as to load the building, oftener than it blocks up the roads; yet no one proposes to abandon the roads because they are sometimes impassable by reason of heavy snows. The roofs and the roads can both be freed from this encumbrance by the same means, and the interest of the money

required to build a steep roof will more than do it.

Now come the walls; and these are to be set in the ground below the reach of frost, on a firm stone wall, and made of stones chiefly, but in good part of lime, sand and gravel, (unless clay may be used instead of lime, the walls being plastered on the outside.) We will carry them up thirty or thirty-five feet, in order to secure abundant storage room, and protect them by wide projecting eaves.

The barn shall be 80 or 100 feet square, with doors and windows on all sides; and nothing inside the walls, but the posts or pillars to support the roof, except where scaffolds are thrown over the stalls for cattle and horses, and over rooms for manure, muck, machinery, &c.

I can now drive into my barn at any convenient door, with a loaded team, and instead of being confined to a narrow drive-way, and compelled to pitch the hay over and over, across wide mows, I can drive all over the barn, into any corner, and with a horse pitch-fork unload just where I wish to, and can drive in a dozen loads at the same time.

In this large, cheap barn, I can store and keep all my spare hay, and not be compelled to sell it at a ruinously low price, to make room for the next crop; but can hold on to it till the price is remunerating. I can extend the accommodation for cattle and all kinds of farm stock at pleasure, by elapping up stalls anywhere as required; and can always regain the space for storage, without expense, when that is desirable. All the work is now to be done on the same floor. With a wheelbarrow I can carry the hay or straw to the cutter, and when it is cut and mixed, I can feed the animals conveniently in the proper boxes for them to eat from. I can take the dry muck or refuse from its room, and mix it under the cattle in small quantities, till it is properly moistened with urine and compounded with dung, and then wheel it to its convenient place, to be preserved in its strength, unfermented and inoffensive, till it is wanted upon the land.

The barn will be dry and warm, yet well ventilated; a store-house, a stable, a manufactory; convenient, large, durable and cheap. J. W. K.

Strawberry Bank, Durham, N. H., Aug. 25, 1859.

BLACK-FACED MOUNTAIN SHEEP.—We recently saw eight sheep of this breed, selected in Scotland by SANFORD HOWARD, Esq., and sent in the ship Old England, which arrived at Portland a few days since, and from whence the sheep were sent to this city. There are two bucks and six ewes. They all have horns—those of the bucks are large and graceful. Their faces are black, and the legs are spotted with black. Wool, coarse and long. They are long and deep in body, with a good proportionate width. Mr. ISAAC STICKNEY, of Boston, a gentleman who has long taken much interest in introducing new and good stock into the country, has imported them with a view of getting a breed of the best mutton sheep.

For the New England Farmer.

DRAINAGE.

MY DEAR BROWN:—In the publication of my book on *Farm Drainage*, the chapter which I send you was omitted, to make room for matters which were deemed essential. Still, I think it will interest our readers, and have some tendency to direct attention to the all-important subject of Health, which, says Isaac Waiton, is the blessing next in value to a quiet conscience.

HENRY F. FRENCH.

INFLUENCE OF DRAINAGE ON HEALTH.

Swampy Districts unhealthy—Sixty millions of Acres of Swamp given away by the United States Government—Clearing Land of Timber makes it dryer—Fevers and Agues leave where Land is Drained—Mr. Colman's Opinion—Facts—Birkenhead Park—Opinions of Distinguished Men—Health of Stock improved by Drainage.

Although the general proposition that drainage promotes the healthfulness of a country or district will be readily admitted, yet it is believed that this idea does not, by any means, make its due impression upon the community. It is proposed, therefore, briefly to consider the subject in its relations to the health both of man and of the domestic animals, and to cite such authorities that a way-faring man, though not quite wise or learned, shall not, if he reads the chapter, fail to see something of its force and importance.

It can hardly be expected that private individuals, owners of small tracts of land, will embark in schemes of drainage for the improvement of the climate merely, or that the limited operations of individuals on their own land can be pointed to as evidence that drainage promotes healthfulness.

There are, however, certain propositions generally received as truth. Wet, swampy districts of country are usually afflicted with agues and fevers, and other forms of disease, from which dry regions are exempt.

In accordance with this idea, and with a view to promote the healthfulness of the country, the United States government, by Acts of 1849 and Sept., 1856, granted the swamp and overflowed lands of the government, as a gift to the States in which they lie, and it is officially estimated that when these grants shall be entirely adjusted, they will amount to *sixty millions* of acres.

Lands covered with timber are far more damp than cleared lands.

It is a well established fact that mill streams and rivers have grown perceptibly less throughout New England, since the wood has been cut away. Streams, which formerly were sufficient to drive certain mills, have failed, probably through the increased evaporation, so as to have become entirely inadequate to the purpose.

Fevers and agues seem to leave an old State,

and to pursue the pioneers into new settlements. Indeed, it is not, perhaps, assuming too much to say, that generally in proportion as, by the cutting away of timber, or by other changes, such as the clearing up of swamps, the climate of a country or district is rendered more free of dampness by evaporation, in the same proportion its healthfulness is increased.

Mr. Colman, of Massachusetts, a careful observer, both at home and abroad, of the effects of drainage, says,

"There are considerations connected with the subject, which are not to be measured by a pecuniary standard, but whose importance cannot be over-estimated. I mean, for example, such as refer to the health of the country. The fogs and dampness arising from wet and undrained lands, are a prolific source of ill health and sickness.

"Tracts of land which are liable to fevers and agues and consumptions, by a complete drainage have become salubrious, and are now upon an average standard of longevity with other parts of the country."

An English Board of Sanitary Commissioners states the matter as follows:

"1. Excess of moisture, even on lands not evidently wet, is a cause of fogs and damps.

"2. Dampness serves as the medium of conveyance for any decomposing matter that may be evolved, and adds to the injurious effects of such matter in the air;—in other words, the excess of moisture may be said to increase or aggravate atmospheric impurity.

"The evaporation of the surplus moisture lowers temperature, produces chills, and creates or aggravates the sudden and injurious changes or fluctuations of temperature, by which health is injured."

"Where there is a large accumulation of surplus moisture, having animal or vegetable matter in suspension or solution, the injury to the public health is so direct and considerable as to amount to a nuisance requiring authoritative intervention. The evils thus arising, which are found in the greatest intensity in low-lying town districts, in valleys near rivers, or on sites below high water mark, have been exemplified in the General Sanitary Report, and also in the Second Report of the Metropolitan Sanitary Commissioners. The inhabitants of drier districts are often afflicted with marsh diseases from the ill-drained lowlands; thus, after the prevalence of easterly winds over the Essex and Kent marshes, cases of marsh fever and ague are found scattered throughout the whole extent of the metropolis."

In the same report, under the head of "The Drainage of Parks and Suburban Lands," we find a notice of the drainage of the park near Liverpool, which, in 1857, when seen by the writer, presented the appearance of dry and healthful pleasure-grounds. This account should instruct Americans, because the Park at Birkenhead is one of the first beautiful landscapes that meets

his gaze after his weary wanderings over the dreary waste of waters.

The space of ground near Birkenhead, now called the park, was, a short time ago, like much suburban land near the metropolis, a mere marsh, over which thick mists hung at nightfall. It was thoroughly drained by Sir Joseph Paxton, with drains varying in depth from seven feet to close surface drains. The mists and fogs created on this tract have, since the drains came into operation, disappeared. The expense of that work was £20 per acre; and the land, which before the drainage was worth only £1 per acre, is now worth, at the least, £4 per acre for pasturage; so that the work pays 15 per cent. direct profit, besides effecting its main object,—the improvement of the neighborhood in comfort and salubrity.”

Upon this point, as upon so many others, we are obliged to refer to English authority, because so little drainage has yet been effected in our own country, and because our government has as yet collected no statistics touching the matter.

There is no reason apparent, however, why the testimony of eminent agriculturists abroad should not be deemed as reliable as that of our own countrymen.

In 1848, “queries” were issued by the “Metropolitan Sanitary Commissioners” regarding the Drainage of Land, and the following extracts from the answers of gentlemen of the highest character, as published by order of the British Government, will be found pertinent and satisfactory as to the beneficial effect of drainage upon the health of domestic animals and of the population.

Mr. Smith.—In the alluvial clay districts of Stirlingshire, and west of Perthshire, where the drainage was formerly effected by large open ditches, in the Dutch fashion, ague was periodically prevalent, and rheumatism, fevers and scrofulous affections were much promoted, until the introduction of thorough-drainage, forty years ago; after which period those diseases began to disappear, or to be mitigated in severity. Few cases of ague now appear. Fevers are seldom known, except in the usual course of fevers which prevail epidemically over the whole country; and it is generally observed by the inhabitants that their cattle or stock are now less subject to diseases. In the undrained condition of these districts they were subject to dense fogs, especially in the autumnal months when much rain had fallen, communicating a chilly feeling to the inhabitants; but since the general introduction of thorough-draining those fogs seldom prevail, unless in a general foggy tendency of the atmosphere of the country.

Mr. Parkes.—The complete drainage of town and rural districts is universally admitted to be conducive to the health of both man and animals. The medical profession are, however, best qualified to give testimony to the one, and veterinary surgeons to the other.

The disease of footthalt in sheep and deer has

been perfectly removed in many gentlemen’s parks, and in extensive pasturage grounds, by deep under drainage. The earlier seasonable maturity of venison, and a greatly improved flavor, are also the acknowledged results of complete drainage. Footthalt, however, is known to occur where sheep are turned on very luxuriant herbage, kept continually moist from the state of the atmosphere, though the land be not wet; so that drainage alone will not, on all soils, and at all times, exempt animals from suffering from this disease.

In respect of increased salubrity induced in towns and rural districts by drainage, I may instance the acknowledged disappearance of ague and other periodical maladies consequent on the great drainages effected in Cambridgeshire—as in the Isle of Ely, &c.—and in the Lincolnshire and other great marshes.

As an example of the good effects arising from the drainage of swamps, I may state that the Commissioners of Her Majesty’s Woods and Forests, of which your lordship is the chief, have recently caused me to drain an extensive tract of country in the New Forest, called the Weare’s Lawn and Bog, adjoining which is a small hamlet, whose inhabitants previously suffered much from intermittent fevers. The hamlet is now healthy; the offensive gaseous emanations from the soil have ceased; and the inhabitants are supplied with abundance of the purest spring water, discovered during the operations of drainage, and appropriated to their use.

Mr. Spooner.—Beyond the general improvement in a sanitary point of view, and the diminution of fever and ague, acknowledged to have resulted from the drainage of the fen districts of Cambridgeshire and Lincolnshire, and the marshes of Essex, I am not acquainted with cases in which improvement in the health of population can be traced to drainage as a sole cause; but in respect to stock, a striking instance can be adduced of improvement in healthiness resulting from drainage alone, attributable to no other cause. In the Highlands generally, and more particularly on the west coast, there exists a well known and fatal disease among sheep, incurable by any treatment, termed “Braxey,” which on undrained lands and in wet seasons is a cause of very serious losses. This is, in a great measure, prevented by drainage, and the diminution of casualties alone is more than sufficient to cover its cost, independently of the increased quantity and better quality of the fodder produced. This system has been extensively practiced for several years, and invariably with the same beneficial results.

Mr. Macaw.—As to the health of cattle or stock, I have the strongest evidence of the beneficial effects of drainage in many instances. On the lands which I possess, and on several others in the district, a disease called red water prevailed, in some years proving very fatal; but after drainage and cultivation of the marshy parts of the pasturage the stock has been free of that disease. I may mention that the first and most severe cases of pleura pneumonia in cattle that had occurred in this and a neighboring county were on lands of a swampy, undrained character. The surface drainage of sheep walks in every district is well known to promote the

healthiness of the stock; and I believe the thorough drainage of a single swamp in any locality will be an important means of improving the health both of the population and stock connected with it.

Mr. Beattie.—It is apparent that animals have more comfort and thrive better on dry lands than on wet.

I am aware of instances where marsh lands have been dried, and all the disagreeable and injurious effects arising from the swamps removed, such as frosts, fogs and blights, &c. These lands have been again allowed to become wet, and all the evils formerly complained of have returned.

Where undrained lands produce bad herbage for the food of stock, and their influence in the neighborhood are injurious to crops that produce the food of man, they must of necessity be injurious to the health of the population and stock, independent of the injurious influence of the atmosphere, which cannot be so easily determined.

Mr. Neilson.—In the Altcar Meadows, belonging to the Earl of Sefton, a low level district about eight or ten miles north of Liverpool, a water-wheel was erected about five years ago, for the purpose of relieving the land from inundation; and though thorough-drainage has been very little adopted, the inhabitants speak of the increased salubrity of the locality, while the equally increased fertility of the land has created a marked improvement in the condition of the stock. In my own neighborhood, some low flat land of a stiff clay soil, and lying extremely wet, always had a scouring effect on the young stock turned on it in the spring; and no application of manure produced any alteration. It was drained, and, without any other change in the management, the same species of stock thrived on it extremely well.

This is easily accounted for; the wet prevented the manure from fermenting, and fostering that species of herbage best calculated to promote the vigorous growth of animal substances, and the land became covered with a verdure unsuited for that purpose.

The withdrawal of the water produced fermentation; the aquatic plants were superseded by a more food-producing species, carbonic acid gas was more speedily absorbed, and, instead of the exhalations of the marsh, a purer oxygen was evolved, increasing both the salubrity of the atmosphere and the condition of the stock.

I have also had several opportunities of witnessing similar effects in the West Indies, and particularly in British Guiana, where I resided several years. The surface is almost a dead flat, lower than the sea at high water, and drained only at considerable expense by large sluice-gates for each estate, which are opened each period of low water.

When an estate is abandoned, this is neglected, and its neighborhood is invariably the first to suffer from the approach of an epidemic; and I have known instances of the course of a fever thus produced being checked, and materially altered, by the neighboring lands being drained, an alteration considerably accelerated by a small quantity of lime, in a finely powdered state, being distributed on the lands during a windy day.

For the New England Farmer.

GRAFTING NATIVE GRAPE STOCK.

DEAR FARMER:—I see by your Marblehead correspondent that he has found the same trouble with myself in raising native grape vines from seed. About ten years ago I planted some grape seed, and have been waiting to see what varieties I should get, and I found that the largest and most thrifty vines, although they blossomed full, never set a grape, and by comparing them with those that bore fruit, I found they would never bear. Last spring I got some cuttings that were three buds long, and in May, after the vines had grown leaves as large as dimes, I cut the vines off so low that two or three inches of dirt could be put on top of the stock; then I split and grafted the same as in apples; if the stock is small, a string tied round the top will help hold the scion fast till it is grown in. It is better to have a stock three-fourths or one inch in diameter, and then nothing but dirt will be needed. No wax should be used. My vines have now grown over eight feet in length, with side shoots four feet long, and still they are bound onward. I have not cultivated them this year any, except to take off the suckers, and these will need looking after every week; and yet there are leaves on them that measure 12 inches wide and 13 long, and the vines would in two years, if attended to, cover friend G.'s arbor. I would not destroy the roots till I had grafted them. I think they will soon be valuable fruit-bearing vines.

A. J. DODGE.

Francestown, N. H., Aug., 1859.

For the New England Farmer.

TOP-DRESSING.

"It is an excellent time to apply composted manure as a top-dressing immediately after the hay is carried from the field, as the young grass will grow up and cover it in a few days.

If this work is not already done, it should be, before the grass ceases to grow, so that the autumnal rains shall moisten the manure and carry its fertilizing properties among the roots."

The above, Mr. Editor, you will perceive, is copied from your editorial. Had you added,—if your land is already in a good condition, so that the grass will grow up immediately and cover it, or if you are sure it will rain immediately after spreading your manure, and for several days to come, until the fertilizing properties are all washed from it into the soil, or if your manure is composted of materials that are purely inorganic and will not evaporate, then you would have driven the nail where it is said Noah drove the first nail. (if nails be drove,) when he built the ark, and I should have been saved the mortification of sending my poor composition before the public. As it is, permit me to offer an amendment to your proposition, in which I will endeavor to give my own experience, corroborated by science, as I understand it.

I have learned, by experience, that the best time to apply manure as a top-dressing to grass lands, is late in autumn or in winter, so late that the manure, after being spread upon the surface, will remain most of the time in a congealed state

except when drenched by the thawing rains of winter.

The snows which are so liable to come upon us at that season of the year, will soon cover it, bidding defiance to the winds which are so eager to catch up its fertilizing qualities, bearing them hence to no particular spot.

The greatest benefit I ever received from top-dressing, was spread on the snow in winter, while that spread in early autumn has been almost an entire failure.

Ashes and other non-evaporating substances may be spread at any season of the year. Under the above process I have improved the condition of a farm which had been continually deteriorating under the process of plowing, so that the barns that were not more than two-thirds filled are now filled—full. This season I have been obliged to reap and cradle my grain, which heretofore has been mowed, for want of barn room, and all this has been done in the space of four years.

Now let us examine it in a scientific point of view. It has been my pleasure, as well as privilege, for the past few years, to enjoy the reading of your excellent paper, of which the editorials have not been of the least importance. You have frequently set forth in them, (and I think not without foundation,) as a principle, that the substances which combine to perfect the formation of the vegetable kingdom are classed under two heads, called *organic* and *inorganic*. That the organic substances are derived from the atmosphere, and the inorganic from the soil; that when these substances have combined and formed vegetable matter, and are permitted to decay, being exposed to the open air, will return to the source from whence they came.

Now, does it appear reasonable that our compost manure, a large share of which is organic, should be spread upon the surface, under the burning sun of July, August or September, exposed to the evaporating influences of sun and air, and that in case it should not rain for a week, would almost be relieved of its organic substances, or, at least, of those parts which are of any service, leaving only the inorganic, which alone cannot perfect vegetation? N. H. L.

Otter River, Mass., 1859.

REMARKS.—When we wrote the paragraphs which "N. H. L." has quoted, we had not forgotten the objections he raises—they are valid objections. There is always more or less loss in top-dressing with organic manures. What we must do, is, to select that time which we think, upon the whole, is the least objectionable. We have asked the question of at least fifty among the best farmers in New England, "When is the best time to top-dress grass land?" and we think the reply has been, in a majority of cases,—“just as soon after you take your crop off as you can.” If the manure is applied late in autumn, the sweeping winds which prevail at that season desiccate it with great rapidity, even more rapidly than July suns. Just before snows fall in autumn, or early in April, are also good times to

top-dress; but the objection to the former time is, we cannot tell when the snows are coming, and do not like to risk the manure exposed to the fierce winds, and the objection to the latter time is, that the ground being so soft at that season of the year, might be injured by going over it with teams and wheels.

AUTUMN WILD FLOWERS.

BY MARY HOWITT.

The autumn sun is shining,
Gray mists are on the hill;
A russet tint is on the leaves,
But flowers are blooming still!

Still bright, in wood or meadow;
On moorlands dry and brown;
By little streams; by rivers broad;
On every breezy down—

The little flowers are smiling,
With chilly dew-drops wet,
Are saying with a sportive voice—
“We have not vanished yet!

“No, though the spring be over;
Though summer's strength be gone;
Though autumn's wealth be garnered,
And winter cometh on;

“Still we have not departed,
We linger to the last,
And even on early winter's brow
A cheerful radiance cast!”

Go forth, then, youths and maidens,
Be joyful whilst you may;
Go forth, then, child and mother,
And toiling men grown gray.

Go forth, though ye be humble,
And wan with toil and care;
There are no fields so barren
But some sweet flower is there!

Flowers spring up by the highway
Which busy feet have trod;
They rise up in the dreariest wood;
They gem the dullest sod.

They need no learned gardener
To nurture them with care;
They only need the dews of earth,
The sunshine and the air.

And for earth's lowly children;
For loving hearts and food,
They spring up all around us,
They will not be subdued.

Thank God! when forth from Eden
The weeping pair was driven,
That unto earth, though cursed with thorns,
The little flowers were given.

That Eve, when looking downward,
To face her God afraid,
Beheld the scented violet,
The primrose in the shade!

Thank God! that with the thistle
That sprang up in his toil,
The weary worker, Adam,
Saw roses gem the soil.

And still, for anxious workers—
For hearts with anguish full,
Life, even on its dreariest path,
Has flowers for them to cull.

For the New England Farmer.

BEAUTY, UTILITY AND REFINEMENT.

BY SUSIE SUMMERFIELD.

The day has arrived when it can be truthfully asserted that American agriculture has become elevated in the estimation of American people, and it is justly encouraged and promoted by scientific men, by earnest thinkers and workers who are pursuing the art. Now and then we find one of the "gentler sex" who presumes to express an interest in the occupation of farming.

It is an occupation in which a woman has a part to perform; then let her express her estimation, her interest in it, and she will help to lend an enthusiasm, a charm to agriculture, such as will interest and animate our young men; and she will prove her influence to be more potent than all the wise counsellors found among our grandfather and father farmers of old New England.

If woman but gives her hearty approval of this occupation, she will make sunshine to glow within our farm-houses, which shall vie with the glowing sunlight without, that mellows the luscious fruit, and matures the golden grain upon the productive fields. But, alas, some blush to do this, for fear of being unrefined, and I pity them in their mistaken opinion; while I take my pen to assert that a beautiful combination of beauty, utility and refinement, may and ought to have an intimate relation with the farm.

The word beauty is expressive of adornment or embellishment. Beauty is discernible in all of God's works, and why should not man aim to have it discernible in his work, too? It is governed by laws which are the writing of the Eternal mind, and are more stable than the created universe; then how worthy of man's attention is the art of adornment! Some men are so practical in all of their views of life, that they cannot deem beauty as having a laudable claim upon their attention, and seek for utility in all that they create or improve. Though the works of nature are created for our use; yet, all is symmetrically formed, and is teeming with loveliness; from the towering mountain upon which the clouds recline, to the crystal dew-drop that trembles upon the spire of grass as it glistens in the sunshine.

The rays of the sun which help to crumple golden borders for the clouds; to crimson the hill-top with amaranthine hue; which makes each shrub and tree to give out their soft shadows; also warm the brown soil, so that Mother Earth yields the green herbage and plentiful grain that sustains life in man and beast. The farmer who toils in the open fields may fail to recognize beauty in Creation's fair handiwork, while he deems that plants, trees and fruits are good, because man can use them. But let him lift his eyes above, and watch the silvery clouds in rich contrast with the azure sky, as they float along like winged ships; and at night, when the stars, one by one, come out, till the firmament gleams and glitters with stars, will he then forget that beauty is a twin sister with utility? Perhaps he looks upon the shade tree beneath which the red cattle recline upon a July day, or beneath which he seeks protection from a scorching sun, and lo! he beholds it as a very good

treasure, a goodly appendage to his farm! But let him pause, and take up one little leaf which the winds toss at his feet. Let him scan well its organization; see its thread-like fibres, its delicately notched edges, its velvet-like softness, its firm, glossy stem, and its green hue; then let him realize that each tiny leaf is ever assisting to purify the air which it inhales, while it clothes the tree which beautifies the landscape about him, and will he not recognize the combination of beauty with utility? Yes, reader, every shade tree that you plant, feeds upon carbonic acid gas, which feeds upon carbon and oxygen, and the trees absorb the carbon, which is obnoxious to man, and exhale oxygen, which is healthful; thus, when you beautify your grounds by planting trees at a proper distance from your dwelling, you are promoting your own good, although they may cast too broad a shade upon the mowing-lot or meadow near the old homestead.

Beauty is an emanation from God. One writer asserts that, "the fact of a beautiful object's being beautiful, is equivalent to the fact that its beauty is from God."

Bayne forcibly asserts, "that every thrill awakened in us by true beauty is a noble emotion, and when our nature is restored to what it was, or raised higher than before, beauty will beam upon us from every part of God's universe, till then scarcely dreamed of."

Now, since beauty is of such origin, is everywhere about us, and while no occupation of life is so capable of admitting it as the farmer's, is it unworthy of their notice, or of their efforts in creating it? The architect and the mechanic each study to combine adornment with utility, in all their designs and labors. Accordingly as they effect this harmonious combination, so are they estimated. It may, and should be so, with farmers. Regularity, symmetry and order are elements of beauty. Are not order and regularity desirable in farming? Are not nicely arranged fences, deeply and well-furrowed fields, well selected and well kept stock, and thrifty orchards, something which adorn a farm? Is it not for a farmer's interest to make such adornments?

It is also for his interest to have and use pleasant and comfortable dwellings. He should seek to adorn his homestead with graceful shade trees, flowering shrubs and cultivated vines. He should become inspired with glowing enthusiasm in all that is beautiful, useful and refined. Every farmer, his wife and children, should strive to make a harmonious combination of beauty, utility and refinement, until fruitfulness exists where once barrenness and leanness abided, thereby verifying the words of Keats, who said,

"A thing of beauty is a joy forever."

Although our yeomanry are under the necessity of laboring diligently and earnestly, yet they are not justified in disobeying Nature's laws, or in forgetting that God has endowed them and their offspring with immortal minds that require cultivation as much as do their broad acres. Some farmers, who plead that they have no time to read, to improve and beautify their homes, who go on over-tasking nature, fail in their schemes of acquiring an abundance, while they make themselves decrepid, *old* young men.

Yes, old in a physical point, but young in years. They have sons who become weary of home-monotony, of home-drudgery, and turn away in disgust with a farm life. Their fathers have failed to educate them as the times demand, and also fail to elevate their occupation in the estimation of their sons, and too often are left alone upon the old homestead in their declining years. But the intelligent farmer who studies for improvement, who has not infringed upon nature's laws, steadily increases his wealth, and old age sits gracefully upon him, as he retires to his arm-chair, to allow the son of his youth to stand at the helm. In such farmers' homes, we find fathers and mothers looking with eyes dim with grateful tears upon their offspring, who till the fields and cull the roses which they cared for in youth.

Beauty is something which is considered as belonging to woman. Refinement is what ought to characterize her, in her intercourse with her family and in society. While the yeomanry of our land should make a law like the Medes and Persians, that beauty, utility and refinement shall exist among themselves, their wives and their daughters should 'act well their part,' in the good work that pertains to the occupation which their fathers and brothers pursue.

Much has been said upon the want of refinement in our farm-houses. It is well that the subject has been agitated. It will awaken new thought upon the subject, while it will give rise to action in the cause of improvements. Perhaps, some have not thought that the introduction of literary periodicals, volumes of poetry, scientific discussions and essays, religious and moral papers and books, and agricultural reports would shed a halo of brightness around the "old home." But let each farmer patronize the book-seller, and let him subscribe for periodicals and papers, till he has planted them profusely within his home, and see if they are not as productive of good as the planting of corn, potatoes, and the foreign seeds from the Agricultural Department at Washington. Love of music ought also to be encouraged. Let the echoes of song vibrate the heart strings, and let it ring in the farm-house. Money that is invested in books, and in promoting intelligence and true refinement in a farmer's home, is better than an investment of hoarded money in a bank at six per cent. interest. The mind ever pays well for all efforts to enrich it, in all grades of society. Mind is immortal. Money is perishable. Money never clinks beneath the coffin-lid so that it makes music to the dead sleeper who once possessed it. As minds are expanded and improved upon in time, so will they be elevated and rejoice in eternity, if faith and forgiveness secure to them an entrance into Heaven.

SHEEP IN TEXAS.—There is a sort of mania, just now, about sheep in Texas. The start made a few years ago by G. W. Kendall—and his success, after going through all the phases of ill luck, losses and discouragements—which perseverance overcame—has induced many others to establish great sheep-farms in that State. Maj. Wm. Leland, one of the proprietors of the Metropolitan Hotel, in this city, is one of the number who has

followed the lead of Mr. Kendall, with every prospect of success. There is, beside the fine wool-flocks established in Texas, a constant, and large importation of the coarse wool-sheep of Mexico. It is estimated that a fourth of a million of Mexican sheep have crossed the line into Texas, since the first of 1859—and the number is constantly increasing. These Mexican sheep are crossed with Northern stock—and make a valuable progeny, both for wool and mutton. We shall expect, before many years more, to see Texas mutton sheep in the New York market, more frequently than we now see Texas beef-cattle—and that they will be much better liked, both by butchers and mutton-eaters, than the bullocks are.—*N. Y. Tribune.*

NEW YORK STATE AGRICULTURAL SOCIETY.

We have before us the eighteenth volume of the transactions of this Society, giving its operations for the year 1858. It is a handsomely printed volume of 850 pages, and is the *thirtieth* volume of the society, prepared under the direction of its able and accomplished Secretary, B. P. JOHNSON, Esq.

After a brief "notice" from the Secretary, in which he lays the volume before the "farmers of New York," the book opens with a report from the Executive Committee of the Society, in which they give a brief recapitulation of the leading transactions of the year. It is the full report of these transactions that makes up the volume. This report gives, in a condensed form, the condition and progress of agriculture and the mechanic arts throughout the State, as illustrated in the operations of the agricultural societies of the State. They say, that, upon the whole, the year of 1858 was a successful one to the farmers, and that a very commendable advance has been made in every department of agriculture. "We want"—say they—"to increase the number of well educated and intelligent agriculturists—men who are, in every respect, as well qualified for all the varied operations connected with agriculture, as are the men of other professions, who have been duly prepared for their pursuits."

On speaking of the *wheat crop* of the State, they say that investigations into the habits of insects has established one principle, viz:—that "where land is properly dressed and cultivated there is less liability of damage from insects, than where the land is poor, and the crop is neglected." This is undoubtedly true, as it is in the case of poor or diseased animals, who are sure to be attacked by vermin long before the healthy and vigorous cattle of the herd are. This is in compliance with a law of nature, who abhors a deformity as well as a vacuum, and sets immediately to work to put it out of sight! Lean and sickly crops, and lean and sickly kine, are

at once attacked by insect scavengers to hide the deformity from the fair face of the earth. But when the committee endorse the theory of Professor HIND, of Trinity College, Toronto, and English writers, who recommend "*good husbandry* as among the remedial measures to arrest the progress of insects," we think they do not, to say the least, give the true cause of the increase of insects. They say, "high farming is as destructive to vermin as to weeds, and it is *rarely* that the devastation committed in highly cultivated land is *very serious*."

We believe that the reverse of this is the case—that *high farming produces insects—that it feeds and shelters them, and produces the condition of things best fitted to a rapid and wonderful increase*. This, too, is in accordance with a natural law. The forests of certain sections of country sometimes yield no mast, or nuts, for several years in succession, so that the animals that enlivened their tops all disappear. At length they blossom again, and lo! long before the fruit has matured, the forest is vocal with the hopeful sounds of its old denizens, waiting for their accustomed food. And so is it with the grasses on the prairies—it is the plentiful crop that increases the destroyers, and not the lean and hungry ones.

We should aim to secure large and healthy crops, notwithstanding—but must set our wits to work to devise the ways and means to prevent their destruction by insects. But we certainly have done much that is favorable to their multiplication and vigor, in increasing the varieties and excellence of our crops. When apple trees were few, the fruit small, gnarly and almost as hard as flint, and the leaves were small, tough and wiry, we had but few curculios; but now that the cultivated apple is juicy and tender, the curculio finds it so admirably adapted to its purposes of propagation that scarcely an apple is left untouched by this tiny depredator; and so the caterpillar finds the leaves of the apple tree large, succulent and tender, and the very food it requires in order to sustain millions of its kind. So the tender leaves of numerous other fruits, as well as the great variety of vegetables which we have been pleased to introduce into our gardens and fields and cultivate, contribute to the aid and comfort of numerous insects, as well as to the gratification of our own appetites. Life, in this respect, as in many others, is a continued warfare. It is so between us and the insects, and between them and us. Who shall gain the mastery? They, by their instinct, or we, by our reason?

The committee then refer to the want of a more uniform and systematic mode of collecting the statistics of agriculture, so that we may bet-

ter know the number and value of our stock, of all kinds, and how to form a general estimate of average crops raised. They also speak of *Agricultural Associations*, and quote high authorities in their favor. The *Sorghum* or *Sugar Cane*, and *Steam Plowing* are considered, and the importance of a choice *Agricultural Library* is dwelt upon with considerable emphasis.

Their address last year was given by JOSEPH R. WILLIAMS, President of Michigan Agricultural College,—it occupies some thirty pages, and was of so excellent a character as to be very generally published in the agricultural papers during the last winter.

The next paper contains extracts from an address by Prof. NORTH, on "American Trees and Tree Planters," and is full of excellent facts and suggestions. He says that trees make generous returns for the room they occupy. The destruction of trees not only diminishes the absolute quantity of rain, but prevents its accumulation in springs, shaded valleys and swamps. A bare hill-side will shed water like a roof. Let the trees remain as nature intended, and the same soil becomes a sponge, absorbing the rain as it falls, and sending it down little by little to the thirsty lowlands. He gives an interesting account of the leading men who have presented the claims of trees, beginning with JOHN BARTRAM, who founded the first botanic garden in this country, on the banks of the Schuylkill, and mentioning ANDRE MICHAUX and his son, WILLIAM COXE, of New Jersey, DOWNING, M. P. WILDER and H. W. SARGENT. In confirmation of our theory about the increase of insects, and the state of warfare we are in, he says—"Every valuable tree has its enemies. The more useful the tree, the more numerous, busy and implacable its foes."

The retiring President, WILLIAM T. McCOUN, made a speech in which the subject of steam as a motive power on the farm was very ably discussed,—and then the newly elected president, ABRAHAM B. CONGER, made short, congratulatory remarks upon taking his seat. In a general discussion at another time, Mr. CONGER made an earnest address to the farmers to abandon the exhaustive process of feeding mainly on hay and adopt the root cultivation. He believed in the English dogma, that without roots for food, there must be few cattle; that with few cattle there must be little manure; and with little manure there must be light crops.

The report of the committee on *Dairy Farms* is a long and interesting one. We notice that the result of inquiries among dairymen, as to the amount of milk required to make a pound of butter, was stated at *fourteen* quarts. Colonel Pratt's dairy, of 50 cows, in 1857, was *twenty*

quarts; in 1858, *sixteen and one-sixth* quarts. It seems to us that the lowest number is a large one.

Then follow papers on "Experiments with different Manures on permanent Meadow Land," on "Draining," on "Potatoes," on "Winter Fruit," on "the Culture of the Cranberry," on the "Wheat Midge and Hessian Fly," on "Wheat and Chess," and then one on the "Edible Fishes of New York," by Robert L. Pell. This report gives a brief account of the fish common to the rivers and inland streams of the State in a very attractive style. Mr. Pell cultivates fish—as well as apples—and says,—"I am convinced that an acre pond, well stocked with pike, would yield more profit than a ten acre lot under ordinary cultivation."

A short chapter is devoted to the New York State Agricultural College, and then comes a long, practical and interesting chapter upon *Fences*, by S. Edwards Ladd. The subject is discussed under various appropriate heads, and embraces every kind of fence resorted to, including wire, stone, picket and hedge fences.

Following this are one or two hundred pages of miscellaneous matter, and the volume closes with the fifth report on the noxious and other insects of the State of New York, by Asa Fitch, entomologist to the Society.

We have now, briefly, brought to view the varied contents of this interesting and highly useful volume. It has not been made by an individual, but by many individuals, and the extended interest that has been secured to produce such a work must be a lever of great power in the State. To say that the work is as good as its fellows that have preceded it, would be saying much; but in some respects it is better. We hope the Society will continue its surveys of counties.

Mr. Secretary JOHNSON will please accept our thanks for the volume which has enabled us to make these remarks, and to complete our set of this highly-valued work.

OYSTERS AND STAR FISH.

The oyster beds in Providence river have suffered severely from the attacks of star fish, which, in some instances, have destroyed hundreds of dollars worth of oysters. The manner in which the star-fish contrive to carry off the delicate morsel contained within the shells of healthy oysters, has been more or less a conjecture. By many it has been supposed that the star-fish closes its arms over the shell, and so starves the oyster to death by refusing to let it open its mouth for food. An old supposition was to the effect that the star-fish succeeded in inserting a ray or finger into the gaping shell, and if it found the bivalve too strong for it, got rid of the diffi-

culty and the ray at once, conscious of its power of reproducing another; which conclusion may have been drawn from the fact that the star-fish readily parts with its rays to preserve its body, reproducing them again very speedily. Star-fish have been detected in the act of sucking the juices of bivalves through perforations, and also with their mouths applied to the edges of the valves. From the apparently paralyzed state of the bivalves found in such situations, it has been conjectured that the star-fish introduces some deleterious secretion within the valves, and thus leaves the mollusk torpid, and deprived of the power of closing its valves against the attacks of the destroyer. But it is not on living prey alone that the star-fish feeds. It seems to assist materially in cleansing the sea from dead and decomposing animal matter. A human tooth has been found in the stomach of a star-fish. Its mouth and gullet are admirably adapted for securing the animal substances on which it feeds. When the prey is apparently disproportioned to the parts into which it is to be conveyed, the œsophagus, or gullet, together with parts of the stomach itself, can be protruded and everted, so as to draw the desired food into the cavity by the application of the inverted surface to it. Thus small shell-fish are swallowed whole, and specimens still living have been found taken from the cavity.—*Newport Mercury*.

ABOUT BARNES.

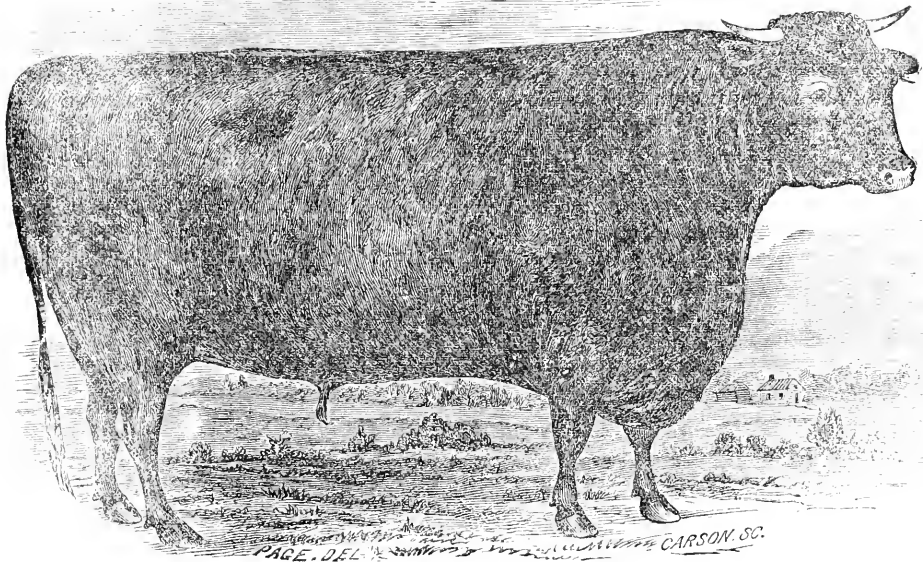
The careful attention of the reader is called to an article in another column, on *the form and manner of constructing barns*—a subject of the first importance to the farmers of New England. We do not mean to be understood as assenting to all that "J. W. K." says in his article—it may all be right, but we should rather see a barn so constructed before recommending them to others. His ideas, however, strike us quite favorably, and when we once had him "in our leanto," some years ago, had we known that his mind run so strongly to barns, we certainly should have detained him an hour or two to discuss them.

That our barns are too expensive in their first cost, too liable to rapid decay, and inconvenient in their arrangement, we have long been convinced, and our correspondent has our hearty thanks for giving the subject so much consideration, and for giving us an opportunity to communicate his views to the public.

LICE ON CATTLE.

Take white oak bark, boil it in water—making a strong decoction; wash the animals on the back and on the sides. In twenty-four hours the lice will be completely tanned. Tanner's oil is also first-rate.

REMARKS.—If you try this, use it with moderation, as all decoctions of this kind are of a powerful nature. You would not like to tan the whole creature while living.



A FULL BLOOD DEVON BULL.

The lover of good cattle will scarcely be able to forbear a criticism of the above symmetrical and every way beautiful portrait. Look at the head, and see what a brilliant eye it has, what slender and clean jaws; then glance at the legs, fashioned as though cut out in a modern lathe for turning irregular surfaces, and then at the extreme appendage, so small, long and graceful! Look at the straight back, the short neck, the powerful shoulders and brisket, and every part filled with muscle or fat, all so attractive that an alderman's mouth might water upon beholding him.

This animal was bred by Col. L. G. Morris, of Mount Fordham, N. Y., and is the property of the Hon. John Wentworth, of Chicago, Illinois.

As oxen, the Devons make as good as ever need to be yoked—there are, perhaps, none better. They are strong, docile, quick, have good length of legs, are excellent travellers, and are handsome; and when done with the yoke, they make most capital beef.

Devon cows, as milkers, are frequently of a high order, having all the good points and qualities of the best milch cows. Occasionally there is one giving milk of the richest quality. They

are preferred by some to all other cows for the dairy—but as a general thing, do not stand quite so high as the Ayrshire.

MILLER'S STEAM WAGON.

In Marysville, Cal., a steam wagon has recently been put in operation, and is represented to have proved a complete success. It is designed for travel on common roads, and to do heavy work with great power and steadiness. Mr. Miller, the inventor, has been constantly engaged for the last two years in improving the mechanism of his wagon, and in satisfying himself that the principle of his invention was correct. As is usually the case with inventors, he has struggled with many difficulties, but has at length, as we learn, the satisfaction of seeing that his labors have resulted in producing a new and valuable means of locomotion. We compile the annexed description of the wagon:

It is twenty feet long, by seven and a half feet wide, and is driven by a fifteen-horse engine, geared to work up to thirty-five or forty-horse power. It is constructed to move on endless tracks, that are laid down and taken up as the wagon proceeds.

These tracks are carried round on large wheels, of five feet diameter, to which motion is given by the engine, and the weight of the wagon is supported on small truck wheels of two feet di-

ameter, which rest on the tracks. These tracks thus form a movable railroad, which is carried along with the wagon, and furnishes the rails upon which the wagon moves.

The large wheels which carry the tracks do not touch the ground, and serve only to move the tracks under the small wheels, which bear the weight of the whole machine.

The two tracks, one on each side of the wagon, have a bearing surface on the ground of twelve feet long by four inches wide, which enables the wagon to pass over soft or sandy soil without sinking into it, and hence without any or very little loss of power by reason of increased friction.

On its first trials, the wagon was put to many tests, and with success in all. It ascended and descended steep grades, as high as one foot in height; it ran over soft ground without any loss of power; and hauled loads, under the circumstances, equal to fifteen tons, at two and a half and three miles per hour. It was as easily turned as any mule team, started as readily as a locomotive, and was stopped in a shorter distance. Some persons expected that the motion of this wagon would be rough and unpleasant—but it was not found so, as the wheels run on the smooth metallic surface of the tracks, and the movement of the tracks themselves is the same as that of a belt passing over two pulleys of the same diameter.

For the New England Farmer.

THE WEATHER OF THE SUMMER MONTHS, 1859.

Clouds and rain, and cold nights, were the prominent characteristics of the weather of *June*, rain falling on fifteen days, including six thunder showers; and, according to observations made by Mr. J. Weatherhead, at the U. S. Army, in this city, 6.38 inches of water fell on a level. Three frosts occurred during the month; on the mornings of the 6th, 11th and 12th, the first and last being very severe over the whole northern parts of the United States, with occasional exceptions. That on the 12th was the most severe in this section, doing great injury, not only to crops, but to vegetation in general. The grass, and leaves of plants and shrubs were frozen stiff, in many localities, and the ground, (in moist, plowed fields,) was frozen to the depth of one-fourth to one-half an inch. Ice formed in favorable situations. At sunrise, the thermometer stood at 34°, at my usual place of observations, but upon carrying it to low, marshy ground, some thirty rods distant, the mercury fell to 29°, while suspended in a *frozen bush*, and this in "rosy June!" Many gardens seemed nearly ruined, beans being almost universally killed, and corn and potatoes, in the fields, were greatly injured. In some instances, the leaves and young growth of the grape vine and white oak were blackened and killed. The weather throughout the month, with the exception of a few days, was so cold that vegetation advanced very slowly, and so wet that farmers were obliged to lose much time in consequence of the rain. At the close of the month, they were nearly a week behind-hand in their work, and the prospect for a corn crop was very discouraging.

July, however, was pleasantly interspersed with sunshine and rain, moderate heat, agreeable coolness, and refreshing north-west breezes. Drought and rain were so well apportioned, that vegetation suffered not from a too long continuance of the former, nor a superabundance of the latter, and the season for haying and harvesting was very good, though somewhat interrupted by showers towards the close of the month, and if the crops were not remarkably heavy, the farmers enjoyed the satisfaction of saving them in prime order. The weather was very cool about the 4th and 5th, and frosts were reported in some sections, as occurring on the night following the 4th, but of not much severity. There was extreme heat for only a few days, from the 10th to the 14th, the mercury reaching 96° at one P. M., on the 13th; but the last ten or twelve days had the pure atmosphere and agreeable coolness of September.

The weather of *August* was, in many respects, fine, being remarkably clear, with but little sultry weather or extreme heat. The first fourteen days were quite warm, however, their mean temperature being 70.09°, but the remaining seventeen were very cool, and occasionally to an unpleasant degree, and the mean temperature of this part of the month was 63.06°. A few times the maximum temperature was above 80°, during the fore part of the month, but as frequently fell below 68° towards its close. Three light white frosts were observed on low land, on the mornings of the 17th, 29th and 30th, here and there leaving traces of their effect on tender vegetation, but no serious injury resulted. About an ordinary amount of rain fell, more or less falling on eleven days, but there was a period of ten days, from the 13th to the 24th, without rain, and symptoms of a drought began to be manifest; and reports from many sections of the country represented vegetation as suffering considerably.

The weather throughout the season was quite unfavorable for the farmer, and rendered his prospects for a good corn harvest quite gloomy, and, at times, very uncertain. The frosts of June were very extensive and destructive, and many fields of both corn and potatoes never fully recovered from their effects. The consequence resulting therefrom to rye and wheat was for a time doubtful, but, at harvest, the damage proved to be slight, exhibiting itself occasionally in the half-filled heads of the former, in many fields, while a few pieces were wholly ruined. The light frosts in August again threatened great injury to corn, and other late crops, but fortunately the apprehensions of farmers were not realized; so the season afforded the novelty of frost in each of the summer months, without very disastrous results. Corn at the close of August seemed to indicate a fair crop, though very late; from ten days to two or three weeks of warm weather being then necessary for its maturity in this vicinity.

The mean temperature of the summer months was 65.6°; of June, 62.95°, being seven and a half degrees lower than the mean of June, 1858, and only about five degrees warmer than May; of July, 67.53°, being 4° colder than July, 1858, 3.2° colder than July, 1857, and 6.3° colder than July, 1856, which was remarkable for its great heat and dryness; of August, 66.31°; from .06° to 1.16° warmer than the three Augusts pre-

ceding. The mean temperature at sunrise was 55°; at noon, 72.73°; at three P. M., 74.16°; and at sunset, 75.23°. Of June, at sunrise, 47.47°; at noon, 68.83°; at three, P. M., 69.9°; and at sunset, 61.9°. Of July, at sunrise, 57.71°; at noon, 75.81°; at three, P. M., 77°; and at sunset, 65.68°. Of August, at sunrise, 57.78°; at noon, 73.55°; at three, P. M., 75.48°; and at sunset, 68.13°. The mean sunrise temperature varies but slightly from the mean minimum, and the mean temperature at three, P. M., as here given, is the true mean maximum.

The warmest day in June was the 29th, the mean temperature being 74.67°; in July, the 12th, with a mean of 80.83°, which was also the warmest of the season; in August, the 4th, with a mean of 76.33°. The coldest day of June, also of the season, was the 11th, with a mean temperature of 45.67°, and at nine o'clock, the thermometer stood at 49°, and at noon at 52°, though the sun shone clearly! Several other days were uncomfortably cool throughout. The coldest day in July was the 4th, the mean temperature of the day being 54.67°, and in August, the 29th was the coldest, the mean being 54.83°.

The extreme temperatures occurred as follows: highest in June, 91°, at eleven, A. M., on the 29th; in July, 96°, at one, P. M., on the 13th, also the highest of the season; in August, 86°, at three, P. M., on the 4th. The lowest in June was 34°, at sunrise on the 12th, which was also the lowest of the season; in July, 44°, at sunrise on the 5th; in August, 40°, at sunrise on the 30th.

The summer of 1859 was 3.34° colder than the summer of 1858, and 16° warmer than the summer of 1857.

Rain fell on thirty-six days; on fifteen in June, ten in July, and eleven in August. Fourteen thunder showers passed over this place, ten of which were from the north-west; six in June, five in July, and three in August. A remarkably heavy shower occurred on the 29th of June, and in some parts of western New England, was very destructive from hail and wind. The whole north-west presented one mass of inky blackness as it approached, and when ten miles distant, columns of dust began to rise at different points, soon spreading along the whole front of the shower, rolling up like dense smoke to the height of several hundred feet, and truly presented a somewhat alarming aspect. In a few minutes after the shower commenced, water ran in the streets in brooks. Hail also fell on the evening of the 26th of July, from the size of a pea to that of a hazel-nut. But the wind rising light at the time, no serious harm resulted, though the marks were visible for several days, on tobacco and corn.

Of the ninety-two days of summer, twenty-nine were clear, twenty-eight tolerably clear, sixteen cloudy, and in the remaining nineteen, clouds prevailed. There were but five clear days in June, ten tolerably clear, and fifteen quite cloudy. In July there were ten clear days, eleven tolerably clear, and five cloudy, and five considerably so. In August, there were fourteen clear days, seven tolerably clear, but three cloudy, and seven others more or less so.

There were forty-six days of wind from a northerly quarter, and forty-three from some southerly point, as follows: Thirty from the

north-west, fifteen from the north-east, and two from the north; twenty-six from the south-west, thirteen from the south, and three from the south-east, and six days of calm. In June, there were nine days of wind from the north-west, two from the north-east, two from the north, twelve from the south-west, five from the south, and two days of calm. In July, thirteen days from the north-west, five from the north-east, seven from the south-west, two from the south, one from the south-east, and four days of calm. In August, eight from the north-west, eight from the north-east, seven from the south-west, six from the south, and two from the south-east.

I noticed ten solar haloes, which, save in one or two instances, were followed by a storm of rain on the succeeding day.

I also noticed three Auroras, or displays of "Northern Light," all in August; that on the 21st was fine, but the one on the night of the 28th was truly splendid, and in many respects remarkable. It became visible as soon as twilight had sufficiently faded, and continued all night, with brilliant streamers of crimson, golden yellow, and various shades of red, yellow and greenish.

J. A. A.

Springfield, Sept. 2, 1859.

THE NATIVITY OF INDIAN CORN.

An intelligent article in the Cincinnati *Gazette* discusses the question of the nativity of Indian corn, or maize, which was one of the subjects before the American Scientific Association at Springfield. It will be recollected, perhaps, that Dr. J. H. Gibbon read a paper in which he contended that maize was not solely a native of America, but was also the product of Asia and Africa. He contended that it was known to the Egyptians, and that the manna which is said to have fallen from heaven for the sustenance of the Israelites, was maize, which did not literally rain down, but which was found along the way.

The article in the *Gazette* contends that maize is a native of America alone, and cites the evidence of Dr. Pickering, who says:

"Whether the maize was introduced into Egypt from the East or West, I have met with no evidence that the plant existed in the country prior to the discovery of America."

The writer also cites the evidence of Livingstone and Booth in proof of the fact that maize was not found in Africa, and contends that it was not known in Europe until 1332. Admitting that maize might have found its way to Japan across the Pacific, the article says:

"The points may be considered settled by positive testimony—that maize is a native of America, and that it is not a native of Europe. Our inquiry, therefore, is confined to Asia and Africa. Still it is important to observe that in Asia and Africa were the first settlements of mankind, and of them we have by far the earliest and most authentic testimonies, to say nothing of those memorable monuments on which is inscribed much of the domestic manners, and history of the ancients. If then the civilization of Asia and Africa knew anything of Indian corn, or potatoes, or buckwheat, or turkeys, is it possible that no evidence of them should exist in those histories or

monuments. Therefore it is that we consider the negative evidence as completely overwhelming. It is made conclusive by being entirely exclusive. Let us turn to the Mosaic account—the ruins of Nineveh and the monuments of Egypt. We find evidence of the existence of barley, and wheat, and beans, and onions, and lentils, but where is there any evidence of maize or potatoes? Indian corn is one of the most remarkable and easily described plants known, and yet all ancient history is silent on its existence. Where is the evidence? Wheat was found among the mummies. The entire absence of any sort of evidence, is, to our mind, conclusive of the question. But this is not all. The classic ages of Greece and Rome had intelligent writers on agriculture, and Rome brought from Africa a large portion of her supplies. Now, if Carthage or Egypt or Assyria, had ever known or heard of Indian corn, would these writers have been totally silent on so interesting a plant? Nor is this all. De Goguet, a learned French writer on the origin of arts and sciences, has collected all that the ancient writers say, and all that tradition asserted of ancient agriculture, and not one word is there about Indian corn. There is additional significance given to the fact, that wherever Indian corn, is introduced, it is an important plant. It is not a thing to be overlooked; and yet all ancient history is silent in regard to it. We conclude, therefore, with Dr. Pickering, that there is no evidence of the existence of this plant prior to the discovery of America."

WHERE THE GRASSHOPPERS GO TO.—We are glad to know that this jumping fraternity are to be destroyed in some way. The Port Hope (Canada) *Guide* says they are falling a prey to a grub very similar in appearance to the weevil. On examination they are found covered with these small but formidable enemies, the strength gradually departs from the joints of the strongest, and they die. It is said that the grasshoppers may be seen in myriads, "stark and stiff," in the fields, while those alive are so dull and inactive that they can do but little mischief to the green crops. Some farmers assert, with all sincerity, that the weevil, appearing too late to successfully attack the fall wheat, pounced upon the grasshoppers, then young and tender, and will destroy them instead of the grain. If this should prove to be the case, it will be one of the most extraordinary circumstances on record.

COSTLY CRANBERRY MEADOW.—Capt. Capon has expended one thousand dollars upon a single acre to bring it into cranberry meadow, and with the strong expectation that it will be a good investment. This is the most costly acre of cranberry land that we have ever heard of. If it will pay thus to fill in deep swamps, and then give them a coat of three or four inches of mud, with a top-dressing of sand, it is quite evident that those who have little else to do to their meadows but break them up with a plow, and set out the vines, ought at once to be about it. A situation where the meadow can be flooded until June or July is thought to be best, but there are different opinions, we find, in regard to the whole theory of cranberry culture.—*Barnstable Patriot*.

LOVE IS EVERYWHERE.

[We find the following in an English paper, a waif floating about, whose paternity we should be glad to state if we could. Please read it, remember it, and let its sentiment ever be present with you, so that *your* love, also, shall be everywhere.—*Ed. N. E. Farmer.*

LOVE IS EVERYWHERE.

The air is filled with a gentle song—
An under song of wooing—
As the leaf enshrouded woods o'erflow
With the sound of the ringdove's cooing.
In Nature's deepest haunts,
I hear a voice that chants:
"Why should the earth grow old with care,
Since Love, sweet Love, is every where?"

Ye will hear at night, if ye listen well,
Music in heaven ringing,
And amid the stars a melody,
As of angel voices singing;
For the spirits who in the spheres of light
Have made their happy dwelling,
To each other across the depths of space
Their tales of love are telling.

The sunbeams leave their glowing throne,
And whisper love to the flowers;
The birds outpour it in their strains,
As they sit in their rose-crowned bowers.
When the breeze swells mournfully,
Through the boughs of a swaying tree,
I ever hear a voice declare
That "Love, sweet Love, is everywhere.

In the moaning thunder of the waves,
That dash on some rocky shore;
Or the tuneful flow of the rippling tide,
When a tempest's rage is o'er—
In the murmured music of the brook
As it rashes the sea to gain;
Or the sullen plash on the silent pool
Of the swiftly falling rain—

In the gleeful laugh of the dancing spray,
From some skyward-leaping fountain;
Or the ceaseless roar of a white cascade,
In its giant bound from the mountain—
There falleth on mine ear
This song so sweet and clear:
"Ah, why should man e'er feel despair,
Since Love, sweet Love, is every where?"

For the New England Farmer.

LOOK TO YOUR APPLE TREES.

Among the numerous insects which attack the apple in wood, bark, leaf and fruit, there are none doing more damage, or likely to ruin more young trees in this locality, than a bark grub or borer.

This grub, which for want of a better name, I will call *Bark Borer*, is of a whitish color, without legs, tapering but little from the first ring. The head is broad and flat, nearly twice the width of the body. When full grown, they are an inch in length, with a head one-fourth of an inch broad, and no thicker than the body.

The eggs are deposited in June, July, or early in August, upon the bark of the body of the tree. When hatched, they eat into, and through the bark where they remain over winter. The next spring they feed between the bark and the wood, and attain their full size in May or early June. Of their transformation I cannot speak advisedly.

The bark borer is undoubtedly of the same family with the borer from the larvæ of the two-striped *saperda* (*saperda bivittati*) which attacks the apple tree, quince, white ash, mountain ash, locust, and various species of thorn, at or near the ground. Young trees from one inch to four inches in diameter, are preferred by the bark borer, and if they are crooked, or lean to the north or east, they are more liable to be attacked. The grub seems to poison the tree, and the bark dies faster than it eats.

At this season they have not got through the bark, and are from one-fourth to one-half inch in length, and are usually found doubled like a fish-hook. Their location is ascertained by the dead, black look of the bark, and if they are not dislodged, your tree is ruined. My method is to cut them out with a sharp knife and then wash the tree with a liquid recommended by Prof. Mapes, which is made by the following recipe:

Sal Soda 1 lb. Water 1 gal.

Heat the sal soda to a red heat, then add the water.

J. R. WALKER.

Springfield, Vt., Aug. 20.

RAIN WATER---UNDER-DRAINS, ETC.

The following article is full of useful truths, but the writer, in enumerating the sources from whence the soil receives water, has failed to notice that portion received from dews and from condensation upon the surface of cold particles, from the atmosphere circulating in the soil. The fact that the surface evaporation of water reduces the temperature of soils, and that such loss is prevented by under-draining, is fully proved. The loss of ammonia and nitric acid by drainage water is, however, over-stated, as, when the drains are sufficiently deep, the loss of these ingredients is no greater than would occur in undrained lands by the same ingredients sinking below the level of roots, while in the drained lands the reception of nitric acid and ammonia from the atmosphere is increased much more than equal to the quantity parted with by the water.

Whatever be the sources of the influence exerted by the rain upon the soil, it is only as the soil enables it to reach the roots of plants that it can act for good. Let us, therefore, consider the means of its access to the plants growing on the soil.

Water can get into the soil in three ways—1st, as rain falling directly on its surface; 2nd, as in the case of spring-water, rising from below, where there is a direct connection between the soil and a reservoir at a higher level; 3rd, by that surface attraction of matter for it, which, as exhibited by porous substances on water lying beneath them, is called capillary attraction. And it is plain that any attempt to drain a field must be guided by all three of these considerations. The quantity of the rain-fall, added possibly to an additional supply from beneath, and both held with more or less tenacity by capillary attraction within the soil, is the agent which you wish by means of drainage, we will not say to get rid of,

but to direct to useful ends in the growth of your plants.

Again—water can leave the soil in three different ways: 1st, by running over its surface; 2nd, by evaporation from the surface; 3rd, by percolation through its substance. And let us consider what the water does and does not do when escaping from the land in each of these several ways.

1.—In the first, when running over the surface of the land, it is of course inoperative. It is wanted to dissolve food out of the soil and feed the plants upon it. It is wanted to bring its own supplies, such as they are, from the air for the nourishment of these plants. It is wanted to break up and comminute the soil by its passage through it. It is wanted for the sake of its own dissolved oxygen and carbonic acid, as well as for the same ingredients in the atmospheric air which follows it in its passage downwards, both of these substances acting usefully in the laboratory of the soil. And it is wanted especially in the spring time for the sake of the temperature of the spring showers, which, if they could get into the land, would warm it. None of these things can it do. It runs off the surface without penetrating it, and its influence as well as want of influence are shown in the case, which often happens, of rain-water falling on a frozen field. If it could gain access to the substance of the soil, the whole furrow slice would at once be thawed, and we should have vegetable growth recommencing earlier. If it could make its escape through the soil instead of over it, we should avoid these surface currents which wash the finer particles into the furrows and the ditches. The *fertilizing* influence of a *constant* surface current seen in the water meadows is perfectly consistent with the mischievous influence of the state of things with its occasional surface currents seen in every undrained field. The former coexists along with an escape of water through the soil, for a constant drainage is as necessary as a constant water supply to successful irrigation.

2.—But let us now consider what the water does during its escape by evaporation. In the first place it is worth while remembering as being among the comparatively indefinite results of evaporation from the surface of the soil, that in this way great loss ensues of the nutritive substances which the water held in solution. It is very true that some theorists contend for what they call the leaf-feeding of plants, and urge that all the benefits of cultivation during the growth of plants arise from the extension of this evaporation, by which the leaves of the growing plants thus obtain a more abundant supply of food; but we believe that our object in cultivation should rather be to increase the stores of food within the soil, and that tillage operations have this tendency by increasing the quantity of absorbent surface within the soil which is exposed to the air.

The principal result, however, of the loss of water by evaporation is indicated by the fact that during the conversion of every pound of it into vapor, as much heat is consumed and lost as would be produced by burning 2 or 3 ounces of coal; and when you think that an ordinary rain-fall amounts to 3000 tons per acre per annum,

you can easily conceive that the loss of heat by the evaporation of a comparatively inconsiderable portion of this must involve a great cooling of the land. If thirty inches of rain were evaporated in this way, it would need 1 cwt. of coal per hour per acre through the year to make good the loss of heat sustained in this way; a quantity which, in Dr. Arnott's hands, would give us an Italian climate. The quantity, however, actually lost by evaporation is of course nothing like this; a great deal of water finds its way through the land. The water supply of all our springs and wells, if that were known, would indicate its quantity for the island. A great deal escapes in flood times by running over the surface, and a great deal now finds its way out of drains after percolation through the soil. Notwithstanding these causes, however, and notwithstanding the extremely irregular character of the rain-fall, the loss by evaporation must be very considerable. Dalton measured the quantity of water escaping from two rain gauges, one of an ordinary kind, and the other filled three feet deep with earth, and he found that of thirty-three inches of rain which fell per annum as indicated by the one, only eight and a-half passed through that quantity of earth as indicated by the other, and he concluded therefore that the difference between the two—twenty-five inches, or three-quarters of the whole annual fall—escaped by evaporation.

Mr. Dickinson, of Abbot's Hill, near Kings Langley, has for several years copied Dalton's experiments, with results somewhat different from his; finding that of twenty-six inches per annum fifteen were evaporated, while as much as eleven, rather more than two-fifths of the annual rain-fall, passed through the soil. His results, however, probably exaggerated the quantity of the rain-fall which in general passes through the land, for it is plain that earth loosely placed in Dalton's gauge is much more likely to transmit the rain which falls upon it than the same depth of earth can be in ordinary circumstances, the lower half at least never having been disturbed since the Deluge. And in fact the attempt of Mr. Milne Home to ascertain the truth upon this point, by measuring the water actually escaping from the mouths of drains in a field of a given extent (though it on the other hand was liable to an opposite error, because it could not take account of what went through the land altogether to feed the wells and springs of the neighborhood.) leads to the conclusion that a much less quantity of water than either Dickinson or Dalton indicates, passes through the land in the course of the year. And it would appear from this that the loss of water by evaporation even in well-drained soils is considerable, and therefore that the loss of heat by evaporation is to a great extent unavoidable.

3.—Let us now, however, consider what water does by percolation; and its effects here we must do little more than enumerate. They are shortly these: It carries the temperature of the air into the soil, a thing the possible injury of which, as in autumn and winter, when the air is colder than the soil, is as nothing compared with the benefit of it in spring, when the air is warmer than the soil, and when the advantages of early growth are great. The most important experi-

ments which we know, proving the influence of drainage on the temperature, are those described by Mr. Stephens in his exceedingly instructive little book descriptive of the Marquis of Tweeddale's operations at Yester Mains, where, the temperature of soil being 40 deg. in its undrained state, the cutting of a drain near it and the setting in of a current through it, raised its temperature $1\frac{1}{2}$ deg. in six hours.

Another effect of water percolating through the land is seen in the introduction to it of the atmospheric elements which it holds in solution. The carbonic acid by its operation on the alkalies and alkaline earths is a powerful solvent and disintegrator, and the oxygen keeps in check the decaying effect of vegetable matter in the soil, which in its absence tends to reduce the higher state of oxydation of the iron present in the soil into the lower state, when it does mischief by forming with acids in the soil soluble salts injurious to vegetation.

But the main purpose served by water during its percolation through the land is that of feeder of the plants. A fertile soil, cultivated so as to exhibit its fertility in the most profitable manner, has growing upon it crops whose habit and specific character are adapted to the climate in which they are placed, and to the character of the soil itself—it yields these crops in the order in which each succeeding to the cultivation of its predecessor shall find the soil, chemically as regards its contents, and mechanically as regards its texture, and practically as regards consequent cleanness of the land and the fitness of their respective times of cultivation to one another, in the best condition for the supply of the wants of the crop in question—it is annually manured and cultivated so as best to meet the current wants of the plants cultivated on it—but it is especially dependent for all its powers to bring these crops to a fruitful maturity upon the fact that there is during every shower and after every shower of rain a continual current of water and a current of air throughout its substance, not too rapid, lest its soluble parts should be washed to waste; indeed, it is hardly possible to be too slow; slow enough, however, to dissolve from the soil whatever it contains of food for plants, and fast enough to be continually bringing fresh supplies by every mouth which the absorbing extremities of the roots of plants present.

All these purposes of *warming* the soil, of *introducing substances* within it which shall operate chemically upon the mineral and other matters within the soil, and of *converting the soil into an efficient vehicle* of the matters which it contains, are answered by the percolation of water through the soil. You must not think, then, of drainage as being a contrivance for getting rid of water as an enemy from the land; nor must you think of a wet and ill-drained field as being merely an illustration of the injury done by water *in excess*, as it is called. Water need hardly ever be an enemy, and need hardly ever be in excess. Drainage is a contrivance for making use of it as a friend, and an ill-drained field is an illustration of the mischief done by water, whether there be little of it or much, when not in motion.

It is well, however, to consider the *mischief* that may be done by the percolation of water. If, as it moves through the soil, it contains the

food of vegetables in solution when it passes the mouthpiece of a plant, no doubt it also contains useful matters in solution when it passes into the drain which is to convey it altogether away, and the waste of food for plants by our drainage water is a matter of considerable importance. It has been most admirably investigated by Mr. Wray during the past year. His results are given in the following table:—

Samples of Drainage Water from Mr. Paine's very highly manured field contained grains per gallon of		Samples of Drainage Water from Mr. Acland's poor clay contained grains per gallon of	
Ammonia.	Nitric Acid.	Ammonia.	Nitric Acid.
.018	7.17	.003	4.78
.018	14.74	trace.	2.69
.018	12.72	.012	.628
.012	1.95	.012	.12
.018	3.45	trace.	.485
.018	8.85		
.006	11.45		
.018	3.91		

He found that the drain of water from highly manured fields near Farnham contained eighteen thousandths of a grain of ammonia in every gallon; but as much as four to fourteen grains of nitric acid; while from ordinary poor arable soil in Devonshire the drain water contained from three to twelve thousandths of a grain of ammonia, and from one-tenth to as much as four grains of nitric acid in a gallon.

From this it appears that there is a very large waste indeed of nitrogen in the form of nitric acid in the drainage of very highly manured fields; comparatively little, however, in the case of fields of ordinary cultivation. Whatever it is, we must simply bear it as a tax upon the otherwise general advantage of the practice of land drainage. One very satisfactory thing observable in the results of these experiments is the comparatively small quantity of ammonia which the samples of rain water contain, even when compared with that present in the rain water which falls upon the land.—*Agricultural Gazette.*

For the New England Farmer.

FARMING, AND OTHER PROSPECTS IN KANSAS.

MR. EDITOR:—I am what is called here, a "Boston Yankee," and I am also a subscriber to the *New England Farmer*.

Although the New England system of farming is not very applicable here, where the soil is so rich, and where the plow has rarely turned the rich earth to the sunlight, and where one year's labor upon one acre of ground will equal a yield of five years' labor upon one acre of New England soil, yet in every number of your valuable paper we gather new hints, which are a great help to us in our laudable efforts to become farmers. Your domestic articles, hints as to the arrangement of a farm, remarks upon poultry, trees, grasses, &c., are read with interest by two of the old Bay State citizens—viz.: my husband and myself.

I think I have never seen any communications from Kansas in the columns of your Monthly, and perhaps a letter from the fast-improving and glorious Territory may be interesting to many of your readers.

Kansas is swiftly growing. The emigration into our Territory this season, and the number of "claims" that have been taken up and are rapidly being made into farms, is almost unprecedented. Many of the squatters are New Englanders, just the kind we want, for they bring the real go-ahead spirit, and what is best of all, Free State principles. We don't catch a Yankee here that don't have them.

New England homes, New England comforts and pleasures, New England intellect and beauty, New England domestic and social life, have become so proverbial, that to say, "That man is a Yankee," perfectly establishes his identity, and his acquaintance is cultivated forthwith. They will trust a Yankee here, as far as they can see him, and *further, too.*

The new Constitution has been formed at Wyandotte, and probably at the next session of Congress Kansas will be organized as a State under Republican principles. Now, Kansas is performing its political affairs in an honorable and legal manner, and will soon take an honorable position under the stars and stripes of our national flag.

Now is the time to come to Kansas for health, wealth and wisdom. Our troubles have heretofore kept substantial men away, who did not like to risk their all upon uncertainties—but now "come and possess the goodly land," for certainty is now a free and sure word. Kansas has now some excellent citizens, and next year's emigration will consist of substantial farmers, who have sold their property in the East, and will come here with means to buy land, and improve and farm it on an extensive scale. This emigration will bring money among us, and hereafter produce what will continue to bring money.

Possessing a soil of unexampled fertility, a climate healthy and pleasant, extending in an undulating succession of fields of verdure hedged with woodland, Kansas comprises every inducement for a sudden and brilliant prosperity. If the reports of the enraptured "squatters" are to be credited, no other region presents half so many inducements.

I have written you but little concerning the agricultural character, but in another number I will do so, and show the New Englander how we break prairies, make homes, and farm it easy, in Kansas.

SUSIE V.—

Sumner, Kansas Territory, Aug., 1859.

THE WHEAT CROP OF 1859.—The farmers and the entire population of the country very naturally feel a deep interest in the prospective market value of our great staple product, wheat. The crop is very large, and the quality is better than for years. The yield is so great that two bushels can be afforded as cheap as one last year. If 75 cents can be realized now, it gives the farmer better remuneration for labor than \$1.50 last year. If the corn and potato crop had been as good in proportion as the wheat and oats, we could hardly have expected to have realized in the Western States even 65 cents for wheat. As it is, we think it is safe to calculate that the market value of good club wheat will not be very far from that figure, and certainly will not remain much below.

—*Wisconsin State Journal.*

For the New England Farmer.

THE ONION.

In conversation with a practical gardener this morning, about the remark made by Mr. Huntington, that his best onions, the present season, were on that part of his field where no manure at all was applied, (which field I examined yesterday, and found the fact to be as stated,) he said he had found maggots to rage less on a warm, light, porous soil, than on that which was otherwise. This principle he thought applied equally well to Mr. Huntington's crop, as that which he had applied. Perhaps the true reason may be found in the combination of the two causes. It is important to determine the true cause, because it is admitted by all who have seen them, that Mr. H.'s crop of onions is superior to any other in the neighborhood—full half of most other fields having been destroyed by the worm.

If any mode of checking the ravages of this insect could be made certain, it would be an annual saving to this town of \$50,000—and quite as much to several of the adjoining towns.

I have forborne troubling you with communications of late, because I find my neighbors are watching the signs of the times, and are always ready to tell all they know, and *sometimes a little more*; but when *the onion is crowded upon*, I think my legitimate province is invaded. P.

South Danvers, August 30, 1859.

LADIES' DEPARTMENT.

LEGISLATION IN THE NURSERY.

See the young mother in the nursery with an unfolding human character committed to her charge—see her, profoundly ignorant of the phenomenon with which she has to deal, undertaking to do that which can be done but imperfectly even with the aid of the profoundest knowledge. She knows nothing about the nature of the emotions, their order of evolution, their functions, or where use ends and abuse begins. She is under the impression that some of the feelings are wholly bad, which is not true of any one of them; and that others are good, however far they may be carried, which is also not true of any one of them. And then, ignorant as she is of that with which she has to deal, she is equally ignorant of the effects that will be produced on it by this or that treatment. What can be more inevitable than the disastrous results we see hourly arising? Lacking the knowledge of mental phenomena, with their causes and consequences, her interference is frequently more mischievous than absolute passivity would have been. This and that kind of action, which are quite normal and beneficial, she perpetually thwarts; and so diminishes the child's happiness and profit, injures its temper and her own, and produces estrangement.

Deeds which she thinks it desirable to encourage, she gets performed by threats and bribes, or by exciting a desire for applause, considering little what the inward motives may be, so long as the outward conduct conforms, and thus cultivating hypocrisy, and fear, and selfishness, in place

of good feeling. While insisting on truthfulness, she constantly sets an example of untruth by threatening penalties which she does not inflict. While inculcating self-control, she hourly visits on her little ones angry scoldings for acts that do not call for them. She has not the remotest idea that in the nursery, as in the world, that alone is truly salutary discipline which visits on all conduct, good or bad, the natural consequences, the consequences, pleasurable or painful, which in the nature of things such conduct tends to bring. Being thus without theoretic guidance, and quite incapable of guiding herself by tracing the mental processes going on in her children, her rule is impulsive, inconsistent, mischievous often in the highest degree; and would indeed be generally ruinous, were it not that the overwhelming tendency of the growing mind to assume the monotype of the race, usually subordinates all minor influences.

DOMESTIC RECEIPTS.

PICKLED BEANS.—Select young beans; string and wash them. Make a brine of salt and water strong enough to bear an egg. Put your beans into it, and let them remain until they change color. Then take them out, and wash them in clear water. Line the bottom of your kettle with green cabbage leaves, put in your beans, and as much vinegar and water, or clear water, as will cover them. Lay cabbage leaves over the top; put them over a slow fire, and let them get scalding hot. When they are green, take them out and let them drain. Put them in jars with some allspice, cloves, a little mustard seed and scraped horseradish, and enough vinegar to cover them. Tie them close, and keep them in a cool, dry place.

PICKLED ARTICHOKEs.—First wash your artichokes, put them in strong salt and water, and let them remain four or five days. Then take them out, rinse them in fresh water, wipe them dry, and put them in jars. Add to them cloves, allspice, and mustard seed. Cover with cold vinegar, and tie them up close.

PICKLED NASTURTIUMs.—Lay them in salt and water for two or three days; then wash them in fresh water, and let them drain. Put them in jars, and cover them with cold vinegar.

If it should be preferred, a little spice may be added to the vinegar, but it discolors the pickles. A little sugar is a very great improvement.

PICKLED MUSHROOMs.—Select small mushrooms, commonly called *buttons*. Cut off the end of each stalk; scrape, wash and spread them out to drain. Take as much vinegar as will cover them, put into it some stick cinnamon, mace, cloves, allspice, and just enough salt to taste. Put the mushrooms in jars. Boil the spice and vinegar, and pour it over the pickles while hot. Cover them close, as soon as they get cold.—*Widdifield's Cook Book*.

TOMATO PIE.—Line the sides of a deep plate with pastry, slice the tomatoes thin, add sugar, a little butter, some pounded cloves and nutmeg, and half a cup of water. A little flour makes the sirup richer. Cover the whole with pastry, leaving an opening in the centre to let the steam escape.



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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SIMON BROWN, EDITOR.

FRED'K HOLBROOK,) ASSOCIATE
HENRY F. FRENCH,) EDITORS.

NOVEMBER.

"No warmth, no cheerfulness, no healthful ease,
No comfortable feel in any member;
No shade, no shine, no butterflies, no bees,
No fruits, no flowers, no leaves, no buds—NOVEMBER!"



NOVEMBER! Doesn't the very name strike a chill to your heart? If, as our old friend the "Spectator" says, MAY is a month of which lovers should beware, and those who escape its tender influences may be expected to go scathless

through the rest of the year, so November, with its fogs and its storms, and its gloomy aspect, is productive of quite a different set of feelings.

Then it is, that "despair and fell revenge," and various other things which should not "be to our bosoms known," take possession of us. It is, indeed, a month just "fit for treasons, stratagems and spoils." Yes—now we think of it, Guy Fawkes was of the same opinion, for—

"O, don't you remember
The fifth of November,
The gunpowder treason and plot?"

That ingenious little device, by which King James and his parliament were to be sent flying through the air in a manner quite unexpected to themselves.

Statistics show that there are more deaths, births, and marriages, (we have rather reversed the order, but no matter,) in certain months of the year, than in certain others. We have some-

times wondered whether the "Newgate Calendar" would not show that the dreariest months, are those most productive of crime.

"Salem Witchcraft" has long gone by, but if ever you are disposed to be charitable towards the weak superstition which condemned harmless old women to be drowned or burnt, it will be of a wild November night. Then, if ever, you can fancy the traditionary witch abroad on her broomstick, howling in your chimney, and knocking loudly at your window pane!

It is true, there sometimes comes a November so fair, so full of "Indian Summers," that it goes far to redeem its character from the obloquy which has been heaped upon it, and if ever we are authorized to expect such an exception to the general rule, it should be this year, when nearly every month has done its best to turn to nought our preconceived notions.

For example, that sweet month of MAY, which every one expects to come like a fair young bride, turned out but a sullen vixen of an old wife—and JUNE, with its buds and flowers, and all these fancy articles with which we are wont to adorn its memory, came and went in a series of drizzly, rainy days. The "Fourth of July" so froze our patriotism, that hardly a *feror* was left to bestow upon our "glorious country"—our "beloved fellow-citizens"—and even the "American Eagle" seemed to droop his wings like the veriest barn-yard fowl. Certainly no one, taking a prophetic view of AUGUST, would have hesitated to interperse it with dog-days and thunder-showers. How mortifying for such an one to sit, wrapped in his shawl, reading his own article, while his eye also glances over numerous little items of whole meadows of cranberries being spoiled by frost, in what ought to be the very heat of dog-days. Doubtless, all almanac makers and writers of monthly calendars will sympathize with these sentiments.

There is a paragraph going the rounds, to the

effect that the earth is receding from the sun, as indicated by the fact that the sun's disc grows smaller, and that according to the records of the ancients, it was formerly much larger, we believe four times as large, as at present. If this be true, posterity may see our world only a vast snow-ball. We would fain hope, however, that it is the mistake of some drowsy astronomer, who looked through the wrong end of his telescope.

Such is the dependence of the planets on each other, and upon the sun, the centre of the system, that such a variation might be expected to make considerable discord in the "music of the spheres." It is true, the comets wander about in an erratic and unexpected manner, but our earth is not supposed to have any tail, and cannot, therefore, come under precisely the same head! So that we think we are authorized in rejecting the idea that we are travelling out of the region of heat and light. In spite of theorists, so far as we have read, no very marvellous change has ever come over men, animals, or climate.

Races of men and animals have indeed become extinct, but man has always been *man*, and the earth's zones have always sustained many of their present characteristics. The world is rather a conservative old body, after all, and we would not attribute these variations of weather so much to any radical change in the laws of government, as to some slight causes, which for convenience we might call accidental.

Having said thus much, we would not undertake to predict what the following month is going to turn out, but for our genial views on the subject see Bryant's perfect little poem. We made a solemn compact, internally, that not one word of it would we quote, because

"Lives there a man with soul so dead,
Who never to himself hath said?"

those lines every fall since they were first written? But it's all of no use, so here they are:

"The melancholy days are come,
The saddest of the year,
Of wailing winas, and naked woods,
And meadows brown and sere.
Heaped in the hollow of the grove,
The withered leaves lie dead;
They rustle to the eddying gust,
And to the rabbit's tread."

"The saddest of the year,"—for though life is indeed locked up in those dry branches, and lying at the root of each skeleton tree, we realize it no more than, when we walk through some old churchyard, we realize the *resurrection* for which the silent forms around us are waiting. Death, and its symbols, is all that meet our eye, but in the one case we have the "sure word of prophecy," and in the other, the result of repeated observation. Not one of all these dead leaves at

our feet is lost, or wasted. They will all re-appear again, by-and-bye, in another and more beautiful form.

Let us leave the world to its winter sleep, then, cheerfully, for although our summer and harvest were short, do not our barns and our store-rooms testify that they did not come in vain? It is, very appropriately, at this season that our Yankee *Thanksgiving* is appointed—an observance which is spreading year by year, throughout the United States—for as the children of New England migrate to different parts of the Union, they must needs carry the customs of their forefathers with them. It is now more than two hundred years since the first Thanksgiving was instituted here.

Some of us may have forgotten the incidents which produced it, although we learned at school in our histories, how there was a famine in the land, and a time was set apart as a day of fasting and prayer. But a ship laden with provisions came to them from the "old country," and this day of fasting, was changed to one of *Thanksgiving*.

As we, the happy families of New England, gather around our Thanksgiving tables, then here's to the memory of our Puritan ancestors!

TO CURE HARD PULLING HORSES.—Put the curb chain inside the mouth, from hook to hook, instead of out. How or why it acts with such considerable effect, I know not; but at times, it utterly puts an end to over-pulling. To stop a runaway horse, or render the most pulling brute quiet and playful with his bit, get a double snaffle, rather thick and heavy, the joints rather open; cut an old curb chain in half, and let it hang down from the bottom snaffle joint. When the brute offers to pull or bolt, instantly merely drop your hand; of course, the curb chain will drop between his front teeth; and should the beast savage it, [if any of your correspondents wish to try the effect on themselves, they have only to place a nut between their front teeth and try to crack it, they will soon understand the vast difference between pleasure and pain.] So does the horse; and in a very short time, he will play with the very thing he before tried to savage; and in the end, become, from a vicious brute, a playful and good mouthed animal.—*London Field*.

AGRICULTURAL EXHIBITIONS FOR 1859.—There have been held during the month of September, one hundred and ninety-seven State and County Fairs; and there are one hundred and twenty to take place during the months of October and November.—*Practical Machinist*.

QUITE A FARM.—The whole amount of the public land surveys, as returned to the General Land Office, for the year ending with the last month, is nearly 53,000 miles, or about fifteen million acres, nearly equal to the whole extent of New England.

ARTIFICIAL GUANO.

I enclose a recipe for a new fertilizer, which I intend preparing this week by way of trial. The cost of the raw material is about \$10.

VALENTINE'S RECIPE FOR ARTIFICIAL GUANO.

No. 1. Dry Peat.....	20 bushels.
No. 2. Wood Ashes.....	3 "
No. 3. Fine Bone Dust.....	3 "
No. 4. Calcined Plaster.....	3 "
No. 5. Nitrate Soda.....	40 pounds.
No. 6. Sulphate Ammonia.....	53 "
No. 7. Sulphate Soda.....	49 "

If peat cannot be obtained, use garden mould or clean virgin soil.

MIXING.

Mix Nos. 1, 2 and 3 together; then mix Nos. 5, 6 and 7 in four or five pails of water; when dissolved, add the liquid to the mixture of 1, 2 and 3, as in making mortar; when thoroughly mixed, add No. 4, the calcined plaster, which will absorb the liquid, and bring the whole to a dry state.

Mix under cover, in a dry place. Pack so as to exclude air.

Product, one ton, which will manure $7\frac{1}{2}$ acres of land.

I think the artificial guano would be improved by the addition of a bushel each of poudrrette and dried blood, and shall try its effect. — *Gardener's Monthly*.

REMARKS.—Will Dr. Reynolds, of Concord, or some other chemical friend, tell us what they think of the above, to be used as a fertilizer?

COAL ASHES AS A FERTILIZER.

The editor of the *Boston Commercial Bulletin* says he has seen several communications and editorial discussions in the *New England Farmer*, and is disposed to add to the common stock of information by the following remarks. He says:

To solve the question affirmatively would be of great importance to farmers and gardeners, especially those living in the vicinity of cities and towns where coal is used for fuel. Without any pretensions to a practical knowledge of the subject, we are tempted to give our experience in a small way. Upon a half-acre of land, partly in grass and partly cultivated, we have tried the experiment as follows, with great success:

In November we cleared out of the cellar ashes made the previous season from seven tons of anthracite coal mixed with the ashes of one-half cord yellow pine wood used in kindling; to this was added equal parts of horse manure and loam, well mixed together. A part of this was used at the time upon a piece of grass ground more than twenty years in the sward, put on about two inches thick as a top-dressing, which has this year produced two crops of fine grass, in place of white weed and other nuisances, and the ground has shown no signs of being affected by the dry weather. The balance lay in a heap till spring and was used on the cultivated ground both for spreading and in the hill.

RESULTS.—While in former years the early potatoes planted from the same kind of seed have invariably rotted before the time for digging, this

year there has been the most productive crop of the largest and best quality. The sweet corn averages nine feet in the stalk, the leaves of a clear green, and the ears perfectly filled, and so with all the other vegetables in the garden. We believe coal ashes have been rejected without a fair test. The great hue and cry made about their destructiveness to the trees on our Common, instead of leading to careful investigation, resulted in a summary condemnation. The same result might have followed, if lime, plaster, or even wood ashes had been used, as the coal ashes were, — to the depth of two feet or more, unmixed with loam or sand. We hope the experiment will be fairly tested, as everything which helps build up the farmer's manure heap is beneficial not only to him, but to those who depend on him for their vegetables.

HOME EDUCATION.

Whatever defects there may be in home education, it is certain that the exceptions are rare where the moral training of the mother is not according to her best capacity, for the benefit and advantage of her offspring. Her influence is often counteracted by the habits and examples of the father; but in such case she is not responsible if her care and teachings are of no avail. Home education, where the parents are united in sentiment, leaves its impression upon the mind and heart which can never be totally obliterated. The principal cause of departure from the path of right is evil associations. The poor mother, engaged in her household affairs, dependent upon her labor for a livelihood, has little time to devote to her children; and as soon as they are able to walk by themselves, they seek playmates, and the youthful mind is readily impressed for good or evil according to the disposition of the associations. The effect of these impressions is more lasting in most cases than the influence and example of parents. If children were early less subject to such influences, there would be less vice in the world. Home education is the best for the youthful mind. The most determined man in every situation of life will, to the latest period of his pilgrimage, be influenced by the early teachings of his mother, if the example and the habits of the father are in unison with her counsel and instruction.

SMALL FEET IN PERU.—*L'Union Medical* states that the ladies of Lima are noted for their extremely small feet, the secret being that the infants of the female sex undergo, as a rule, amputation of the little toe of each foot. So general is the custom, that many women think that five toes on each foot is a state of things peculiar to the male sex. It is said that a Peruvian surgeon is going to London and Paris, where he expects to make a fine harvest. He warrants the ladies the tiniest and most graceful foot, by means of the above named amputation, and confinement to the house of only one week. The writer adds, that a custom of this kind prevailed pretty generally in Paris, some years ago, kept up by a very reprehensible complaisance of a surgeon, who had acquired some celebrity touching the silly mutilation.

For the New England Farmer.

TYPE--SPECIES--VARIETY.

The word Type is frequently used in science. It stands for an abstract notion, and is not readily understood. It is that image which we form in the mind, made up of all the traits that are common to a genus, a species, or a group of any kind. Every person forms such a type in his own mind. It may be more or less accurate. It is the idea that springs up at the mention of the word man, or bird, or grass, without the mentioning of the particular man, or bird, or the kind of grass. We have in the type all the habits that are common to all the individuals of the group, leaving out peculiarities; as in all men there is a common form distinguishing them from all other animals, notwithstanding they differ greatly among themselves in height and proportions and cast of countenance. No one individual has all the traits of the ideal image in perfection. What horse is a perfect horse according to the standard we have in our minds? But when one species embodies most the traits of the genus, we speak of it as the type of the genus. The eagle may be said to be the type of the bird.

Species has been defined to be "primordial organic forms." By this we understand the original characteristics of the first created individuals which by a law of nature have been transmitted. Each species comprehends all the individuals which may have descended from one original. The characteristics of many plants and animals have been modified by circumstances of climate and cultivation, producing *variety*; but nature has carefully preserved the type of the species, and when left to themselves in their native place, the individuals take on their primordial forms. The following facts are important:

1. Species may be modified indefinitely by circumstances—producing varieties.
2. One species cannot be changed into another.
3. No continuous progeny can be produced by the mingling of two species so as to form a new species.

The first of these facts is the one of the most practical importance to the agriculturist. Almost every plant he cultivates and every animal he uses is a variety or variation from the original type.

There are two questions concerning varieties which it is important that every farmer should be able to answer in respect to every species of plant and animal with which he has to deal.

1. How can valuable characteristics be produced?
2. How can they be preserved and transmitted?

The fleshy root of the beet, the compact head of the cabbage and the large tubers of the potato have, doubtless, been produced by cultivation. That is, by placing the plant in good soil, fertilizing it and tilling the ground.

Every species needs especial and peculiar treatment to develop in it desirable properties. In general, horticulturists and florists understand this better than farmers. There is much useful knowledge in existence upon this point which ought to be systematized and diffused. New varieties of potatoes, apples and peaches, are produced by planting the seeds; but the result, so

far as I know, is a chance—no one can tell what kind of cultivation of the seed will give a potato of desired and definite qualities. There is probably much to be discovered on this point.

But when we have an individual of good qualities, how can those qualities be preserved and transmitted?

We do it in the apple by grafting, in the current by cuttings or layers, in the potato by planting the tubers. In each case the new plant springs from the bud, and may be considered a multiplication of the old plant. New individuals are produced only from the seed.

In the animal kingdom the case is full as important, but the object is not so easily accomplished.

There are, however, laws of propagation in the animal kingdom which successful breeders understand, and which are very reliable. No one can see the results of the experiments of Mr. PAOLI LATHROP, of South Hadley, without being convinced that it is possible to combine and render permanent in one variety of cattle, the most desirable characteristics. This can be done only by avoiding, for many generations, the blood being tainted by that of individuals of degraded qualities.

M.

Wilbraham, Sept., 1859.

HAMPSHIRE, FRANKLIN AND HAMPDEN SOCIETY.

The last annual meeting of this society was held at Northampton, and brought together one of the best exhibitions of neat stock in the State. The Short Horns are the favorite stock in the Connecticut Valley. Their fertile pasture lands, and rich intervalles afford them the means of bringing this stock to a higher degree of perfection than is possible in less favored lands. Many noble oxen were exhibited, weighing from 4000 to 5000 pounds per yoke. Of such cattle, their owners may well be proud. When such cattle will spring from the soil, the smaller breeds, the Jerseys, and the Ayrshires, stand but a small chance.

The Address, by Dr. G. B. LORING, "unfolded the true picture of New England Farming Life," with much beauty and eloquence—and indicated a more correct appreciation of the subject than the highly-colored, but untruthful limning in the pages of the *Atlantic*. The paper of Mr. GRENELL, on sheep culture, is of much value and interest. We notice that the East Hampton Farmers' Club "added much to the exhibition by the fine collection of vegetables presented by them," and also by the exhibition "of the plates of apples, most of them of the choicest varieties." An award of ten dollars was made by the Club to encourage future efforts. East Hampton has acquired much celebrity for its fine fruit. The Farmers' Club in that town is a very efficient one, and has done much to promote fruit culture, and thereby add to the prosperity and reputation of the town.

The last paper in the report is an interesting

one by H. J. HODGES, the Secretary, showing the effects of top-dressing, consisting of different kinds of fertilizers, for the years 1857 and 1858, upon seven half acres of grass. Each lot was upon the same kind of soil, and in the same condition. The substances used were poudrette, plaster, superphosphate of lime, horse and cow manure, ashes and guano, and one lot was left without any dressing. The result was, that ashes was the only profitable fertilizer to be used as a top-dressing on such land. The lot upon which the ashes was used, was the only one upon which the increase of hay paid for the fertilizer. The lot upon which the guano was applied the first year, gave 105 pounds more hay than the lot dressed by the ashes. But the guano cost \$5.24, while the ashes cost but \$2.00. Eight dollars worth of horse and cow manure increased the hay only to the value of \$1.66, leaving a loss of \$6.44.

We should be glad to have many more such experiments made and reported with the same accuracy, especially as the idea seems to be gaining ground, that top-dressing is an economical way of applying manure to grass land. We have no doubt that this is the best mode on heavy, moist land; but on light, dry soil, we fear it can never be profitably substituted for occasional plowing and re-seeding.

The amount of premiums awarded by this society was \$802.25.

For the New England Farmer.

THE FABLED WHITE GRAPE.

Who has ever found the native "white" grape, of whose existence the public are at intervals informed? To be sure, we have the Rebecca, which might in popular language be styled a "white" grape; but what I am in pursuit of, is, that native "white" grape which is declared to exist in several localities as a pasture seedling. Has there ever been such a grape found? does such an one anywhere exist? I have walked many a mile to see with my own eye wild grapes, which, in their neighborhood had the reputation of being white, but somehow or other they would always insist on blushing in my presence, particularly on their sunny side.

Some years ago, a relative, on reading an advertisement by a gentleman residing in New Hampshire, stating that he had a native white grape for sale, proposed to purchase; I endeavored to dissuade him, but seeing was believing, and he purchased a vine, and half a peck of the grapes. Alas! for his anticipations, when that box was opened in my presence, the grapes blushed, as usual! This gentleman planted seed from these grapes, and the fruit on his seedlings recalled to my mind the result of his investment. To help settle for myself the question, whether or not our pastures or forests contained a grape that can properly be called white, (the Rebecca to be excepted,) I shall be happy to pay to

any individual a ten dollar bill who will forward to me next spring a native white grape vine, white in a fair use of the word, i. e., one whose fruit shall not show a well defined lilac tinge where the sun looks at it. Observe, I say nothing of the flavor of the article; it may be a combination of choke cherry and sulphuric acid—no matter for that, only give me a white, native seedling.

JAMES J. H. GREGORY.

Marblehead, Mass., 1859.

HANDLING HORSES WHILE BEING SHOD.

A most important job, that of shoeing a horse, is very frequently performed by a careless or ignorant smith, whereby valuable horses are often lamed or injured. Dr. W. Pierce, V. S., in a note to the *Ohio Cultivator*, in alluding to this fact, remarks, that horses sometimes stand quiet and easy, at other times they refuse to stand still, while one foot is up—they struggle until it is released, and frequently the shoer beats, speaks sharply, swears, and frightens the horse, so that he must be held by force or abandoned. Another takes his tools and sets his shoes without any trouble.

The Dr. gives some of the reasons for this. He says: Under certain circumstances the muscles cramp, causing severe pain. Almost at any time a horse's hind leg may be raised so high, or in such a position, as to cause severe cramping, not to be endured. When a horse has had all the muscles relaxed by exercise, and stands and cools quick, an unusual position will most certainly produce cramping, and at the same time make him irritable. A horse that has stood for some time in the cold, uneasy, and suffering with anxiety to get home, is in a bad condition to stand the bangs, and often painful position, of shoeing, and too often fretted to that degree that he never gets over it—too often forced to stand and endure the pain of severe cramping, pricking, etc., until he will never forget it, and often refuses to enter the shop again.

Some horse-shoers have a habit of raising the foot and leg so high that no common horse can stand it, and thus he will shoe horses half his life-time before he knows that the fault is in himself. The awkwardness and ill-temper of some shoers is sufficient reason to withdraw your patronage, although they may do their work well. The damage done by forcing the horse to stand in pain, and the injury to his disposition, is infinitely more injury than to go ten miles, and spend a day and pay double price to one who has some sympathy, and shoes him without pain—one who exercises some reason and judgment and patience, and seems to sympathize with the suffering animal—has little or no trouble, and does no damage.

I once knew a horse that if he was minus a shoe, would go by himself to a particular smithy, and there stand until the shoe was set. I once owned a horse that was shod three or four years without any trouble—at last he was sent to a shop to be shod and the shoer, being a little intoxicated, frightened him, beat and abused him in such a manner that he ever after feared to approach a blacksmith shop, and if forced to enter one, would tremble with fear. I think I shall be

justified in saying that one-half of the horse-shoers are incompetent to the task, saying nothing about their workmanship of setting shoes. I have no doubt but some fancy shoers are the cause of splints, bogs, and curbs, as well as kicking, cringing, pulling at the halter, etc. etc.

Reader, if you are the owner of a good horse, go yourself and see him shod, unless you are well acquainted with the shoer, and know him to be careful, patient, mild tempered and humane. Withdraw your patronage from all reverse characters, before you sustain a loss. Never submit to, or employ a shoer whose character and intellect is inferior to that of your horse. If you do, you may have him lamed, abused and spoiled.

For the New England Farmer.

THE INFLUENCE OF THE MOON UPON VEGETATION AND THE WEATHER.

With the many good things we have inherited from our progenitors, are many foolish notions that have been faithfully transmitted from one generation to another; and among the more common are those in relation to the peculiar influence of the moon upon vegetation and the weather. Though generally discarded among the more intelligent, there are many who still adhere to them with tenacious faith, and believe that planting potatoes, peas, beans, melons, and all plants of similar habits, at some particular age of the moon, is more likely to cause the energies of the plant to result in the production of vines than otherwise; or, in other words, to "run to vines" if planted in the "new of the moon." That this is an idle fancy is altogether probable; though when a crop seems to "run to vines," this is ascribed as the cause without further thought, by farmers generally. Peas have grown in my garden the past season to the average height of between seven and eight feet—the highest we or any of our neighbors ever saw—and several farmers who saw them, were not slow to remark, "you must have planted them in the new of the moon," but to me there appeared sufficient cause for their luxuriant growth in the highly manured soil and a wet season.

The opinion in regard to the moon's influence upon the weather seems to be more general, and recognized by those familiar with Nature's laws and her operations—several meteorologists of note giving countenance to the idea—while the scores of *special* "signs," based on the form or position of the new moon, must be groundless, as, for example, when the horns of the crescent moon are in such a position that the "old Indian can hang his powder-horn thereon, it will be dry weather," or "it is a dry moon," and *vice versa*. This occurrence is observed at regular intervals, and depends upon the relative positions of the moon and sun.

By many, special power is attributed to the "old of the moon." That in August is the best time to cut bushes, and eradicate shrub-oaks and willows, I have no doubt; but that the age of the moon has anything to do with it, or renders one part of the month preferable to another for the purpose, I beg leave to dissent from, notwithstanding the familiar saying, "Mow bushes in the old of the moon in August to prevent sprouting;"

and it taxes my credulity in the potency ascribed to the moon a little too much to believe her so powerful as to authorize the old sayings about doing this in the old moon, and that in the new in preference to any other time. It savors too much of belief in unlucky Fridays.

My attention was directed to the subject of *lunar influence upon the temperature* by remarks in an article in the August number of the monthly *Farmer*, page 380, by N. T. T., of Bethel, Me. He says: "Physicists are not inclined to attach much importance to the influence of the moon upon the weather, but it seems to be a well established fact that when the moon runs high, as farmers say, it is colder than at other times. It is the dread of the farmer that he shall have a frost on the full of the moon, either late in the spring or early in the autumn. He always looks for it at that time, and no other," etc.; and adds: "Here I believe is an interesting field of inquiry, requiring, to be sure, a long series of observations, but which will result in something important to the cause of science and scientific agriculture."

As I chance to have the means at hand of ascertaining, for a short time at least, the facts in the matter, taking my old almanacs and comparing the "moon runs low" and the "moon runs high," with my themometrical tables and written account of the weather of each day for the last three and a half years, I have the following results: By taking the mean temperature of three days when the moon was high or low, (the day of the maximum or minimum height, and the day preceding and subsequent,) and averaging all the observations when the moon was low, and comparing them with an average of all the observations when the moon was high, for three years, ending with August, 1859, comprising eighty observations, I find the average of the observations to be 22° lower when the moon was high than when she was low; the mean of all the observations when the moon was low being 47.31°, and the same when the moon was high being 47.09°. For the year ending with August, 1857, there was a difference of 1.65° in favor of the theory that the temperature is higher when the moon runs low; the year ending with Aug., 1858, gave 1.57° against the theory, while the year ending with Aug., 1859, gave a difference of .58° in favor of it, as is shown by the following

	Low.	High.
For the year ending Aug., 1857.....	46.65°	45°
" " " " 1858.....	48.11°	49.68°
" " " " 1859.....	47.17°	46.59°
For three years end. Aug., 1859.....	47.31°	47.09°

Of course, nothing decisive in this matter can be derived from so short a period of observation as I have given; but that this theory, or rather opinion, so prevalent, in regard to the moon's influence on the temperature can be sustained, I am strongly inclined to doubt, although it is not to be denied that the moon exerts a great influence upon our atmosphere, producing tidal swells, as has been reliably ascertained by a long series of barometrical observations by men who have devoted much of their attention to meteorology, and *probably* lunar influence has consid

erable to do in the varied phenomena of the weather, and perhaps in the fluctuations of temperature. Whatever influence the moon does exert is so modified by more powerful, and consequently disturbing causes, that it is rendered so complex and obscure that its effects have escaped the observation of meteorologists hitherto, or at least have resulted in the deduction of no fixed principles; and, indeed, the whole science of the weather is so complicated that a great length of time must elapse before the establishment of many of its principles.

I noticed, in looking over my record of the weather, that the extremes of heat and cold, *save in a very few instances*, did not occur either when the moon was high or low, at full moon or new moon, but during the intervals between; also that the early frosts in the autumn, or late frosts in the spring, did not often occur when the moon was high, but as often when it was low, and as often at new moon as at full moon.

As the sidereal month, (the time occupied by the moon in one revolution about the earth—about 27 days and 7 $\frac{3}{4}$ hours.) is shorter than the synodical or lunar month, (the time that passes between two consecutive new or full moons—about 29 days and 12 $\frac{3}{4}$ hours.) the time of the full moon seldom occurs in conjunction with the time of the moon's passing nearest the zenith, nor new moon when the moon is furthest south of the ecliptic. I append a statement or table showing an average of the mean temperatures of three days of new and full moon for three years, embracing seventy-four observations, as follows:

TABLE OF THE MEAN OF ALL OBS. ON THE MEAN TEMP. OF THREE DAYS AT EACH			
		<i>New Moon.</i>	<i>Full Moon.</i>
For the year ending Aug., 1857.....	45.91°	41.62°	
“ “ “ “ 1858.....	47.86°	43.59°	
“ “ “ “ 1859.....	46.81°	47.19°	
For three years end. Aug., 1859.....	43.86°	46.57°	

Which gives 2.90 in favor of the prevalent idea that it is colder at full moon than at new moon.

While I am sorry, Mr. Editor, to trespass so much upon your patience and the columns of the *Farmer*, (if you should choose to publish the article,) I would be glad to have these things satisfactorily ascertained, and some of these whims, if they be such, exploded; and probably a series of observations covering ten years or more—the longer the time the better—would do something towards it; and if any of your correspondents or readers have thermometrical tables covering that time, with a little trouble it may be ascertained. I have given a few results, which a longer period of observations might probably modify.

Springfield, Mass., Aug., 1859.

J. A. A.

TO MAKE STORE VINEGAR.

To make good vinegar, take forty gallons of rain water, one gallon of molasses, and four pounds of acetic acid. It will be fit for use in a few days. Acetic acid costs twenty-five cents per pound. This is the recipe by which most of the cider vinegar is made, which is sold in the stores.

REMARKS.—Try this in a small way until you have tested the value of the mixture.

For the New England Farmer.

TOADS AND THEIR SKINS.

MR. EDITOR:—In a short article in the *Farmer* about toads, it says: “he rolls up his old coat in a pile, and swallows it.”

Now, as I have seen him take off his coat and pants, and a friend has seen another do the same thing in precisely the same way, it may be interesting to others to know the process.

About the middle of July, I found a toad on a hill of melons, and not wanting him to leave, I hoed around him; he appeared sluggish, and not inclined to move. Presently, I observed him pressing his elbows hard against his sides, and rubbing downwards. He appeared so singular, that I watched to see what he was up to. After a few smart rubs, his skin began to burst open, straight along his back. Now, said I, old fellow, you have done it; but he appeared to be unconcerned, and kept on rubbing until he had worked down all his skin into folds on his sides and hips; then grasping one hind leg with both his hands, he hauled off one leg of his pants the same as any body would, then stripped the other hind leg in the same way! He then took the cast off cuticle forward, between his fore legs, into his mouth and swallowed it; then, by rising and lowering his head, swallowing as his head came down, he stripped off the skin underneath until it came to his fore legs, and then, grasping one of these with the opposite hand, by considerable pulling stripped off the skin; changing hands, he stripped the other, and by a slight motion of the head, and all the while swallowing, he drew it from the throat and swallowed the whole. The operation seemed to be an agreeable one, and occupied but a short time.

CALEB BATES.

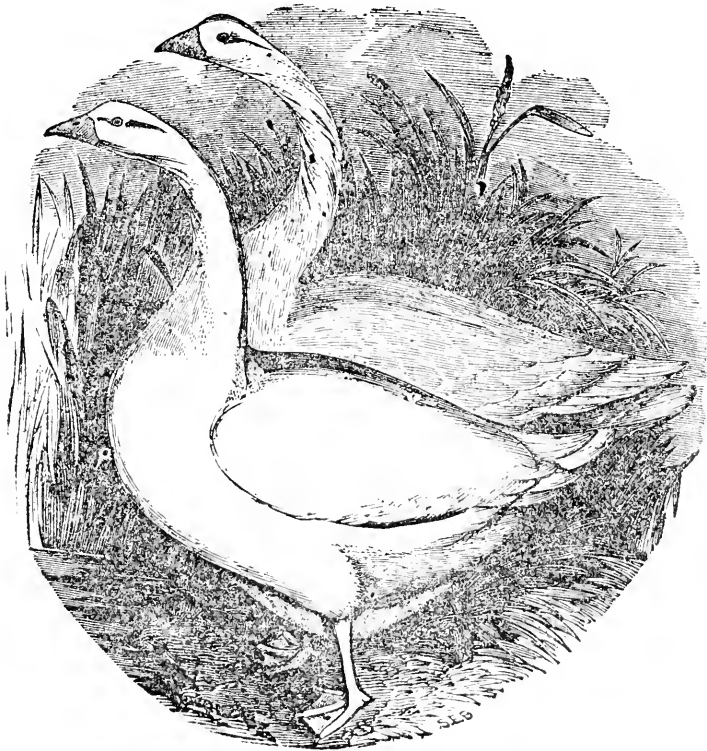
Kingston, Mass., Sept., 1859.

For the New England Farmer.

DRAINAGE.

From inquiries that I have made, I find the cost of laying a tile drain to be hereabouts from fifty cents to one dollar per rod, the drain being laid to the average depth of three feet, and well secured from starting at the joints. Unless this is done, the whole purpose of the drain will be defeated. Care should be taken not to move with loaded teams on the surface of the field, so as to jar the tile from their place; in this respect, drains made of stone are less liable to disturbance, than those made of earthen tile. The general belief is, that the water enters through the pores of the pipes, whether more from above than below I am not advised. Of this I am certain, wherever tile operate well, and do what is expected of them in conducting the water—the soil becomes much lighter, more free to break in pieces, and in all respects better fitted for culture. I cannot doubt that the crops on many of our fields, now cultivated with vegetables—such as onions, carrots, cabbages, beets, &c.—would be doubled by the application of tile drains, at an expense not exceeding fifty dollars per acre. I know of no mode of improving their interests, more worthy the attention of the farmers of New England, than this of draining.

Sept., 1859.



THE BREMEN, OR EMBDEN GOOSE.

These beautiful geese were originally from Holland, and were introduced here by Colonel Samuel Jaques, of Ten Hills Farm, near Boston. The appellation of "Embden" has been obtained from the town of that name in Hanover. Beyond their great size, and the uniform clear white of their plumage, Mr. Bement says he is at a loss for any sign of a specific difference between these and the common goose. In figure they are alike, and the bill and legs are of the same brick-dust hue.

The quiet, domestic character of the Embden geese causes them to lay on flesh rapidly; they never stray from their home, the nearest pond and field satisfying their wants, and much of their time is spent in quiet repose.

Col. Jaques said of this goose,—“As quality of flesh, combined with weight, is a main consideration, I wish to mention that the flesh of the Bremen goose is very different from that of any of our domestic varieties. It does not partake of that dry character which belongs to the other and more common kinds, but is as tender and juicy as the flesh of a wild fowl; besides, it

shrinks less in the process of cooking than that of any other fowl.”

Mr. James Sisson, of Warren, Rhode Island, says of them,—“Their properties are peculiar; they lay in February; sit and hatch with more certainty than common geese; will weigh nearly, and in some instances quite twice the weight; have double the quantity of feathers; never fly; and are all of a beautiful snowy whiteness.”

THE MANUFACTURE OF COAL OIL.—The manufacture of kerosene and other oils from coal is generally supposed to be very profitable, and so it probably is, though we doubt whether such fabulous sums have been realized from it as many imagine. A Mr. Gould, of Rochester, N. Y., has written a letter concerning this branch of manufacture, which a correspondent informs us abounds in misstatements and fallacies, the writer showing his entire ignorance of the subject. Mr. Grant assumed that a bushel of Pennsylvania cannel coal, costing five cents, yields a gallon of crude oil worth thirty-five cents. This seems a large margin to pay for transportation, cost of labor and fuel in retorting and distillation, but in point of fact coal suitable for making

oil cannot be obtained for five cents a bushel. Western oil is in bad repute here, the character of the coal being such that it is impossible to get a good burning oil from it. The large manufactories here pay \$20 to \$25 per ton for coal from Scotland, New Brunswick, and Nova Scotia, which yields a good oil. How much profit they make we are not informed. With the present demand for the oil, the profit is doubtless handsome; but the great demand and high prices invite competition, and this will ultimately reduce prices and lead to more economy in the manufacture.—*Boston Journal*.

CATTLE SHOW AT WESTBORO'.

On Thursday, Sept. 15, the annual agricultural show of the Westboro' society took place in the village of that town. The day was cool but the air clear and elastic, and the good people of that and the neighboring towns, of both sexes, were out in full attendance and fine spirits, to do their part in making it a social gala day, as well as one to show the products of farms. So the cool bracing air brought bloom to many a charming face, and no doubt some of those fine looking young farmers there, found a tumult under their jacket which was anything but disagreeable! The cold made men and animals step nimbly, so that, instead of depressing, it made the scene all the more lively.

First, we witnessed the exhibition of *Bolles' Patent Rock Lifter*, and found it working just as we had seen it on two or three other occasions, greatly to the satisfaction of all beholders. The cattle pens next attracted attention. In them we found a sprinkling of most breeds common in New England, and, unless we overlooked them, none of pure blood of any kind. But there were a good many milk cows presented which would do credit to the best farms in the State. We saw some which the people there denominated the "Sukey Breed," that present excellent points, and have the general appearance of good milkers. Several bulls were on exhibition, but none that we should rank as among "the best." There were some fine swine and poultry.

The Town Hall was occupied with fruits, vegetables and flowers, and a crowd of admiring spectators. The show of pears was exceedingly attractive, one gentleman exhibiting over ninety varieties; some of these were very large and fair. The show of apples was creditable, and would be so to any section of the State. They were numerous, of well-known varieties, and were of good size and shape. A few peaches, plums, cranberries and crab apples were interspersed, making up a beautiful collection in all. The fruit was arranged, and labelled with considerable horticultural skill. We noticed with pleasure collections of flowers tastefully arranged, which added

a freshness and beauty to the scene that nothing else could have done.

The collection of vegetables was very good—no better samples of beets, onions, carrots, tomatoes, parsnips, squashes, egg plants, &c., can be produced anywhere. We saw eight splendid squashes, weighing some 350 pounds, the product of a single vine.

There were 23 entries for the Plowing Match; the work was well done, without hurry or noise, thus affording an example to the farmers worthy of their imitation at home. The trial of the strength and skill of working oxen was numerously attended. There were 20 entries of oxen, 5 of steers, and 4 entries of farm and 3 of carriage horses. A Spading Match was eagerly contested. The Society pays about \$100 in premiums.

The Address was at the dinner-table, and was given by WILLIAM BRIGHAM, Esq., of Boston, but a good cultivator, we understand, on his farm at Grafton during the warm season. The address was an excellent one, and was listened to with close attention by a large audience. The speaker said, "it is labor and economy, not luck, that brings success, and that the door-yard and general appearance of things about the house, will indicate the character of the farm. He said agriculture, like other pursuits, had its periods of prosperity and adversity, but that a period is dawning when labor on the soil will be as amply repaid as that of any other industry. He thought nobler examples of men cannot be referred to, than the last six generations of New England men. He drew an interesting comparison between the agriculture of the last half of the 17th century, and the first half of the 19th, speaking of climate, mode of culture, and habits of living. There were only *thirty* plows in the whole colony in 1633. The address was a decided, bold and plain one, containing many valuable facts and suggestions, and along with them, two or three opinions not at all in accordance with our own. When we see it in print, we may take opportunity to speak of it again.

The dinner was a good one, and good appetites waited upon it. After proper attention had been paid to it, the President of the Society, G. C. SANBORN, Esq., congratulated the company upon the success of the exhibition, spoke of its future in hopeful terms, and called upon Mr. Brigham, the orator, for remarks. Mr. Brigham honored the call, and was followed by Mr. BROWN, Editor of the *Farmer*, and Dr. JOSEPH REYNOLDS, of Concord. At this moment, Time, with its inexorable finger, pointed to the hour assigned for testing the working oxen, and what was left unuttered by the men and women, who looked as though they had whole columns of things to say, the world will probably never know.

Westboro' is a beautiful town, and has a thrifty and intelligent population. It has many excellent farms, cultivated with intelligence and skill, and they present in their fields, gardens and dwellings, the most substantial evidences of a progressive and prosperous people.

For the New England Farmer.

NEW CHURN---AARON'S ROD.

MESSRS. EDITORS:—In a recent number of the Boston *Herald*, I noticed a "churn" advertised of improved character, which the inventor operated for general inspection each day at "Gerrish Market," adding that it would convert either fresh or sour milk into butter in three minutes! Sure, if any invention can be found, altogether dispensing with the use of cream, and affording butter in so short a space of time, it would be most desirable to obtain, unless the promised product be as that of the fancy farmer, who boasted that, in a few years, manures would be so condensed, that a man could carry fertilization enough in a vest pocket to enrich twenty acres! "Aye! good master," said his servant, "and sure at that time, you may be able to carry all the crops produced, in the 'tother pocket!" Pray, Messrs. Editors, can you bestow on us any information as to a three minute milk churn? Will it perform all its inventor promises? What is the price, and how much butter can be made from a gallon of milk?

I would be glad to learn if any of your readers know of any medicinal virtue in that singular plant "Aaron's Rod," and what is its botanical name? Surely a product of nature possessing such singular properties, could not have been made altogether in vain.

OAK HILL.

July 24, 1859.

REMARKS.—The plant you inquire about, and commonly known as "Aaron's Rod," belongs to the family "Sedum," in botany. There are several varieties; the botanical name of the common house-leek is "Sempervivum," or "everlasting."

For the New England Farmer.

FINE POTATOES.

My neighbor Osborn, whom I have long known as a first rate man to mend his own and neighbor's ways, this morning brought me a basket of potatoes, of the Davis Seedling variety. They were planted the 30th of June, fertilized with guano only, plump and fair as a Virgin's cheek. I mean, a regular built country virgin of sixteen; not your pale-faced, tight-laced, city exquisite, of twenty-five, who would turn up her nose with a sneer, sooner than lay her delicate fingers on a potato. What I would particularly remark about those potatoes, is, their rapidity of growth, and superiority for quality and quantity. I had some of them cooked to-day, and they opened perfectly, and tasted as well as they looked. In these days, when so many mishaps visit the potato, it is a luxury (to us paddy boys) to find those as good as ever grew in old Ireland.

South Danvers, June 13, 1859.

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EXTRACTS AND REPLIES.

LIME AND WHEAT—MUCK AND GUANO—HAY-CAPS.

I regard the *Farmer*, published by you, as a valuable means of intercourse among farmers. Through it they learn each others' experience in the various departments of agricultural pursuits.

If lime is sown on wheat, when is the right time to sow it—at the time of sowing the wheat, or some time the next spring, and how much ought to be sown to the acre?

I practice drawing muck into my barn in the spring, yarding my cows on it, and in the fall I spread it on my grass land. Now I want to know if it would be wise to buy guano and mix with it, before carting, and if so, how much ought to be used, say, for example, in a quantity that will make fifty cart-loads?

I also want to know the price of hay-caps, all ready for use. I have lived in this world more than fifty-five years, and have never seen one yet.

ELIJAH GUNN.

Montague, Mass., Sept., 1859.

REMARKS.—Sow four or five bushels of slaked lime per acre—even more will do no harm—at the time the wheat is sown.

A bushel of guano mingled with an ox-cart load of good, moist muck would form a valuable manure. It depends upon circumstances whether it would be wise for you to use it. If you have exhausted your manure heaps, and have land at a distance from your building that you are quite desirous of bringing up, we have no doubt your crop would be sufficiently benefited by the muck and guano to pay the cost of application. The great advantage, however, to be gained in the use of guano is to cover the land, if possible, with a crop of grass, and thus fill the starved soil with grass roots which supply it anew with vegetable matter. You then have a basis to proceed upon in getting future crops.

Hay caps two yards square may be obtained for about 40 cents each. Of a smaller size for a less sum.

BLACKBERRIES.

Will you, or some of your correspondents, please inform me the mode of cultivating blackberries, and also, where I can obtain the genuine Lawton or Rochelle variety, the price of them, and how many it requires for an acre?

What are blackberries worth per quart in your market generally?

Newbury, Vt., 1859.

SUBSCRIBER.

REMARKS.—Such cultivation as one would give to raise sixty bushels of corn per acre, would be suitable for high blackberries. They may be cultivated in hills, four feet apart, or sustained by rough trellis work of poles or strips of boards. Mr. Lawton usually advertises his plants in the *Farmer*. Vermont or Massachusetts are too far north for the Lawton. It is a

most excellent fruit when ripe, but it needs a longer summer than ours to perfect it. Blackberries will average at least ten cents a quart in Boston market.

BEANS—SQUASH VINES—WITCH GRASS.

As you are always ready and willing to insert in your paper anything that is profitable or interesting to your readers, I thought I would give you the product of a single bean raised on my place this season. From one stalk I took 58 pods from which I shelled 288 full grown beans, besides quite a number that were not fully developed. Now that is what I call a pretty good yield for New Hampshire soil. This was a stalk pulled up without regard to its being more prolific than others of its kind, and they are what are called the wild goose bean in our parts.

One thing by way of curiosity—we have a squash vine ten or twelve feet long, which is between six and seven inches wide near the end. I do not know of what kind it is, as the seeds came from Washington. The vine has but one squash upon it, which did not make its appearance until about four weeks ago; it is now about as large as a gallon measure, and of a light green color.

Can you, or any of your correspondents, tell me where I can get what is called by some the "Phin" grass, by others "Dog," and still others "Witch" grass seed, and at what price per bushel?

GEORGE MORRISON.

Franklin, N. H., Sept., 1859.

REMARKS.—We have never known the witch grass seed for sale. This grass makes good hay, but it has an Arab's reputation, every man's hand is against it.

DEEP CULTURE.

MR. EDITOR:—At the market in North Andover I met a gentleman of Lowell, who told me he had thirty-five acres under culture, which he had plowed twelve inches deep. He further said he had been accustomed to plow his plain land in this depth for fifteen years. I presume he gets as good crops as any other man, for it is said he has become the wealthiest man in the city in which he lives. Facts are stubborn things.

He still entertains some strange notions about the bugs that destroy the potato and the onion—but these he refers to his lady, who has practiced philosophy in these matters.

What a fine thing is a good helpmeet in our labors—even if they do lead us into error!

Sept. 19, 1859.

ABOUT BARN.

Your correspondent, "J. W. K.," from Durham, N. H., has given many good ideas about the structure of barns. First, let me say, it can never be expedient to crowd a dozen dozen of eggs into one basket when they can be more safely and conveniently preserved in a dozen baskets. So with a barn for the storing and preservation of hay. No sensible man will ever think of putting 500 tons of hay under one roof, when it can be much easier and more safely secured under ten.

"VERBUM SAT SAPIENTIS."

FENCE POSTS—SWAMP LAND.

I wish to inquire of you, or some of your intelligent readers, the best time to cut ash or hemlock for fence-posts?

Also, what shall I do with a piece of swamp land that is made dry, and don't bear as good grass as before it was ditched—muck from one to five feet deep—never was flowed?

JOHN W. TOWNSEND.

New Lisbon, N. H., Sept., 1859.

REMARKS.—September, we have always understood, is a good time to cut timber in order to secure durability.

From your account of the swamp land, we should infer that the water had been taken off too low down—leaving the top too dry. If you can stop the flow of water by a slight dam, it may be well to do so, raising the water to within 12 or 18 inches of the surface and see what the effect is on the crops.

SEEDING TO FOWL MEADOW GRASS.

I have several acres of land, which I would like to seed with fowl meadow, but cannot plow or drain, it being on the borders of a very flat stream. It is flowed most of the winter and until May.

Can I seed a small portion by spreading $\frac{1}{2}$ to 1 inch of loam after sowing? if so, how much seed to the acre, and when to sow? If that will not do, will any other way answer, without plowing?

A YOUNG FARMER.

Waltham, Mass., Aug. 28, 1859.

REMARKS.—If you could seed the land sufficiently early, say in August or first week in September, so that the grass would root well and cover the ground, the winter and spring flowage might not hurt it. We are told by seedmen that one bushel of seed is not too much for an acre.

LAMB-KILL.

Can you give any feasible method of exterminating the pasture shrub known as lamb-kill?

A. I. SHAW.

Kensington, N. H., Sept., 1859.

REMARKS.—We do not know. It is a difficult matter. The only certain remedy is fire, and then the plow and hoe. Where you cannot introduce the plow and hoe, cut the bushes, burn thoroughly, and rake grass seed into the burnt spots. Perhaps some of our readers—from their own experience—can recommend a better way; if so, we shall be glad to have them do it.

CROWING HENS.

There is a hen in this town which has brought up a brood of chickens this summer, but has now left her vocation of cackling, and taken up that of crowing; she "flaps her wings and crows" as lustily as Chapman used to at the result of the elections.

Why she thus unsexes herself, and assumes airs

so unnatural, is more than I can tell; by some, it is considered as an omen of bad luck; perhaps you or some of your readers can explain the mystery.

ALPHA.

Brandon, Vt., 1859.

POISON IVY.

I wish to inquire if there is any way that I can rid a meadow of poison ivy? If so, what is the easiest and most effectual way of doing it?

Norwich, 1859.

A SUBSCRIBER.

For the New England Farmer.

TRANSPLANTING PINES.

In the July number, "Oak Hill" inquires how pine trees may be transplanted. I give him my limited experience with two, and two only, which have both lived, and are growing well. In March, 1856, as soon as the frost was out, I went with my wheelbarrow, iron bar and spade, to my pasture, selected a thrifty pine 4 or 5 feet high—drove my spade into the ground around it on a circumference 18 inches or so from the trunk, not perpendicularly, but as much inclined to the ground as my pen now is to the paper I am writing on, (and I hold my pen as I was instructed by that excellent writing master, Mr. Barker, who lived in London, N. H., 25 or 30 years ago.) That done, I pried up the tree, dirt and all, with my iron bar, and hoisted the same (a good solid lift, by the way) into my wheelbarrow; dug a hole in my front yard, set the whole into it, and levelled off—and left it to grow—and grow it did without more care. Yesterday, August 29, I observed it had grown this year upwards of a foot in height. Last March I sat out another in the same way, which is growing well; have not watered either of them.

N. C. BERRY.

Randolph, Mass., 1859.

LOOK IN THIS MIRROR.

Investing in champagne at \$2 a bottle—an acre of good government land costs \$1.25. Investing in tobacco and cigars, daily, one year, \$50—seven barrels of good flour will cost \$49.

Investing in "drinks," one year, \$100—\$100 will pay for ten daily and fifteen monthly periodicals.

Investing in theatrical amusements, one year, \$200—\$200 will purchase an excellent library.

Investing in a fast horse, \$500—four hundred acres of good wild land costs \$500.

Investing in a yacht, including bettings and drinkings for the season, \$5,000—\$5,000 will buy a good improved country farm.

Panics, hard times, loss of time, red faces, bad temper, poor health, ruin of character, misery, starvation, death, and a terrible future may be avoided by looking at the above square in the face.

A majority of "financiers," in making calculations for the future, watch the importations, exports of specie, the ups and downs of stocks, and the movements of the Wall Street bulls and bears. All that is very well, but let them at the same time estimate the loss of gold in the maelstrom of extravagance.—*Scientific Artisan.*

AUTUMN—A DIRGE.

The warm sun is failing; the bleak wind is wailing;
The bare boughs are sighing; the pale flowers are dying;

And the year

On the earth, her death-bed, in shroud of leaves dead,
Is lying.

Come months, come away,

From November to May;

In your saddest array,

Follow the bier

Of the dead, cold year,

And like dim shadows watch her sepulchre.

The chill rain is falling; the nipt worm is crawling;

The rivers are swelling; the thunder is knelling

For the year;

The blithe swallows are flown, and the lizards each gone

To his dwelling;

Come, months, come away;

Put on white, black, and gray;

Let your light sisters play—

Ye follow the bier

Of the dead, cold year,

And make her grave green with tear on tear.

Percy Bysshe Shelley.

For the New England Farmer.

FROM NORTHERN ILLINOIS.

MR. EDITOR :—As our harvest is gathered, and all growing crops in such a state of advancement that a correct idea of the yield may nearly be guessed at, I will offer a short article on the subject for the *Farmer*.

The wheat crop is not a full one—many are now threshing out wheat and oats; wheat varies much in quantity; while some have scarcely five bushels per acre, others have ten, fifteen and some few twenty and upwards, but the number is small that reaches the last figure. The majority will most likely be under ten. This county will scarcely average ten, and I believe it would be a liberal estimate for the whole northern portion of the State. The quality is generally good, far ahead of last year. Oats are good—the best pieces will yield sixty bushels per acre; the average will not be far short of forty.

Corn will not be half a crop in this vicinity. I think it will scarcely average fifteen bushels to the acre of good marketable corn, but this is not the case in all parts of the State.

Potatoes will be a light yield near this place. I am told they are much better in many places not far distant. The hay crop is also much lighter than usual. The importance of this crop is being felt more in this country now, than it was some years ago.

The chintz bugs did considerable damage to many of the crops; they operated on the wheat first, damaging some fields badly. I do not know of a single field that was clear of them. They went from the wheat into the corn, where they still remain in large quantities but do not seem to be doing much injury now; they worked hard on it a few weeks after wheat harvest. Vegetables of all kinds are much scarcer here than common. The frost of June 5th cut most of the tender plants down, and what few escaped then, with what was planted since, have suffered severely by dry weather.

We have had a very dry summer, having had no rain since early in the season to moisten the

ground to any extent; the dry weather is the greatest cause of our short crops. We had two small showers this month, about the 3d and 19th, and about the same in June and July; the last shower was the best, and did much for the growing crops and pasturage. I think by deep cultivation this country would stand the drouth well, and would, perhaps, be much better in very wet seasons. There are some fine lands here that would be much improved by good draining. This is a fine farming country, the soil is naturally good, and the surface smooth and beautiful, with plenty of running water, and a competency of timber; fruit-growing seems to be the least successful of any branch of farm operations.

The farmers do not generally take enough interest in this department; we have no fruit this year—even the wild fruit was all killed by the June frost. I think this country much less adapted to successful fruit-growing than any of the Eastern or Middle States, but it is worth while to have orchards and fruit trees for their beauty, if a good crop of fruit is less sure than elsewhere. There are some kinds of fruit adapted to almost any country.

THOS. A. JACKSON.

Roscoe, Ill., Aug. 29, 1859.

NEW AGRICULTURAL PAPERS.

If the multiplication of journals devoted to the promotion of Agriculture is evidence of real agricultural progress, there can be no doubt but that our people, in nearly every section of the country, are making rapid and real improvement in the art of tilling the soil. Scarcely a week passes but we are greeted by some new friend with smiling face and comely apparel, who has entered the wide field to labor, help on the great work, and while earning honest bread, to win an honorable fame. We have two of this description before us now. They are not only fair to behold, doing credit to the typographic art of the country, but they are filled, generally, with good, sound farming doctrines, and reasonable suggestions.

The first of these is the *Farmer and Gardener*, devoted to Agriculture, Horticulture and Rural Affairs generally. A. M. SPANGLER, Editor; published at 633 Market St., Philadelphia. This paper is in quarto form, very handsomely printed and illustrated. The other paper is *The Western Farmer's Magazine*, monthly, by BIRDSALL BROTHERS, Chicago, Ill. The editor's salutory is a long article upon the topics—

"What are the farmers of our country?"

"What ought they to be?"

"How are they to become such?"
and he handles them well.

We wish both papers great usefulness and success.

TRAIN HORSES TO WALK.—The *Michigan Farmer* well observes: "A plow-horse should, above all things, be a good walker. The walking gait

is not cultivated enough in training horses. Only consider what a team that could walk four miles an hour, for ten hours per day, could do towards hurrying through spring work."

For the New England Farmer.

HARVESTING CORN.

MR. EDITOR:—If you are not already tired of publishing articles on the above subject, I will venture to trespass this once upon your patience.

In the *Farmer* of August 6, I noticed a communication from "W. M. L.," in reply to "J. Wood," as regards the best plan of harvesting the corn crop. There is a wide difference of opinion between them, as to the best way of doing the work. I respect an honest difference of opinion on any subject. I do not think it is safe to make an assertion, that cannot be carried out in practice. Does he really mean when he says it is "as much work to cut an acre of stalks, bind and shock them, as it is to cut up the same amount of corn at the roots and bind and shock it?" This is virtually saying that he can harvest an acre of corn, grain and all, while another is harvesting the stalks. I should like to take a job of that kind on a wager with him, or any other New Hampshire man, and if I did not come out a little ahead on the "home stretch," why then I would "acknowledge the corn," and own myself beaten. Then again, he says, "I know, from my own experience, that corn well secured in the shock will cure as sound and bright as that which is suffered to ripen in the butts." From that I respectfully "beg leave to differ," and I will presently show the reasons why.

A few years ago I had occasion to pass along the road by a neighbor's corn-field that had been cut up at the roots and shocked about two weeks previous. Some of it was standing up straight, some leaning, some half way over and some wholly prostrate. Having always had doubts of the policy of harvesting corn in that way, I thought I would satisfy myself by a personal inspection of it. I selected a shock that had nearly fallen over, and putting my hand into the middle of it drew out an ear and husked it, showing unmistakably its bad condition. The grain was covered with a white mould, and had a pale flabby look. I came away fully convinced that that was not the best way to harvest corn. It seems to me a little strange, that there are farmers who will deliberately go to work and partly spoil their crops, after a great deal of trouble and expense in raising them; and when I see corn cut up at the ground and shocked in the field, it reminds me of so many monuments of folly.

There is a little more in the article of "W. M. L." that I wish to notice. He says, "besides having advantage of his friend Wood in the saving of time and labor, it is a great convenience in having the stalks and butts together. I cannot agree with him in that, for I think it is more convenient to have them separate. He also thinks it an error to let the butts remain standing, because they become hard and dry, and of little value. I think that in raising corn we raise it for the grain, and not for the fodder; then why not follow nature in part by letting the corn stand? I can assure any one with entire

confidence that a bushel of corn cured in the shock, will not weigh so much as a bushel cured standing in the hill.

It would be a good plan, I think, for those who are so inclined, to try the experiment both ways, note the result in harvesting, and send in their experience for the columns of the *Farmer*.

Lexington, Aug., 1859. J. UNDERWOOD.

THE MAINE STATE FAIR.

The farmers' autumnal festivals have been taking place during the past ten days in such numbers, that the utmost limit of our columns would scarcely contain a brief account of each. Recording the awards we long since abandoned, as they can have but little interest for any beyond the locality where they are awarded. It is our aim to catch the spirit of the thing, if we can, and transmit it to the reader, so that he can judge, without having been present at the exhibition, whether what was said and done will tend to promote the general results which it is desired to gain. In doing this, it will be proper to notice with some particularity articles of striking excellence, whether they spring from the genius of the inventor, the skill of the mechanic, or the wisdom of the tiller of the soil; and so, if striking defects in the system of management, or in the execution of plans, occur, it becomes our duty as public journalists to notice them in a proper spirit, and thus the greatest amount of good from the time, talent and money expended, may possibly be secured.

The annual State Fair in Maine opened at Augusta, on Tuesday, the 20th inst., and was to be continued through four days, but the threatening aspect of the weather on Tuesday resolved itself into a decided storm on Wednesday, and arrested its further progress. There was no "make-believe" about it, for the rains descended, the winds blew, and the floods came, and every living thing "caught the dumps" at once. The cattle would not low, the cocks would not crow, nor the horses go—it was an effectual damper all round. The auctioneers grew hoarse while the icy rain drizzled down their necks, and soon began to pack up their traps; the jockeys lost all their grit, and the boldest of them didn't believe there was a horse on the ground that could trot a mile in ten minutes; the men suddenly came to the conclusion that "discretion is the better part of valor," and departed to get up a flame within themselves, or find one at their hotels. There was a regular stampede among the women, and the field, so lately sparkling with feminine beauty and grace, became damp, dull and despondent, and the winds and rain had it pretty much to themselves.

But the Maine State Show for the year 1859

was not a failure, after all, for the interruption which it experienced showed how much the people regard and cherish the festival. It was not a failure, either, because what goes to make up an exhibition *was there*, although the people were prevented from seeing it. Some 500 cattle, 300 horses, 100 sheep, swine, poultry, bees and honey, grains and vegetables, fruits and flowers, household manufactures, paintings and pictures, and a respectable collection of farm implements and machines, were presented to be examined. Then there were the usual arrangements for plowing, drawing, and the exhibition of horses.

The stock, much of it, was excellent, especially the working oxen; it would be difficult to find an equal number having so many points of excellence as the teams from the town of Starks. A herd of Devon cows exhibited by the Shakers of Lebanon, was very fine. There was also a large display of Durham stock, grade and pure, some of which was very good. A few full blood Jerseys were presented by Dr. HOLMES, editor of the *Maine Farmer*, and they are among the first, we understand, introduced into the State. The show of implements and machines contained many attractive articles.

On the evening of the day we were present, a discussion took place at the State House, upon the question—"What is the best breed or race of cattle for the State of Maine?" The discussion was animated and interesting, but assumed a sort of non-committal form, from which few valuable facts were elicited. It was generally conceded that the State has not at present a breed the best adapted to the wants of the people, but none of the speakers informed us how such breed is to be secured; it is to come from crossing, but what breeds and races are to be mingled, was not suggested. In this lies the whole difficulty of the matter.

Among the manufactured articles, we were especially pleased with a *furnace for heating dwellings*, where wood is used as fuel, the invention of Mr. E. D. NORCROSS, of Augusta. We saw this in operation at our lodgings, and felt its genial influences on coming in from the storm.

Another article was a patent *carriage shaft shackle*, for attaching shafts to the axle-tree. It is a simple invention of Mr. GEORGE KENNY, of Milford, N. H.,—is a cheap, safe, and durable article, and allows no noise, such as we hear in other attachments. It is highly worthy the attention of carriage-makers. We also saw "*Torrey's Maine State Bee Hive*," and the bees at work in it, and formed a high opinion of its value. If this is confirmed by a more quiet and careful examination at home, we shall find opportunity to say a word to lovers of the apiary at another time.

Our stay in the pleasant city of Augusta was made delightful by the generous hospitality, and kind attentions of our old friend EATON, (late publisher of the *Maine Farmer*), and those of his cheerful and intelligent family. The storm did not disturb the proceedings of the *fair*, within those doors,—for rational conversation, and song and laugh, blended so harmoniously with every domestic duty, as to afford a beautiful type of a true New England home.

Our visit was also made pleasant by meeting and conversing with several gentlemen distinguished for their zeal and knowledge in agricultural matters, and who are truly benefactors of the race. Among these were J. J. THOMAS, one of the editors of the *Country Gentleman*, Dr. HOLMES, agricultural editor of the *Maine Farmer*, Messrs HOMAN and MANLEY, of the same paper, some of the officers and trustees of the society, and gentlemen from Maine and other States. Several other matters were suggested by our visit, which we may touch upon hereafter.

DESTRUCTION OF SHEEP BY DOGS.

The assessors in Ohio, under an act of the Legislature, have endeavored to ascertain the total number of sheep killed and injured by dogs during the year 1858. The returns from only a few counties have been published; but these, few as the counties are, disclose a fearful amount of slaughter. We append the returns of eleven counties, covering not more than one-eighth of the State:

Counties.	Killed.	Wounded.	Value.
Greene.....	1,259	829	\$ 104
Harrison.....	557	1,473	3,986
Delaware.....	781	555	1,626
Madison.....	1,206	884	3,176
Champaign.....	682	501	3,389
Lorain.....	492	156	1,219
Summit.....	529	829	2,459
Lake.....	412	109	888
Stark.....	626	719	1,579
Cuyahoga.....	693	1,112	3,193
Wayne.....	747	657	2,182
	7,054	7,860	\$25,342

Here are over 7,000 sheep killed and nearly 8,000 injured, at a cost to the owners of over \$25,000, and all by a pack of curs utterly worthless. If the proportion holds good throughout the State, the annual loss to sheep-growers must be about \$200,000, and if all the dogs in the State were put together, they would not be worth a tenth part of that sum. We trust that the legislation under which these statistics have been gathered will be followed up vigorously, and that some judicious measures will be taken to abate an evil of such magnitude. Other States will doubtless follow Ohio in any efficient measures she may adopt. The danger to sheep from dogs has for a long time prevented an increase in the sheep-growing business in this country. Many men who would otherwise engage in it are restrained from venturing from the risk attending it in consequence of the dog-pest. If this were removed, the business of wool-raising would at once become a leading and a profitable one.—*Pittsburg Gazette*.

For the *New England Farmer*.

NOTES ON POPULAR FALLACIES.

MR. EDITOR:—Some years since, while I was engaged in selecting a pair of chickens from the dressed fowls in a butcher's stall, a Frenchman stood near, and observing that the dealer seemed to prize very highly a particular pair, on account of their bright yellow skin, he remarked that the preference for yellow-legged and yellow-skinned fowls was a Yankee prejudice. The dealer admitted that this might be true, but that it was for his interest to buy the most saleable articles, and he had found by experience, that the yellow-legged sorts could be sold more readily and for a higher price than any others. The Frenchman replied that the Americans were very dull in the exercise of their observing faculties, and he suspected that their national love of gold might be the cause of this preference, which was founded on an egregious error. In France, he added, the yellow-legged chickens are considered unfit to be raised. Their flesh is dry and stringy, compared with that of the blue, black and white-legged fowls, whose flesh is by far the most tender and juicy.

I have, since I heard the Frenchman's remarks, taken every opportunity to put them to a rational test, and have found them to be correct. The yellow-skinned fowls have commonly either green or yellow legs; those with black, blue or white legs have a white skin. There are some exceptions; but the exceptions are not numerous. I raise a great many chickens every year for my own table, calculating to supply it weekly with one pair, from July to February. For two years past, I have kept the Black Polands, which are black-legged; the Golden Pheasants, which are blue-legged; White Polands, with white legs, and another sort, allied to the Dorking, with yellow legs. The chickens are all raised and fed in the same way, yet the yellow-legged individuals have almost always been found inferior to the others with white skins. The last are the most tender, delicate and agreeable. There are occasional exceptions, but so frequently are the yellow-legged chickens dry-meated compared with the others, that I am surprised that our own countrymen have not discovered the fact.

It is remarkable that the same prejudice exists in this part of the country in regard to Indian corn. Is it possible that the Frenchman's satirical jest upon our love of whatever resembles the color of gold is founded on fact, and that this prejudice carries away our judgment? The New England people consider the yellow corn the only sort that is fit for the table, and believe that the white kind is fit only for hogs and cattle. The opposite of this is the truth. Meal made from the white corn is the best both for cakes and for puddings, but the yellow corn is more fattening when given to domestic animals, and is preferred by them to the white. The Southern people are well acquainted with this fact. All their Indian bread and their hominy are made from white corn; and they smile at our simplicity, which leads us to prefer the yellow corn. As the Southerners use Indian corn in a greater variety of preparations for the table than we do, and are adepts in this branch of domestic economy, I think they are better authority than we at

the North, in this matter. I may add that those individuals of my acquaintance who have experimented upon the two sorts of Indian corn, have concluded that the Southerners are right.

The superior sweetness and tenderness of the white ears of corn, when they are in the milk and are boiled for the table, are apparent to all. But the community have been very slow in finding out this fact, and even at the present day, some persons may be found, not apparently deficient in common sense, who still cultivate the yellow corn for table use as a green vegetable.

As far as my judgment respecting the quality of fruits and esculent roots can be formed from their color, it will be found that the nearer the color approaches to white, the more sweet and delicate the flavor. Of beets, turnips, cherries, currants, peaches and grapes, the sweetest are white, or nearly colorless. It is a matter of very common observation that of all the different kinds of potatoes, those with yellow meats are more liable to be rank and disagreeably flavored, and are coarser grained, than the other sorts. The best of all varieties are those with white meat or pulp; a tinge of red or blue is not, however, so bad a symptom as a tinge of yellow. It is not always wise to attempt an explanation of these things; but if I were obliged to guess the why and wherefore of this fact, I should say that the materials which produce sugar in a white beet or a white currant, are used up in producing the coloring matter in the red ones. It is also highly probable that the coloring matter of vegetables possesses a flavor peculiar to itself, and not always agreeable. It is evident that the coloring matter of the yellow-meated potato is acid, and the purple coloring matter of the grape is aromatic. I have no doubt that if a white variety of the tomato could be produced from the common stock, it would be found greatly to surpass the red and yellow kinds in delicacy and sweetness.

The color of good butter, which is commonly of a bright yellow, may be considered an exception to the facts stated in these remarks. I would not be understood, however, to say that my remarks are applicable to all substances. Butter which is prepared in winter, when the cows are fed chiefly on dry food, is usually light colored, and it is inferior to the bright yellow butter of June. But when the difference in the color of butter proceeds from the peculiar nature of the cows, the yellow kind is no better than the white. A cow whose flesh contains light colored fat or suet, always produces milk that yields light colored butter, and when the light color arises from this cause, it is no evidence of inferiority.

There is another matter which has been opened for discussion in your paper. I allude to a remark of your venerable correspondent, S. P. Baker. I would not treat his remarks or his opinions otherwise than with respect; but cannot avoid speaking of the mistake which he has committed, when he referred to what he chooses to call "male and female ears of corn." As his observation has been copied into several papers without comment, it is possible that all persons connected with the press are not aware that there is no distinction of sex in the seeds of corn or any other plants. In the vegetable kingdom sexual distinctions exist only in the flowers, and in some cases in the plants of the dioecious order,

one of which bears the fertile, and the other the barren flowers. In Indian corn (*zea mays*) the silk in combination with the ear represents the female flower, and the plume or tassel the male. The seeds or kernels are the embryo offspring, and are neither male nor female. The ears, if it be proper to rank them with either sex, after the flower or silk has decayed, must certainly be all females, holding their offspring (the seeds) in their embrace. I cannot say that among farmers there may not be certain ears of corn which are figuratively called male and female; but no real sexual distinctions exist except in the flowers.

WILSON FLAGG.

FEED FOR HORSES.

The London Omnibus Company, says an exchange, have recently made a report on the feeding of horses, which discloses some interesting facts. It seems that the company uses no less than 6000 horses; 3000 of this number have for their feed bruised oats and cut hay and straw, and the other 3000 get whole oats and hay. The allowance accorded to the first was—bruised oats, 16 lbs.; cut hay, 7½ lbs.; cut straw, 2½ lbs. The allowance accorded to the second—unbruised oats, 19 lbs.; uncut hay, 13 lbs. The bruised oats, cut hay and cut straw amounted to 26 lbs., and the unbruised oats, &c., to 32 lbs. The horse which had bruised oats, with cut hay and straw, consumed 26 lbs. per day, and it appears that it could do the same work as well, and was kept in as good condition, as the horse which received 32 lbs. per day. Here was a saving of 6 lbs. a day on the feeding of each horse receiving bruised oats, cut hay and cut straw. The advantage of bruised oats and cut hay over unbruised oats and uncut hay is estimated at five cents per day on each horse, amounting to \$300 per day for the company's 6000 horses. It is by no means an unimportant result with which this experiment has supplied us. To the farmer who expends a large sum in the support of horse power, there are two points this experiment clearly establishes, which in practice must be profitable; first, the saving of food to the amount of 6 lbs. a day; and, secondly, no loss of horse power arising from that saving.

UNIVERSAL BENEVOLENCE OF WOMEN.—The celebrated traveller, Ledyard, paid the following handsome tribute to the female sex: "I have observed," he says, "that women in all countries are civil, obliging, tender, and humane. I never addressed myself, to them in the language of decency and friendship, without receiving a decent and friendly answer. With man it has often been otherwise. In wandering over the barren plains of inhospitable Denmark; rude and churlish Finland; unprincipled Russia; and the wide-spread regions of the wandering Tartar; if hungry, dry, wet, cold, or sick, the women have ever been friendly, and uniformly so; and to add to this virtue, (so worthy the appellation of benevolence,) these actions have been performed in so free and kind a manner, that if I was dry I drank the sweetest draught, and if hungry ate the coarsest morsel with a double relish."

For the New England Farmer.

A HARVEST HYMN.

[I asked an excellent young man, who sometimes writes verses, if he could find a hymn for our approaching Agricultural Festival. The next day he handed the following. I submit it for your columns, if thought worthy. It certainly contains good sentiments.]

Our voices with our hearts we lift
To thee, O God, in grateful praise;
For every good and perfect gift,
A song of gratitude we raise.

Thine is the seed in spring we sow,
And Thine the harvest that we see;
Sunshine and rain Thou dost bestow,
And strength to labor comes from Thee.

Thine is the fragrance of the flowers,
And beauty that delights the eye;
And Thine the lines of autumn's bowers,
Which in transfigured glory die!

The blessings of our homes so dear,
Our schools and churches, Lord, are Thine;
Thou watchest o'er them, year by year,
And purgest still Thy fruitful vine.

God, with all Thy gifts, still give
The grateful and the trusting heart;
So shall our souls have learned to live,
When called from earthly scenes to part.

For the New England Farmer.

A VISIT TO THE HOMESTEAD OF FARMER ALLEN.

After doing justice to a well prepared dinner, Farmer Allen and myself started from the homestead for the purpose of paying a visit to a piece of land that had been drained and reclaimed from the "wilds of nature" into as good a field for producing grass, corn and potatoes as one would wish to see, and in going we passed through

THE GARDEN.

I paused a moment after entering the well cultivated enclosure, where hardly a weed dared to grow, for the purpose of examining a fine Concord grape vine that was climbing over and around a tastily built summer-house. In this, my friend assured me, he had spent many happy hours after the labors of the day were over. The vine was purchased of Mr. Bull, of Concord, Mass. Mr. A. prizes the Concord as highly as the Isabella or Catawba; it is a good bearer, and seems better suited to stand the storms and cold of our northern States than any other variety. Continuing on our way we passed near a few hills of the Chinese sugar cane, about which so much has been said and written, both for and against its introduction, a few years since. Mr. A. plants a few hills yearly—his cattle are very fond of it. Leaving the garden, I heard the hum of the "busy bee," and going nearer, discovered several hives facing the south. Two years ago Mr. A. purchased three swarms of bees, and the first year he sold nearly enough honey to pay for the first cost, reserving enough for their winter subsistence.

We now passed over several

MOWING LOTS,

and I looked in vain for the bushes and piles of stones with which so many of our farmers embellish the surroundings of some of their best

fields. Every year after haying, Mr. A. spends a day or two with a good bush scythe, in mowing all the bushes on his farm. Many of our farmers only do this once in five years, and then the labor is treble; by mowing them every year their growth is soon checked. In a few minutes Mr. A. announced that we were in the

RECLAIMED LAND.

I should not have known it, for the soil was as firm as the highlands. The piece comprises about three acres, and from the time of the "oldest inhabitant" down to within three years, it has been cold and wet lowland, covered with water until late in the spring. It produced about two small loads of poor, coarse hay, fit only for bedding, and the labor of obtaining this was more than it was worth. Mr. Allen had, during the winter of 1855, read an article in the *N. E. Farmer* (for which he is a regular subscriber) on the many advantages of underdraining, and giving some directions how to proceed in this all-important work. He then gave the subject a careful consideration, and came to the wise determination to make an experiment on the land now before us. After making the necessary preparations, he commenced the work of digging the trenches for the tile, amid the sneers, not only of the anti-book, but anti-progressive farmers in the neighborhood. He laid the tile four feet deep, the tile in the main drain being three inches in diameter, and those in the lateral drains being two inches in diameter, and when he had completed the work in the best manner, he sat down to ascertain its cost, and the result, he said, somewhat surprised him. I know it did me, for he said, that including everything, work, tile, &c., it only came to forty-five cents a rod. The season is about three weeks longer on that piece of land than it was before. Quite an item in our never too long summers. It is now cultivated with less labor and cost, while the profits are doubled. Mr. A. recommends good tile in preference to stone. The tile once properly laid, is laid for years, and the cost is about double that of common bricks. Farmer A. looked anxiously at an impending cloud, for one of Manny's mowing machines had been doing its effective work in a five acre lot of heavy herds grass, so we hurried to the

HAY FIELD,

which presented a scene of active interest. One of Carpenter's Patent Horse Rakes was busily at work in raking the hay into winrows, and several of the men were putting it into well shaped cocks as fast as raked up. Scenes from my boyhood's days came floating back, and acting under their impulses, I seized a rake, and was soon as busy as any one in raking up the scatterings and trimmings of the cocks of hay. Caps were soon placed upon them. I watched the movements of the man, with a good deal of attention, and am confident that he put on three hay-caps to a minute. One cock was left uncovered, so as to afford me an opportunity in the morning of seeing the difference in the covered and uncovered hay. We had barely time to reach a place of shelter when the rain came down in torrents, but the hay was safe. I listened in vain for the usual impatient exclamations about the hay spoiling out in a heavy rain, and for the remarks, "Just

my luck," "I don't see what it need rain for, when I have got so much grass down." Farmer Allen's face looked as pleasant as a spring morning. Among the many virtues of the hay-caps, there is one that I have never seen in print, and that is, that they save the temper and patience of the farmer, as well as his hay.

The next morning, after the sun had dried the dew from the grass, I went out and took the caps from the cocks myself, and there was not a cock of hay in the entire field protected with a hay-cap that was injured. The hay smelt as sweet, looked as bright and felt as dry as if it not stood out all night in a drenching rain. The cock left uncovered was drenched—its sweet odor and light color was gone. It had to be carefully spread and tossed again, while that covered was merely opened sufficiently to let the steam escape, when it was ready to be taken to the barn. I was satisfied that the good services of the caps paid their cost in this single instance, and that no farmer can afford to do without them.

Another time I may write something more of what I saw while paying a visit to the "Homestead of Farmer Allen." FREEMAN.

Sunny Side, Aug., 1859.

REMARKS.—If "Freeman" would be glad to see his articles free from errors, he must write more legibly, and construct his sentences with more care.

For the New England Farmer.

CULTURE AND OVERCULTURE.

On my way from Newburyport, yesterday, I called on my friend HALE, of Rowley, to view with him some specimens of underdraining of wet lands, commenced by two of his neighbors. I found the experiments well begun, but the gentlemen are too diffident to be named until their work is done; therefore I will say no more about the draining, at present. I reminded them that underdraining need not be confined to low, wet land, but that it was equally beneficial to high lands that were not generally esteemed wet. That the auroral light of draining had just burst out at Exeter, N. H.,—and that Judge French's book, which could be purchased for one dollar, would tell all they need to know, and more.

What I particularly want you to know, Mr. Editor, is, what Mr. H. showed me in the way of culture of fruit trees, on the grounds of his neighbors, Messrs. Proctor and Morrison. About ten years since, Dr. Proctor started the purpose of growing fruit, and procured from one of the best sources in North Salem, (Mr. Wade,) a hundred or more choice apple trees, chiefly Baldwin. These were set near his house, by the hands of Mr. Hale himself, on light land, well fertilized. The trees were set twenty feet apart, and between the apple trees were placed peach trees, designed to be removed, when the apple trees grew. The land has been kept under culture ever since; the trees look healthy and thrifty, spreading, on an average, sixteen feet in diameter; and what is best of all, are now as handsomely loaded with fruit as any trees I ever saw. So much for keeping the land loose among the trees, and not omit-

ting judicious fertilization. If any one wants to see a handsome orchard, let them visit the one I have mentioned, and they will not be disappointed. Directly alongside of this, another gentleman set out an orchard, about the same time, and not fancying dirt upon fruit, he sowed his land to grass. His trees appear to be about half as large as those first named; and there does not appear to be any hazard of the fruit being dirtied by falling—for I did not discover any on the trees.

Another instance he showed me, of an orchard set about two years since, where the proprietor determined to have something better than any one else, put several bushels of strong manure from his barn cellar, and covered it slightly with dirt. These trees started well at first, but under the powerful heat of the sun, and the excess of stimulation from the manure, have been overdone, and from present appearances, will be entirely done in two years more. Proving what is often found true—that "too much of a good thing is good for nothing." P.

September 6th, 1859.

For the New England Farmer.

THE ROBINS.

UTILITY VERSUS SENTIMENTALISM.

MR. EDITOR:—I have recently noticed several articles in your paper about the robins, those impudent robbers of our gardens. There has been a great deal of fine talk and fine writing about the matin songs of the feathered choirs, and their morning hymns of praise, which is all, doubtless, very pretty, and very artistic, but it fails to be appreciated by us gardeners who depend in a great measure for a living on our fruits. We are told that the robins live chiefly on the larva of insects and on worms. I do not dispute the fact that they do eat insects until the fruits afford them a diet that they like much better. But what is the use of telling us that they do but little or no harm, when every gardener knows that they will, if permitted, take every strawberry and cherry from his garden, and with all the care he can take, they do actually destroy or pilfer, at least, half the berries he raises, and those the earliest and best. I have a fine bed of strawberries, and a good many cherry trees, and the past season, I am sure, the robins took at least half my strawberries, notwithstanding all the scare-crows and scare-birds we could contrive; and as for cherries, we did not have one fit to eat. Besides their depredations upon these fruits, they made sad havoc of currants and gooseberries, and picked a large share of my peas. I had a fine row of the Champion of England peas, which I left for seed, and where I expected two quarts, I got perhaps half a pint.

Now I profess to appreciate music and beauty, but when they are attended with so much annoyance, it interferes sadly with my enjoyment of them. I can appreciate a fine dish of strawberries and a basket of plump, blushing cherries, as well as music and song. I want them both; but if I must have the music at the expense of the fruit, I choose to have the music from other vocalists than the birds.

I have been studying the habits of the robins

some years, and I find them disposed to be quite domestic in their habits during the breeding season; I think they do not roam far from their chosen homes, and that they are apt to occupy the same nests for several years in succession, or to build in their immediate vicinity. Like domestic pigeons, or dung-hill fowls, they seldom go beyond their accustomed circle, unless driven to it by the want of food, until they have ceased to care for their young. There is a way to do everything that is worth doing, and I think the habits of the robin suggest the way by which we may rid ourselves of the nuisance, without infringing the sentimental law of our State, and as a special favor, I will tell you my secret. In gathering my apples this fall, I intend to destroy every robin's nest that I can find, and in the spring, I intend to destroy every robin's nest, as unrelentingly as I do the caterpillar's nests. I think that by not allowing a robin to breed on my premises, and by urging my neighbors to do the same, I shall soon diminish the number of the pilferers.

Now, sir, my secret is out. Some of your tender-hearted readers may think it an evasion of the law—a violation of its spirit; but I cannot help it. I intend to protect myself, and my own interests, especially, if I can do it without violating the letter of the law.

Yours, &c.,

A.

For the New England Farmer.

THINGS THAT I DON'T LIKE TO SEE.

I don't like to see a farmer boasting of his large crops without knowing something of their cost.

I don't like to see a farmer crowd his fields with cows as soon as he gets his hay off, and sell his milk for two cents a quart. It will make it uphill work for the rising generation.

I don't like to see a farmer go by the village store to some city, or large place, for his stores, and then tell what a dull place his village is.

I don't like to see a farmer cart his crops to market, when, if he would stay at home, purchasers would come after them. Every cockerel crows the loudest upon its own coop.

I don't like to see a farmer go out of town to invest his money, and then say there is no enterprise in our young men.

I don't like to see any body put their own boys into stores, depots, &c., and then advise all young men to stick to the farm; it looks as though they liked cheap bread and butter, but wanted some-body's bone and muscle but their own children's to produce them.

I don't like to see a farmer sell any farm product for half what it costs to produce it, and continue the same business year after year. It is like going into the large end of the horn and coming out at the tip.

I don't like to see a farmer urge his sons to stick to the farm because he cannot afford to hire help, when, if he would give them a trade or fit them for some profession, they would be a blessing to him in all future time. Any thing that you cannot afford to hire done, is not worth doing.

T. J. PINKHAM.

Chelmsford, Sept. 5, 1859.

THE BUFFALO.

Mr. Greeley, in one of his letters, gives the following as his experience with the buffalo:—

Nearly all day, the buffalo in greater or less numbers were visible among the bottoms of the Soloman on our right—usually two or three miles distant. At length, about 5 P. M., we reached the crest of a "divide," whence we looked down on the valley of a creek running to the Soloman some three miles distant, and saw the whole region, from half a mile to three miles south of our road, and for an extent of at least four miles east and west, fairly alive with buffalo. There certainly were not less than ten thousand of them; I believe there were many more. Some were feeding, others lying down, others pawing up the earth, rolling on it, &c. The novel spectacle was too tempting for our sportsmen. The wagons were stopped, and two men walked quietly toward the centre of the front of the herd. Favored by a watercourse, they crept up to within fifty rods of the buffalo, and fired eight or ten shots at the herd with no visible effect. The animals nearest the hunters retreated as they advanced, but the great body of the herd was no more disturbed or conscious of danger than if a couple of mosquitoes had alighted among them. After an hour of this fruitless effort, the hunters gave it up, alleging that their rifle was so foul and badly sighted as to be worthless. They rejoined us, and we came away, leaving nine-tenths of the vast herd where we found them. And there they doubtless are sleeping at this moment, about three miles from us.

We are near the heart of the buffalo region. The stages from the West that met us here this evening report the sight of millions within the last two days. Their trails chequer the prairie in every direction. A company of Pike's Peakers killed thirteen near this point a few days since. Eight were killed yesterday at the next station west of this by simply stampeding a herd and driving them over a high creek bank, where so many broke their necks. Buffalo-meat is hanging or laying all around us, and a calf two or three months old is tied to a stake fast beside our wagons. He was taken by rushing a herd up a steep creek bank; which so many could not possible climb at once; this one was picked up in the melee as most worth having, and taken with a rope. Though fast tied and with but a short tether, he is true game, and makes at whoever goes near him with desperate intent to butt the intruder over. We met or passed to-day two parties of Pike's Peakers who had respectively lost three oxen or steers, stampeded last night by herds of buffalo. The mules at the Express stations have to be carefully watched to preserve them from a similar catastrophe—to their owners. I do not like the flesh of this wild ox. It is tough and not juicy. Of course, I remember that our cooking is of the most unsophisticated pattern—carrying us back to the age of the building of the pyramids, at least—but I would rather see an immense herd of buffalo on the prairie than eat the best of them.

The herbage hereabouts is nearly all the short fine grass known as the buffalo-grass, and is closely fed down. We are far beyond the stakes of the land surveyor—behind the usual haunts of

white men. Santa Fe trail is far south of us; the California is considerably north. Very probably the buffalo on Solomon's fork were never hunted by white men until this Spring. Should one of these countless herds take a fancy for a man-hunt, our riflemen would find even the Express wagons no protection.

VERMONT STATE FAIR.

We have been disappointed in not receiving from some of our numerous and usually attentive correspondents in Vermont, an interesting account of the late State Fair at Burlington. From the reports which we have seen, we suppose it was a good one, equal, and superior in some respects, to any that has preceded it. On Tuesday, the 13th, the weather was exceedingly rough. The correspondent of the *Journal* says:

All night long the wind blew, increasing to a gale, and this morning was one of the bluest that can be imagined. Dark, angry clouds swept over the sky, rising in dark masses from beyond the Adirondack Mountains. The lake was lashed to fury, and the waves dashed at times clear over the breakwater which guards the harbor, dashing, and foaming, and churning, till the entire reach of Champlain was a white expanse. The streets were lined with branches of trees, and on one of the streets a tall Lombardy poplar came down with a crash, just clearing a house which, had it been struck, would have been cut clear through from ridgepole to basement. There was a great fluttering of canvas among the show tents at the Fair Ground, and the Ethiopian Opera Troop had their theatre, stage, scenery, auditorium and all, tumbled into a promiscuous heap.

There were *five hundred and forty-five* horses, entered—a larger number than was ever entered at one Fair before. They were, Matched horses, 58 pairs; Woodbury Morgan stallions, 50; Woodbury Morgan mares, 16; Sherman Morgan stallions, 68; Sherman Morgan mares and fillies, 18; Bulrush Morgans, 30; foreign horses, 24; Hambletonians and others, 60; mares and geldings, 127. Very many of these horses were of exquisite form and action, and are not only a great credit to the Vermonters, but also a source of great profit.

The total number of *Sheep* presented was 352. The entries were—Spanish Merino bucks, 22; Spanish Merino ewes, 197; French Merino lambs, 14; and Long and Middle wool, 119.

The entries of *Cattle* were—Durham, 39; Ayrshire, 3; Devons, 21; mixed and native, 39; working oxen, 19 pairs; steers, 21 pairs; milch cows, 4; Herefords, 8; fat cattle, 7.

There were also about forty coops of *Poultry*, and a small show of swine.

At half-past 5, P. M., of the second day, Gov. BANKS and Gen. WOOL were received by Col. Needham and Gen. Clark, and escorted to the American House, where speeches were made,

and general hilarity prevailed. During the day, the wind blew a hurricane, with occasional dashes of rain and snow flakes. Mansfield Mountain was white with snow, and the lake was churned into soap suds. The air was filled with dust, but notwithstanding all this, there was a respectable attendance in the afternoon.

On Thursday, the third day, the sun rose clear, but through a winter's atmosphere. East and west, the mountain peaks were white with snow. But the Vermonters are not arrested in their movements by trifles, and soon poured in from every quarter to see and be seen, to talk and to hear, and to make their show one of profit and pleasure. So they went through the usual routine with horses, cattle, music, &c., until the hour arrived to listen to the Address by Gov. BANKS, when all repaired to the great stand, where Col. NEEDHAM, chairman of the committee of reception, recently one of our own citizens, remarked that the vast assembly present indicated how great was the interest felt by the citizens of the State in agriculture. There was a time when agriculture was neglected, but science and art had lent helping hands, and had raised it to a higher dignity. He spoke briefly of the progress which had been made, of the interest which had been manifested, and introduced Gov. Banks, who was received with hearty cheers.

The Governor's topic was the origin and growth of popular institutions, but we have space to give only here and there a leading thought of his excellent address. He said:

The Industrial Exhibition should present, in one form or another, the life of the people, and the character of the age it represents—its products, its habits, its labor, its leisure. What is not exhibited in products, should be witnessed in the people themselves. But it is among the wonders of life that the most manifest and indispensable aids to human effort in every age and every land, should have been successfully resisted for extended periods of time. The introduction of machinery, gas, pure water, railways, and many of the common articles of food, have met with such opposition. Products with capacity, to endure every soil and climate, have, by such prejudices, been restricted to special latitudes. Even in New England, where young men are leaving health and home for the newer country of the West, and a little more land—even in New England, one-half of the soil, and sometimes of the best capacity, is, out of custom and usage, unimproved and useless. The surest method of breaking into such customs, that have held men in poverty, is to bring them together, not for a single object, but for every practicable purpose and interest. * * *

The multitudes here to-day are gathered from every part of the State to witness the strength of the State, the extent of its acquisitions, the riches of its industry, the achievements of its invention and discovery, working harmoniously

in purpose and process with the laws of nature and of God!

They come from every walk of life—both sexes and of every age. Welcome all! thrice welcome! This is the day of the people—a regular bread and butter day. Hosts and guests are one! We come to see and hear, what is, and what is to be in the kitchen and the parlor for the coming year—what shall be the order of our life, and how to accomplish it? What is the size of potatoes, and how many in a hill? How about the rot? (Thank G d, not a sign of it yet.) Where are the fattest cattle, and how are they fed? Who has the fastest nag, and what is his time? Let us see the reaper that rides the field like a ship at sea, and cuts down the yellow grain as the Italians and French did the Austrians at Solferino? Is there any improvement in the people? Are the young to grow up wiser and better than their fathers? These are the things we desire most to know.

We are the people!
Not one is for a party
But all are for the State;
The rich man helps the poor
And the poor man loves the great.
Our lands are fairly portioned,
Our products fairly sold,
And we are what our fathers were
As in the honest days of old.

We come just as we are. There is no shame in us. If we are intemperate, profligate, idle, vicious, disorderly, you will see it. If we are quiet, inquisitive and interested—if order vainly seeks for disorder, with a policeman out of employment to aid her, you will know it. It is vain for a multitude to assume virtues to which it has no title. We have a life interest in all things here. It is by them we live, and in the triumphs of industry over all obstacles is our hope of prosperity and happiness. * * *

Physical recreation is essential to our mental and moral culture. It is as essential for artisans and farmers to know how a man with a voice like a willow whistle can be transformed to a full-chested and strong lunged stentor, how tiny limbs and puny frame, by exercise and right living, may attain something of the tendons and flesh of Hercules, as to know by what process cattle may be reared in three years for the market, instead of six. Why not? Are not *men* of as much consequence to the world as the most delicious of tenderloin steaks? One who can hear a musket-shot at his ear without moving a muscle of his face, has an attribute of power which none of us have; and at the first public disaster, a riot, or conflagration, or scene of danger, we should see the superiority of his training over ours. If every man knew his full capacity of power, it would be a different world in which we live.—“Measure us” should be our constant cry. * * *

In conclusion, it was remarked that he had seen in our own New England homes, life stripped of everything but the barest existence and the dullest labor—no fruits or flowers—not a shotgun—not a saddle-horse—scarcely a vegetable-growing—nothing that ministers to the beautiful—all the old sports dropped—not a jest left to throw at a dog. If we hope to retain our young men on their paternal acres, we must show them that it does not doom them to the joyless labor of the galleys, the fasts of Anchorites, or the

solitudes of Celibates. Let it be seen that if agricultural or industrial toil does accumulate in our iron coffers the golden sorrows of the *millionaire*, it returns for honest labors the only substantial and permanent independence. Let its serene contentment and laughing pleasures, as well as its solid compensation of health and happiness, be written in our countenances, seen in our enjoyments here, in our industrial festivals, as it is redolent in the atmosphere of our prosperous, laborious, happy homes.

The address was not a superficial one,—but had evidently been prepared after much research and thought, as it abounded with philosophical remarks and illustrations. Gen. WOOL, Mr. GIDDINGS, of Ohio, and several other distinguished gentlemen, were present.

An esteemed correspondent in Vermont writes us: “It is very gratifying to me to observe the gradual improvements of our people from year to year. These annual gatherings enlarge ideas, improve manners, and practices in agriculture, also. Gov. Banks gave us a magnificent address—sound, sensible, able and practical, and we were all pleased with him as a man.”

Will some one of our able Vermont correspondents tell us, by-and-bye, what the several State fairs have done to *help* or *hinder* the progress of farming in their State. Indeed, it is time, now, that a careful review should be made in every State, and also in their several counties. Who will do it? If made after proper investigation, and by a competent hand, such services will be more valuable than any other labor in the cause.

CONTRACTION OF HORSES' FEET.

THE CAUSE AND REMEDY.

The tendency of a horse's feet, in a healthy condition, is to expand whenever the weight of the body is thrown upon them. Being a very complicated piece of mechanism, they are very easily disarranged, and once out of order, are difficult of repair; hence the necessity of preserving them in a sound condition.

Contraction is caused—1st, by cutting away the bars of the feet, which are the main stays for the support of the quarters. 2d, By (opening the heels, as the smith calls it) cutting away a portion of the frog, in consequence of which the moisture of the frog becomes absorbed, losing its elasticity, and destroying its function, thus exposing the feet to injury by concussion. 3d, By standing upon plank floors. 4th, By improper shoeing.

An ordinary observer will, upon an examination of the common shoe, notice that it inclines from without inwards at the heels, thus forming a concavity for the feet to rest in; the consequence is a lateral resistance to the expansion of the hoofs, when the weight of the animal is thrown upon them. The effect of this resistance is to force the heels together, creating pressure upon the sensitive parts within the horny case; estab-

lishing fever, by which the moisture of the hoofs is rapidly absorbed, rendering the hoofs hard, brittle, and liable to crack, and frequently causing corns, navicular joint lameness, bony deposits to be thrown out from the lateral wings or processes of the coffin bones, rendering the animal permanently lame or unsound. These are but a few of the bad effects arising from contraction; enough, however, to serve our purpose at present.

Remedy.—Preserve a level bearing by making the shoe perfectly flat on the quarters, so as not to interfere with the expansion of the feet.—Should contraction already exist to a considerable extent, bevel the shoe slightly outward at the heels, in order to facilitate expansion. Care should be taken not to bevel too much, or bulging of the lower part of the hoofs at the quarters will be the result. The shoe should in all cases be forged and not twisted, as is sometimes done to save trouble by the bungling smith. Proper applications, to soften the horny parts and promote elasticity, should also be used. Such preparations are put up in the form of hoof ointments.—*R. Jennings, V. S.*

For the New England Farmer.

QUALITIES OF THE HORSE.

We should take more pains to breed horses of beautiful carriage, fine proportions, good tempers, courage and docility, than for high, Gilpin speed. We want horses for all purposes, that are not cowardly, that will not take fright; for those of that temperament are ever dangerous to whomsoever may use them, and to persons in the streets. Much damage is done, annually, by such horses, to carriages, harnesses and other property. Many limbs are broken and lives lost by these affrighted animals. It should be an indictable offence to bring such horses into the market. Courage and other good traits and qualities in the horse are hereditary, as in the human race. We should look to the pedigree for purity of blood, health and constitution, also.

The gait of the horse is less easy and graceful when pressed to a high rate of speed. It is much more healthy, pleasant and safe, to ride at a moderate pace, upon a horse of an easy gait. When riding for pleasure, it is more pleasant and safe, at a six mile speed, than at 2.40 or under. We have, thus, the best and most perfect view of the country or town through which we may ride. Moderate horses are the best, and most comfortable of management, for business and domestic purposes and uses. Those of high speed are more liable to accidents, are more easily injured, are less hardy than others.

Now-a-days, we travel by steam, when we journey, and our swift-winged messages are sent by the aid of electricity.

Swiftness is only a fancy and sportive quality, and too much regard to it, in the breeding and rearing of horses, is a public injury.

GEO. O. BETTON.

ARTESIAN WELLS INJURIOUS.—The California Farmer condemns artesian wells as a curse in California, in some parts of which they are numerous, being used for irrigating the country for agricultural purposes. The fruit raised by

the irrigation system is less rich and juicy, and the trees are not so hardy. In Santa Clara the evils of numerous wells of this sort are already seriously felt. The earth is parched up, and bitter complaints come from all quarters. All the surface water of the country is drawn off by means of artesian wells—drawn down to their channels, and then sent up again in one stream instead of ten thousand through the pores of the surface earth. Instead of being showered, the land is flooded by profuse irrigation.

EXTRACTS AND REPLIES.

SEEDING LAND TO GRASS.

Will it answer to seed down a piece of strong, heavy, orchard land, full of witch grass? or, rather, will seeding down be the most effectual method of killing it out? or try root crop? It has been up two years. READER.

REMARKS.—It is too late to seed land to grass this fall, with much certainty of success. Better plow it this fall as late as you can, and then again in the spring as soon as the ground will permit, give it a dressing of compost manure, and sow grass seed with oats or barley. If the land is high, and a gravelly loam, sow with barley; if of a heavier character, use oats.

A crop of roots on such land, well tended, would probably eradicate the witch grass, but the process would be rather an expensive one.

IMPORTING SCIONS.

Intending to import a few of the better kinds of apples and pears from the continent, I beg you to inform me, through your paper, if scions may successfully be imported? Which would be the best season for it, how long would they continue fresh, and how should they be packed to prevent their spoiling?

SAMUEL B. TRACY.

Dorchester, Mass., Sept., 1859.

REMARKS.—We have no doubt but scions may be brought here from the continent successfully. The nurserymen there will probably know how to pack them. A great many of the pear trees that are imported are undoubtedly six months before they are put into the ground here. Scions properly packed in damp moss, we think would keep plump and fresh for many months, if they were kept in a suitable place.

NATIVE GRAPES.

My object in sending you this box of grapes is to know if they are worth raising? They were raised in grass land, and have never been trimmed, or had manure of any kind. If in your opinion there is any kind of native grape any better, you would do me a kindness to give me the names of a few? LEONARD CHANDLER.

Princeton, Sept., 1859.

REMARKS.—We have had many samples of native grapes sent us to taste, and have trans-

planted and cultivated the best we could find in the woods, but have not yet found one worth encouraging. The samples you send are sour and foxy, with a hard acid core about the seeds, and are not worth cultivating, because they will require as much care as a grape that all will acknowledge good. The wild grapes make excellent jelly, and tolerably good preserves, but are not fit for the dessert. Manuring will not improve the quality of the fruit much.

HYDRAULIC RAMS.

The promised information is wanted of your Concord, (Mass.) correspondent, concerning hydraulic rams. I want to know what kind of pipe is the best—what size will be necessary to supply twenty cattle—and any other information he can give.

PAY.

Bakersfield, Vt., Sept., 1859.

ROCKINGHAM, N. H., FAIR.

[REPORTED FOR THE NEW ENGLAND FARMER.]

MESSRS. NOURSE, EATON & TOLMAN:—At ten this morning, the farmers, with their wives, sons, daughters, oxen, &c., were in full attendance to assist in opening the exercises of the *Seventh Annual Exhibition of the Rockingham Fair*.

The exercises commenced with a procession led by Chief Marshal PALMER, composed of the various bands, fire and military companies, and citizens, with town teams from various parts of the county, bringing up the rear. These teams made a very fine appearance, made up, as they were, mostly of the famous "Red Oxen," of New England.

The Nottingham team had a few very heavy yokes of cattle, and as each yoke bore a banner, with the name of its town marked upon it, the effect was pleasing.

The Hampton team, however, was the attraction; its car beautifully adorned externally, and infinitely more beautiful within, with the animated grace and loveliness of the fair daughters of that town, all indicated that Hampton women take an interest in agriculture, as well as Hampton men.

The stock pens were well filled, and the various breeds of cattle, Devon, Durham, Jersey and native, were fairly represented, though there were few cattle showing any marked superiority of system, either in breeding or feeding. A fair show of horses, sheep and swine completed the list of stock in the pens.

The plowing match came off at 2½ o'clock, P. M., and was very well attended. There were some fourteen entries of horse and ox teams, with plows rigged exclusively for sod plowing. Two of the famous universal plows, and several others, were entered for trial by their respective owners. The land to be plowed was of a light, sandy loam, with little or no sward, and not of that character to bring out all the good qualities of a plow, or to fully test the skill of the plowman.

The universal plow, entered by JOSEPH H. WEARE, of Seabrook, soon became the object of

general attention. The soil came from its mould-board, completely disintegrated, and the land plowed looked much like a garden, so completely and smoothly did the plow do its work. I am confident that this plow will take the first premium, satisfied as I am, that of the many farmers who witnessed its work, not one went away who did not decree, in his own mind, this award to it. All the others performed *well*, but owing to conditions of soil, before mentioned, a sod plow could hardly be said to have had a complete trial. Much must always depend, in a trial of plows, upon the skill which the plowman possesses, in rigging them, or adjusting to the character of the soil to be worked. Many good plows are often condemned and thrown aside as worthless, simply from an ignorance of these requisites.

Immediately after the plowing match, a trot, (for a purse made up *out of the society*.) was announced; the names of the contesting parties, or the result of the trial, I did not take the trouble to learn, as I do not consider this a part proper of an agricultural fair.

The address, by CHAS. G. DAVIS, Esq., President of the Plymouth, Mass., County Society, was next in order, and, as an instance how much a good, sound address will attract that class of people who frequent fairs only to see speed, it is proper to state that ere the conclusion of the address, two-thirds or four-fifths of those in at its beginning, had left.

I would suggest, that if trials of speed are to become the rule at our fairs, the managers shall arrange to have half the trot before and half after the address; this will secure the attendance of the people to hear the address, and may lead the popular mind to entertain more exalted notions of the aim and end of agricultural improvements. Duties, in another direction, prevented my enjoyment of Mr. Davis's address. I judge, however, that those who heard it through, went to their homes with a new impression of the dignity of their calling.

A glimpse at the hall showed that to be the great point of interest. Here is felt the influence of woman's hand and taste, in the various adornments, natural and artificial, which it contains. Upon its tables are displayed all imaginable productions of the garden and greenhouse, arranged as only woman can arrange to show all their good points.

The mechanical department was almost nowhere, and furniture, &c., was not much better.

The second day was devoted to "Female Equestrianism," horse racing, a *show of a market fair*, or sale of stock, which a shower and a scarcity of buyers brought to an untimely end. In the announcement of premiums, I found that Mr. Weare drew the first for the universal plow, No. 121. After this came another race, and then the close.

Yours, very truly,

NOMAD.

Exeter, N. H., Sept. 28, 1859.

The attention of the reader is called to an article in another column upon the meaning of the words "*Type—Species—Variety*," as constantly used by farmers and gardeners, in speaking of their various products. There will be a better understanding between each other when

the precise meaning of these words is generally understood by those who employ them in speaking of agricultural matters.

AGRICULTURAL SHOWS.

We are desirous to give some notice—even though it be a brief one—of each of the State and county shows, as a record of passing events in agriculture, and in order to afford a means of contrast in the future. The *Monthly Farmer* is in book form, and is, therefore, convenient for preservation, and each number is stereotyped, so that as editions are exhausted, they are easily supplied. In this, accounts of these shows may be preserved, and they will afford the means of enabling us by-and-by to ascertain what progress has been made in the art. But as we are not able to attend all the meetings and report them, we are obliged to refer to the daily papers for brief sketches of their proceedings. Some of them we give below.

EAST FRANKLIN AGRICULTURAL SOCIETY.—We learn from a correspondent that the second annual meeting of the East Franklin Agricultural Society was held at Montague on the 24th. Fine horses and cattle crowded the streets, and an endless variety of apples, fruit, roots, melons, squashes, fancy articles, and all the other eteteras of such a show, filled the town hall. An address was given by Prof. Ward of Bernardston. Music was furnished by the Montague Brass Band. A dinner was furnished at the hotel, of which about two hundred partook. Speeches were made by Mr. Eastman, of the *Greenfield Gazette and Courier*, Rev. Mr. Tandy, Prof. Ward, Major Reed, A. D. Hubbard and S. B. Pratt. Mr. Ward's address was the great feature of the occasion, it being delivered in a pleasing, off-hand manner.—*Journal*.

MIDDLESEX NORTH AGRICULTURAL SOCIETY.—The fifth annual exhibition of this society took place on Wednesday, Sept. 20, in Lowell. The number of entries of cattle and stock was much larger and of better quality than on any previous exhibition. Several fine mares and colts attracted much attention. There were several good specimens of Cotswold, Merino and Smyrna sheep with lambs. The rain interfered very materially with the out-of-door exhibitions. At the appointed hour the officers of the society and the invited guests partook of a dinner in French's Hall. After the cloth was removed an address was delivered by Hon. George N. Bontwell, after which toasts were given, and responses were made by Hon. C. L. Knapp, Mr. Bushnell, of Sheffield, Mr. Reynolds, of Concord, and others.

MIDDLESEX SOUTH AGRICULTURAL SOCIETY.—The Annual Exhibition and Cattle Show of this Society began on Wednesday morning, Sept. 20, at Framingham. The display of stock was not so good as that of last year. Some of the animals that took premiums last year, were entered for this year's prizes. The exhibition of vegetables was very fine, and was much better than was

expected, as it was thought the recent winds had damaged it very materially. There were excellent specimens of grapes, and a good display of manufactured articles, carriages and fancy work. The following is a summary of the entries:—

Plowing, single teams 5; double teams 7; horse teams 5; fat cattle 3; bulls 14; cows 12; milch cows 3; heifers 37; heifer calves 13; working oxen 7; steers 4; carriage horses 15; stallions 7; breeding mares 8; colts 18; farm horses 5; fat hogs 4; boars 6; sows 10; litters of pigs 7; miscellaneous 26—total 221. Fancy articles 110; loaves of bread 40; vegetables 132; varieties of fruit 382—total 654. Total 875.

PHILADELPHIA, Sept. 26. The State Agricultural Fair commences at Powelton tomorrow, and will be the most prosperous ever held. The entries are very numerous. All the departments are well filled. The premiums to be awarded amount to \$8000.

St. Louis, Sept. 26. The fourth annual fair of the St. Louis Agricultural and Mechanical Association opened to-day, and although a heavy rain fell in the morning, the grounds were visited by about 15,000 people. Nearly every State in the Union is represented either by delegates, stock, or in the mechanical and agricultural departments. The number of entries exceeds 5000, more than twice as many as any previous fair, and still more are to be made.

The exhibition is unprecedentedly large, and superior in quality. The \$1000 premiums for the best roadster bred stallion, and thorough bred bull, have drawn here many of the most celebrated animals in the country.

In a ring of twenty draft stallions to-day, the first premium was awarded to Charles B. Mack, Rockport, Ky. The first premium for matched, horses was taken by Wm. Reed, of Butler county Ohio.

The city is densely thronged, and every train and steamboat comes loaded with additional crowds. Should the weather be propitious, the present will eclipse any fair ever held in the Union.

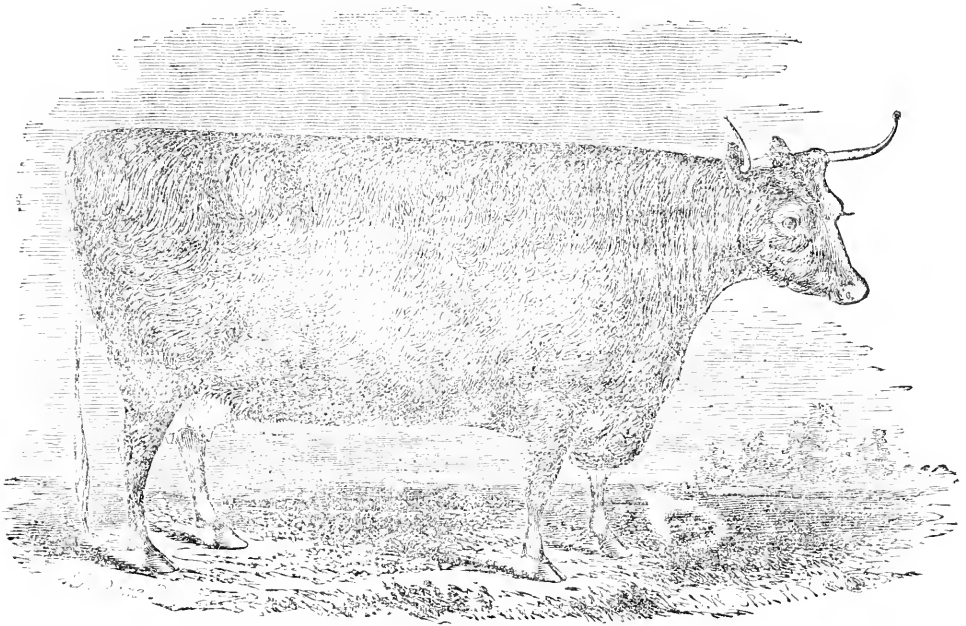
MASSACHUSETTS SCHOOL OF AGRICULTURE.

At the annual meeting held recently, the following officers of this society were chosen for the ensuing year:

MARSHALL P. WILDER.....	President.
RICHARD S. FAY.....	Treasurer.
CHARLES C. SEWALL.....	Corresponding Secretary.
ASA FRENCH.....	Recording Secretary.

By the act of incorporation the Trustees of the society are: MARSHALL P. WILDER, BENJAMIN V. FRENCH, GEORGE W. LYMAN, RICHARD S. FAY, SAMUEL HOOPER, JOSEPH S. CABOT, CHARLES O. WHITMORE.

COAL AND IRON.—From the official returns of the British Mineral Districts, it appears that the produce of the coal mines in the United Kingdom during a recent year amounted to 65,394,707 tons; the estimated value of the coal at the mines was \$97,433,380. The pig-iron produced during the year was valued at \$64,000,000.



THE PURE DEVON COW, FAIRY

We have before us the third volume of the Devon Herd Book, containing pedigrees of Devon cattle, with the names of their breeders. It is an American edition, edited by SANFORD HOWARD, Esq., a gentleman as well qualified for the task, perhaps, as any other man in the country. The publishers, Messrs. *Brown, Taggard & Chase*, Cornhill, Boston, have sent us one of the few copies which comprise the edition, and also two of the electrotype cuts which illustrate it. One of these we gave in a former number, and to-day we present the reader the portrait of as symmetrical and perfect a specimen of the Devon race of cattle as he has probably ever seen. This cow was calved in 1851, and bred by G. Shapland, of Oakland, England, and is now the property of R. LINSLEY, of West Meriden, Conn. Fairy has taken several premiums at shows of the Connecticut State Agricultural Society.

Persons who are not familiar with "blood stock," may think such outlines as are presented in this portrait exaggerations,—but we can assure them that they are not, as similar specimens may be seen at most of our State exhibitions, and quite often at county fairs. It shows not only what may be accomplished, but what may be *continued*, by skill and care.

SPARROWS FOR NEW ZEALAND.—In New Zealand the country, at particular seasons, is invaded by armies of caterpillars, which clear off the grain crops as completely as if mowed down with a scythe. With the view of counteracting this plague a novel importation has been made. It is thus noticed by the *Southern Cross*:—Mr. Brodie has shipped three hundred sparrows on board the *Swordfish*, carefully selected from the best hedgerows in England. The food alone, he informs us, put on board for them, cost £18. This sparrow question has been a long standing joke in Auckland; but the necessity to farmers of small birds to keep down the grubs is admitted on all sides. There is no security in New Zealand against the invasion of myriads of caterpillars which devastate the crops. Mr. Brodie has all ready acclimatized the pheasant, which is abundant in the north. The descent from the pheasant to sparrows is somewhat of an anti-climax; but should the latter multiply, the greatest benefit will have been conferred on the country."

HOW LONG DO WOODEN WATER PIPES LAST?

—In excavating for the State Street sewer, the laborers came upon the remains of an ancient system of water works, the exact date of which is unknown, but supposed to have been made in 1819, '20, or in 1827. The pipes are of pine wood, a foot or so in diameter, and in very excellent preservation. When first reached, the logs retained the bark. Recent discussion re-

specting the utility and durability of wooden water pipes, gives to this discovery considerable interest, and it may be important to note all these evidences of the durability of such artificial water courses. We are informed that the corporation of Elmira have adopted wooden water pipes for a system adapted to supply the wants of that village.—*Rochester Dem.*

For the New England Farmer.

SURFACE MANURING.

BY JUDGE FRENCH.

Lincoln is one of the best counties in England. The wheat crop on Lincoln Heath averages nearly thirty bushels to the acre. This same heath was an open common, a century ago, and so barren and desolate, that a tower was erected in 1751, and a light kept burning to guide travelers in the night in their uncertain journeys across the waste. The writer visited this land light-house in July, 1857, and passed a week in the county, with some of its best farmers. It is a beautiful, highly cultivated region, now, abounding in the finest sheep and horses, with broad fields of grain carefully drilled, hoed, and weeded by hand; enclosed with well cut hawthorn hedges, indicating plainly and surely that the farmer there understands his business, and that it is not, as it is often with us, a matter of luck and chance, whether a good crop repays the culture, but a certainty almost, that the well established system of the county will afford the expected reward. Their system is that which is there usually called "the four-field system"—sometimes, the four-course or four-shift system; of turnips the first year, barley, the second, "seeds," i. e., rye-grass and clover, and sometimes vetches, the third, and wheat the fourth, and this repeated forever. On the heavy clay lands a five years' course is adopted, and on the fens an entirely different system.

Walking over the fields of "seeds" as this grass is termed, I observed on the land of one of my friends, that fresh manure from the "cremeryard" had already been spread on the surface, and this was before the middle of July, and there it must lie till plowed in, in September. It struck me as a wasteful course, and as injuring the grass for the sheep then grazing upon it, and I so said to my friend. He is a man of education, and a practical English farmer, with no other occupation but that of husbandry, and farms for profit, and not for fancy. He gave me his views freely and decidedly. "We understand," said he, "that theory seems to be against us, and that there must be a loss of some of the elements of fertility by evaporation, and that it seems more reasonable to plow in the manure as soon as possible, but we have tested it, all of us, again and

again, and we *know* we get more wheat by spreading the manure a month, or six weeks, before plowing." Upon my suggestion that it was evident the manure was wasting, because *we* *don't* was then very strong all about us,—“Certainly,” he said, “there is some waste, but not so much, perhaps, as many imagine. The odor is from the ammonia, and a very small quantity is quite perceptible to the senses. A few shillings worth of ammonia from the shops will furnish all the odor we perceive from an acre.”

Afterwards, I rode from Salisbury to Stonehenge, in a carriage, with five or six farmers from various counties of England, who had accidentally met at the Great Agricultural Fair, and stated to them what I had observed in Lincolnshire. Nearly all of them bore testimony that the same practice of spreading manure some weeks before plowing, for wheat, prevailed in their respective districts, and so far as I could learn by observation, the practice is general in England, though by no means universal.

The climate of England differs from ours in this, that they have much less hot weather than we. Yet there are many bright warm days, and many days of sunshine, with occasional showers; and perhaps alternate wettings and dryings favor decomposition, and loss by evaporation, more than steady, burning heat; and besides, excepting in the summer months, there is not so marked a difference between the climate of New and Old England. If it be the true policy to apply manure to the surface there, in July and August, to be plowed in, weeks after, we might think better than heretofore, at least, of top-dressings for grass in autumn in our own country. In Lincolnshire, too, they feed their sheep in hurdles on their turnips, and plow in the manure thus made, with a wheel-plow but two inches deep, to keep it near the top for the barley crop which follows.

The *Mark Lane Express*, published in London, has recently given a series of articles upon manures, insisting that the true mode of applying manures is upon the surface. The writer boldly makes such statements as these:

“Mr. Hudson, of Castleacre, Norfolk, states the fact from his own experience, that the quality of farmyard dung is improved by an exposure of months on the surface of the ground; and that the crops are better from dung that has been exposed, than on lands in which the dung has been covered in the usual moist and half-rotted condition. This observation is not quite new, though but little known; and when mentioned, it has been completely smothered by the overwhelming weight of the established dogma on the use of farmyard dung. My own experience is able to confirm the statement of Mr. Hudson, during a long and very extensive practice in using farm dung on clay fallows for wheat. * * * * *

"Mr. Hudson's observation is very much strengthened by the bean farming of East Lothian, cræk county of Scotland. The land is partially wrought in February and March, drills are opened as for green crops, rough but well moistened farm-yard dung is spread along the intervals, the beans are sown, and the drills are reversed. During these operations, the weather, being unsteady at that early season, often interrupts the progress, and leaves the farm-yard dung lying in heaps, and even spread along the drills, exposed to every change of weather—washed by the rain and snow, bleached by the frost, and dried by the strong winds, for many weeks; the crop of beans has been, in every case, superior to the lands manured in the usual way."

This writer, however, admits that his notions are not in accordance with those of others. He says, after giving other facts to the same point, "all the above statements clash with the doctrines of chemistry, and are against even the most approved and settled practice; but facts are stubborn things." And again—"However much these statements may clash with the chemistry of Kensington or Hanover Square, such facts are stubborn things."

Now, at "Hanover Square" is the office of the Secretary of the Royal Agricultural Society, where they hold their regular weekly meetings, and where I had the pleasure of seeing and hearing some of the first agriculturists of all England, and to my mind the writer's admissions that his theories are in conflict with the "doctrines of chemistry" and "the most approved and settled practice," and his slurs at "Hanover Square" are rather stranger than his own facts.

In the *Country Gentleman* of about Dec., 1857.—the date is gone—there is an article by J. W. Clark, on "Spring and Fall Manuring." It is there stated that

"Prof. STOEKLER of the Royal Agricultural College, Cirencester, England, together with Prof. S. W. JOHNSON, of Yale, and several farmers in the State of New York and elsewhere, are, it seems, convinced that manures hauled out and spread broadcast on the soil during late fall and winter, do not suffer any material loss of ammonia, and other plant food, from such exposure; that the evaporation which invariably affects manure in such conditions, does not carry off any considerable quantity of the elements used as food by the plants, and which therefore, it is desirable to prevent the waste of, whether such waste results from evaporation or otherwise."

The writer's idea in brief is, that ammonia, the principal substance supposed to be lost by exposure of manure to the air, is not set free except by fermentation, and that considerable heat is requisite to produce this fermentation, and that manure exposed in winter would not therefore lose much by this process, "because fermentation is prevented by the cold air of this season,

and no loss of nutriment takes place by the mere evaporation of water without fermentation; hence manure does not lose its ammonia by being exposed during the winter, even if it blow and rain and snow and freeze."

If manure be spread, there are certain portions of its fertilizing substances which are washed out by the rains, but which are not thereby lost, but are taken into the soil. I will not attempt to talk like a chemist, because I am not one, but there are evidently valuable elements of fertility which cannot be evaporated. Common salt is of this class. It may be dissolved in water and exposed to the sun. The water evaporates, but the salt remains. John Johnson, near Geneva, N. Y., in the *Country Gentleman*, of June 16, 1859, goes the whole figure for surface manuring.

"If I had no foul seeds to destroy, and my manure had not a large quantity of straw in it, I would take it right from the yard to a grass field, in April or early in May; spread it on the surface, letting it lay one or two years before plowing; at least I would try." * * * *

"I notice Prof. MAPES, also, comes out in the N. Y. *Tribune* against surface manuring. It is possible that plowing down the manure may answer a better purpose for the Professor in raising carrots, beets, turnips, squashes and pumpkins, but not for our crops here. Surface manuring, like under draining, has to meet with much opposition for a time, but it must ultimately, like under-draining, become an established necessity in successful farming.

"I know it is difficult to change the minds and plans of men so far advanced in life as S. W. and myself, (Prof. Mapes I have never seen.) but surface manuring is gradually getting into favor with all progressive farmers; and before ten years, will be generally adopted; but there may be some, as in the chess question, who may, against all opposition, still stick to the old custom of plowing the manure down a foot deep."

Here, again, we find the writer's language has a double edge. He advocates surface manuring, and cites Prof. Mapes as authority against the practice. Now, Prof. Mapes is not only a man of science, but one of the most successful farmers in getting a profit from his land, within my knowledge, and so we cannot help having more faith in science illustrated by practice, than in practical results by men who pretend to no scientific knowledge. The man of science is always a more accurate and reliable observer than the merely practical man.

The object of this article is not to talk dogmatically, but rather to present fairly the views of "good men and true" who differ in their ideas. Perhaps my own opinion should be given. I will state my practice, which I see no occasion at present to change. For grass, I prefer to lay down my land in August or September, either with winter rye or nothing, as winter wheat does

not thrive with me. If I break up sward land, I do not first spread the manure, but turn with a double plow, spread my manure, generally compost, and plow it in with one horse, lightly, not disturbing the sod. The same course I pursue on my sandy land for corn and potatoes. I use a double or Michigan plow even on old ground, and do not like to put the manure so deep, as such a plow buries it. I top dress my heavy land grass fields, once in three or four years in autumn, with compost, and should practice this more, were it not that my land produces white weed and briars and other weeds, and I like to plow it occasionally to give the grass the advantage of them. Where grass is the most valuable crop, top-dressing is, on heavy lands, though there be some loss of manure, convenient and profitable.

I certainly have not yet concluded to spread fresh manure a month exposed to the air in summer, before plowing in, though I cannot deny that my Lincolnshire friends may be correct in their opinion that in their climate and with their system, they get more wheat by this practice. Still, this method does not yet look right, nor smell right, nor seem right, for our adoption.

For the New England Farmer.

A WELL ARRANGED COW-STABLE.

Sutherland Falls, Vt., Sept. 13, 1859.

HON. F. HOLBROOK:—*Dear Sir,*—I am keeping a small dairy of twenty-two cows, and intend to keep about thirty. Will you oblige me by telling me the best plan of arranging stables to keep them in? Would it be good economy to stable them nights during the summer, giving them a little extra feed in the stables? What is the best plan for fastening them in the stalls?

Yours truly, A. C. POWERS.

Brattleboro', Sept. 22 1859.

A. C. POWERS, Esq.:—*Dear Sir,*—I have your favor of the 13th inst., inquiring for a good arrangement of stables for cows. As I occasionally have letters of similar import, I take the liberty of answering yours through the medium of the *New England Farmer*, hoping that other persons may thereby find the information they are seeking for in common with yourself.

I would make the manger of your stables about two feet, and six inches wide, and about three feet and six inches long—the latter dimensions, of course, being the *width* of stall or space in the clear, allotted to each cow. The mangers should be suitably divided off, by partitions, to each animal, so that you can feed each one as you please, without the interference of one cow with the food of another. The bottom of the mangers should be elevated three or four inches from the stable floor, for the convenience of the cows when eating. If the sides of the mangers are made perpendicular, the right angled or sharp corners formed by their junction with the bottom should be filled out with narrow strips

of board or plank, nicely fitted in, so as to prevent meal or other fine mested food from lodging; but a better way would be, to make the sides considerably flaring, and then the cattle can get their noses into the corners of the manger, and clean them of meal or other fine food. Each manger should have an upright post or standard, firmly set, and rounded part way up, and with an iron ring to slip up and down on this rounded part, for the purpose of fastening the animal, and of allowing it to raise or lower its head at pleasure. The board or plank forming the side of the manger next to the animal, should be about one foot high or wide, and the ring on the standard should not slip below that height.

Leather straps, with strong buckles and loops, to go around the necks of the cows, are better than chains or stanchels. The straps should be one and three-fourths inch wide, and about three and a half feet long; and there should be a half ring, of iron, slipped on to the strap, and made fast to it, by stitching a strong loop on the inner side of the strap, and nearest the end which has the buckle; and then there should be a swivel link, connecting the strap-ring to the ring on the standard or manger post. This swivel arrangement prevents the strap from becoming twisted on the neck and choking the animal. You can readily judge for yourself where is the best place in the strap to confine the half-ring, so as to render the fastening and loosening of the cow handy and convenient every way. Leather straps will last many years, and are very safe and convenient for tying up the cattle, as well as comfortable to their necks. I have a set which have been in use some fifteen years, and are still as good as new. There is an oily or lubricating substance imparted to them from the necks of the cattle, which preserves the leather perfectly, and keeps it soft and pliable.

The floor-planks should be placed lengthwise the stalls, or, in other words, parallel with the way the cows stand; they should be about five feet and six inches long, outside the mangers; and should rise slightly from the rear end to the manger, so that liquids will not stand on them.

There should be a water-tight trench, immediately behind the cows, made four inches deep and about twenty inches wide, in the clear, and extending through the whole range of stables, and lying level from end to end. Here is the place of all places to make compost manure.

Then there should be a walk, of about two feet in width, between the trench and the rear side of the stable.

Throw the manure out of the stable windows, under a shed-roof, or through scutiles in the walk behind the trench, whichever you may prefer, though I should prefer a deep shed, on the south side of the buildings.

Provide a dry, warm place, for the storage of compost materials, conveniently accessible from the stables, and in the summer, or fall, fill the storage-place with swamp muck, dug and piled a few months, or a year previously, so as to have become dry and fine, and a good absorbent of liquids and gases, or with leaves and vegetable mould dug up in the hollows and rich places in the woodlands. Each day, throughout the foddering season, clean out the trench, and then fill it again with muck or leaf-mould, putting about

a bushel of it behind each grown animal, and it will become well saturated and mingled with the cattle droppings, and make the very best of manure; indeed, far better than that which is commonly saved in the farmers' stables. No one who has ever fairly tried this method of composting, would dispense with it, nor would he regard the expense of fitting up the stables for it, or of supplying the raw material in the trench, as to be named in comparison with the advantages realized therefrom.

It would undoubtedly be a good plan to tie the cows in the stables, nights, through the summer and fall, or after the full flush of spring pasturage has passed, and feed them at night with green corn, or other soiling crops, raised for that purpose. The trench should also be daily filled with muck or rich mould. Thus you would increase both milk and manure.

For oxen, the floor-planks should be about six feet and nine inches long. The ox-stalls being made all at one end of the stable-range, no inconvenience will arise from having a jog in the trench where the cow-stalls commence.

Very truly yours, F. HOLBROOK.

For the New England Farmer.

BLACK KNOT ON PEACHES.

MR. EDITOR:—Some months since I noticed an article in the *Farmer* on "Doubtful Items in Culture," by your correspondent, J. M. Ives. From some remarks in that article, I infer that he has had much experience in testing different varieties of peaches, as well as other fruits, and I should be much pleased to see a list of those kinds which he esteems most valuable, and particularly, which among the late ripening varieties he thinks the most profitable. The late Crawford seems to be our standard late peach, but in many places it has proved too unproductive to be profitable. Is there a better late variety? If I remember aright, some years since the late Robert Manning recommended a late peach, called the Welch Freestone. Can your correspondent give me any information concerning it? Has the Druid Hill been sufficiently tried to determine its value?

I also wish to inquire if peach trees are ever much troubled by the black knot? Until very recently I was not aware that they ever were, but a short time since, while I was looking at a young peach tree, I was much surprised to discover upon it one of our old enemies, a veritable black knot; it was about two inches in length, and was upon the last year's wood; the tree is only two years from the stone, and is not budded; with the exception of this knot it seems to be perfectly healthy and thrifty. I have thought that, perhaps, the injury which this tree, in common with all peach trees, received from the severe cold of last winter, might have something to do with the production of this knot; yet this tree did not appear to have suffered more than the others.

I have heard of cherry trees, and of wild plum trees, (American,) being affected by the knot, but I have never heard of their being found upon the peach; yet, perhaps, they are not uncommon.

Sept. 20, 1859.

X. Y. Z.

For the New England Farmer.

A PLEA FOR THE ROBIN.

On page 542, vol. 10, of the monthly *Farmer*, is a communication from J. S. Needham, West Danvers, in which he says many hard things about the robins. He denounces legislative enactments to protect these birds, and asserts it as the "right and duty" of man to disobey the law, by destroying all those birds that taste the ripening fruit.

All the weeds, shrubs and bushes which infest the pastures,—hence the deterioration of pasture land, and its consequent depreciation in value, and the increase in the price of butter,—are laid to the poor robin. Really, such an amount of injury would consign a human being to infamy, if he were guilty, and who can uphold such practices in birds? But I am far from believing the robin guilty of all that is charged to his account. Other small birds are quite as plenty as robins, and some species feed almost wholly upon seeds, without being very particular in their choice. As soon as any seed is grown the common yellow bird may be seen upon plants, gathering his daily food. The lady's flower-bed receives a due share of attention, and in the latter part of summer and in autumn, thistles, mullins, burdocks, and almost every other noxious weed, furnish their quota of food, and we hear nothing about the utility of destroying them, but on the contrary all admire them; yet it appears to me that, if the "germ of the seed is not killed in passing" through the digestive apparatus of birds, the yellow bird deserves a full share of the denunciation for scattering seeds of injurious weeds.

On page 332, vol. 11, is another article written in the same strain, by a correspondent who signs himself "N." The article is entitled, "Ornithology," but his animosity to robins seems to have led him from his subject, for I think it would be difficult to find, in his communication, much that pertains to the science. He says, "To my mind, the robin possesses no taste, but selects its food to the fancy of its eye," and that the bird swallows angle-worms "only to gratify his vicious destructiveness." I am glad the writer will admit that the poor bird's destructiveness sometimes leads him to destroy worms. I will also admit that he eats fruit, and so do several other species of small birds, occasionally, but I do not believe the robin would live entirely upon that kind of food, if he could have his choice. Indeed, I think I have very good proof to the contrary, for during the present season I have seen a robin fly from the fence, and pick up worms and swallow them, when a cherry tree, laden with ripe fruit, was quite as near. Many a time have I seen robins follow the plow, picking up every worm and bug that came in their sight. This was in New Hampshire, where, it is true, angle-worms were not as plenty as in some parts of the country, yet robins were abundant, and fruit was plenty. The great number of insects which birds destroyed, was generally considered a full remuneration for all the fruit they eat, yet there, as everywhere, the robin had enemies. Persons called men would kill any small bird rather than allow it to take a few cherries or raspberries. I am glad, however, that all are not of that class, and that some men can be

found who are willing to give their votes to prevent the wanton destruction of our real friends among the feathered tribes.

Let all who are in any way engaged in molding the character of the rising generation, endeavor to inculcate a spirit of kindness, and I believe the time will come when the robin can live unmolested in every garden. AQUILA.

Bloomfield, C. W., 1859.

For the New England Farmer.

HORTICULTURAL HINTS.

CURRANTS—MILDEW ON GOOSEBERRIES—RASPBERRIES—PEAR TREES—RHUBARB—MANURE—SEED.

Those currant bushes that I trail up beside the fence in the manner that grape vines usually are upon the side of houses, I find yield more currants than those which are left to take their own course.

Mildew on gooseberries can be prevented easily, one would think, on reading articles in regard to it in the papers, but my experience says different. I think that some varieties are affected, while others are not; one bush in my garden has not been subject to it, and from it I have propagated ten others, which never have been.

Raspberry bushes need looking after; cut the old and weak new stocks off, leaving the strong, healthy ones for the bearers next year; take good care to manure well, and the time spent will well be paid for.

Pear trees whose trunks are protected from the hot sun. I find have made more wood than those exposed.

If you wish to have rhubarb early, cover up the roots this fall with horse manure; the strength of it, which will get soaked out by the rains, will not hurt the roots.

My three porkers have three wheelbarrow loads of muck each day to convert into manure, which they do by the aid of that which is thrown from the horse and cow to mix with it.

Give heed to the seed which is ripe—do not let the birds gather it, and you be obliged to call on the seedsman to get that which you are not sure is so good. My seed corn I gather from those ears which ripen first. Crops of all kinds look finely.

S. P. M.

Cape Elizabeth, Sept., 1859.

MYSTERIES OF THE BANK PARLORS.—The New York *Tribune* says, the discount clerk of one of the city banks recently resigned his situation. His resignation was accepted, his accounts investigated and pronounced all right, and a complimentary vote passed by the Board for his attention to his duties, &c. He then stated to the Board that he had a communication to make, as a caution to induce them to watch his successor. He stated that, notwithstanding his accounts were all correct at the time of resignation, he had, in fact, been using the bills receivable of the bank for years as collateral for loans, and employing the funds in the purchase of paper at usurious rates. By this course he had accumulated sufficient property to meet his moderate desires, and, having no further use for the facilities he had enjoyed, he had resigned.

MIDDLESEX CATTLE SHOW.

The sixty-fifth annual anniversary of this ancient and honorable society took place at Concord, on Wednesday, the 28th of September. The heavens were propitious—the solar rays being softened by an awning of thin intervening clouds, with a kind of half promise from them and the winds, that there would be no present rain. The air was mild, the roads moist and free from dust, so that these, and the charming scenery of the autumnal woods, invited everybody forth to enjoy this time-honored festival of the farmers of Middlesex.

By nine o'clock in the morning, everybody in the ancient and quiet old town of Concord was in motion, and showed that the gala day had begun.

The first exercise was that of the *Plowing Match*, which was numerously attended, and contested with much earnestness and skill. There were seven entries of double, three of single, and nine of horse teams. The trial was one of more than ordinary value, because some of the lands laid out were rough and wet, and thus compelled the workman to show his skill and the team its training. The usual order of things succeeded, such as the trial of working oxen and horses, the cavalcade of horses, then the exhibition of stallions, colts, farm horses and roadsters,—all of which seemed to afford gratification to the throng that surrounded them.

The exhibition in the Hall was greatly admired,—the fruit exceeding what had been anticipated, after a summer of so few fervid suns to ripen up and color it. The show of apples was very good. The fine Maiden's Blush by W. W. Wheildon, of Concord, and several samples of the same by others, the rich varieties of James Eustis, of South Reading, of Asa Clement, of Dracut, of A. G. Sheldon, of Wilmington, B. Stone, of Acton, John B. Moore and J. M. Cheney, of Concord, and the basket of Pumpkin Sweetings of M. K. Prescott, of Concord, could scarcely be excelled in any year.

The show of pears was excellent—not large but made up of good specimens of most of the best varieties. Some of the persons exhibiting in this department, were John Gordon, of Brighton, Jacob Eaton, Henry Davis and Jesse Haley, of Cambridgeport, Walter M. Allen, of North Cambridge, J. B. Moore, A. H. Wheeler, and J. M. Cheney, of Concord. We noticed several baskets of varieties of fruit, and among them one each of great excellence, from Asa Clement, of Dracut, from R. S. Stewart, of Concord, and from Edwin Wheeler of Concord. Only one small basket, and a shallow plate of peaches, were presented. The basket was from James O. Freeman, of Framingham. The show of grapes was

very fine, considering the cold season and the untimely frosts of May. Mr. Bull, of Concord, made a splendid show of the *Concord*—though rather excelled in this by Mr. Clement, of Dracut—and of the Black Hamburg, Grizzly Frontignac and White Nise. It was a little wicked in him to tempt us with such forbidden fruit. We do not feel certain that we shall ever drink his health again, unless *he finds the wine*. Fine Isabellas were exhibited by George B. Cutter, of Weston, bearing the record that *the vines had not been girdled*. Good samples of the Concord were also presented by F. A. Wheeler, of Concord, and George W. White, of North Cambridge. The show of *vegetables* was large, including most that are raised in the gardens or on the farms of our people, and they were of excellent quality.

E. L. Reynolds, Concord, presented a Yankee cotton plant in full vigor, with one of the bolls expanded and the snowy cotton streaming out.

Some 100 cattle, and 200 horses, were entered, and among them were many of merit. The show of swine was not large, but we think in quality it was the best we have ever seen at any place. We ought not to withhold the names of the persons presenting them. H. G. O. Merriam, of Tewkesbury had one estimated to weigh 1000 lbs., and several others that were excellent. A. Upton, of Wilmington, Joseph Derby, J. B. Moore and Cyrus Stow, of Concord, Thomas J. Damon, of Wayland, James Pierce, of Lexington, and Col. Wm. Hastings, of Framingham, all presented animals which gave conclusive evidence that they are judges of good stock.

There was a pleasant display of poultry. That of John Brown 2d, of Concord, and the White Shanghaies of Charles R. Damon, of Cochrutuate, attracted much attention.

For the first time for many years, we believe, the Society did not set down to a regular dinner; there was no lack of provent, however, on the ground or at the hotel near by. At 2 o'clock a procession, heralded by music, marched to the Town Hall, where a sound, philosophical and able address was delivered by the Rev. Dr. STEBBINS, of Woburn. It lashed the follies of the times, while it abounded with practical suggestions that must be of value to every farmer, if he will but ponder upon and adopt them. The address was an hour and a quarter long, yet none could be weary or inattentive under the sparkling thoughts that rolled from the rich, full voice of the speaker. We hope to see it printed, and to refer to it again. He was followed by Gov. BOUTWELL, Mr. BROWN, of Concord, Mr. ESTY, President of the South Middlesex Society, Gen. DANA, of Charlestown, and others.

I. F. SHEPHERD, Esq., of Somerville, being

called on, apologized for spoiling a committee book he held in his hand by concocting a little *agricultural poem*, while the orator was speaking; and to punish him for this breach of propriety the President made him read it, and a capital thing it was, glowing with onions and orchards, cabbages and cattle, pigs, poetry and pumpkins, and many a sly hit at the girls about their friscettes and curls,—matters that he ought to know nothing about. But we overlooked his want of gallantry in consideration of the excellence of the poem, and made him more than half promise that we might show the whole of it to the world!

The speeches being arrested, reports of committees were read, and then the society went into an election of officers for the ensuing year, with the following result:—

GEORGE S. BOUTWELL, Groton, President.
 GEORGE O. BRASTOW, Somerville, } Vice
 ANDREW WELLINGTON, Lexington, } Presidents.
 JOSEPH REYNOLDS, Concord, Secretary.
 GEORGE HEYWOOD, Concord, Treasurer.

Col. KEYES, of Concord, who has been the most earnest and efficient presiding officer for two years, declined a re-election. Though not a farmer, the attention and thought he has given to the society has greatly promoted its interests, and sustained its ancient and honorable reputation. The Society, grateful for his past endeavors, tendered him a cordial vote of thanks.

In the exhibitions of this Society there is always one thing worthy of imitation by all; that is, the promptness with which it takes up the several exercises of the day as the moment occurs to which they are assigned, and the celerity with which it goes through them. This enables them to accomplish all in one day, and prevents those unpleasant delays and confusion which always attend upon procrastination.

Below we give, as an example, the programme of the day, struck on a little card, and presented to the committees and others, who desired them. It was prepared by the President to prevent mistakes and prevent inquiry, and was found a most happy expedient.

MIDDLESEX AGRICULTURAL SOCIETY.

CATTLE-SHOW, FAIR AND MARKET DAY.

ORDER OF ARRANGEMENTS.

Plowing Match, at.....	9 o'clock.
Trial of Working Oxen.....	10 "
Cavalcade of Horses.....	10½ "
Exhibition of Fruits, &c.....	11 "
" of Stallions.....	11 "
" of Colts.....	11½ "
" of Family and Matched Horses.....	12 "
" of Farm Horses.....	12½ "
" of Roadsters.....	1 "
Procession and Address.....	2 "
Auction Sale.....	3 "
Annual Meeting.....	4 "

JOHN S. KEYES, President.

Concord, Sept 28, 1859.

For the New England Farmer.

COMPOSTING MUCK FOR MANURE.

Warner, N. H., Sept. 22, 1859.

MR. HOLBROOK:—*Dear Sir,*—Will you inform me of the best means to be used in composting muck so that it may be used as a fertilizer for crops?

I would like to know how much lime that is slaked in salt water should be used to a load of muck; also, how much plaster, or if you prefer ashes?

When is the best time to compost it, and how long is it best to let it remain in heap?

It has been recommended to mix it at the time the ground freezes, and let it remain until spring before turning it.

This muck which we have hauled out was formed in a valley, between two hills which are covered with trees; and when you put in the spade, it cuts like old cheese when it is mouldy. There is not a particle of sand or gravel in it.

Any information in relation to the best modes of composting will be gratefully received.

Yours, respectfully,

OLIVER N. MOULTON.

REPLY.

Brattleboro', Sept. 28, 1859.

MR. O. N. MOULTON:—*Dear Sir,*—I have your letter of the 22d inst., making inquiries about various modes of composting muck to fit it for use as a manure. I have several times written articles upon these matters for the *New England Farmer*, but even now, occasionally receiving letters of inquiry, similar to yours, I conclude to answer you through the *Farmer*, that other persons desirous of the information you request may have it in common with yourself.

From your description, I judge that your muck is purely a vegetable deposit, of great value as a fertilizer, if properly prepared for the purpose. Muck is not only valuable for its large amount of vegetable matter, as food for plants, but also for its great capacity as an absorbent of those matters which are so liable to slip away, and become, in a large measure, lost to the land and crops,—the liquids, gases and salts of the manure. To realize the full benefits that may be derived from the use of muck, it is important that it should be dug from the swamp and piled on dry ground some months before using it in compost, and if it could thus lie for one or two years, so much the better. While in the green and wet state, the vegetable matter of which it is composed is more or less locked up in acids deleterious to cultivated plants, and is therefore unavailable to them as food, and its qualities, as an absorbent, are but in part developed. But give it age, and the water and acids will in a large degree pass out of it, so that it is lighter and every way more convenient for handling, and better for becoming the food of plants; and being thus dry and finely pulverized, it is, next to pulverized charcoal, the best absorbent of the liquids and volatile matters of manure that we can employ.

You inquire particularly about composting muck with lime and salt. This makes an excellent compost for putting in the hills of corn and

potatoes. At the place where the heap is to be laid up, prepare a temporary lime-bed, of boards if you please, or by smoothing off the ground, and with water handy to the bed. Dissolve the salt in just water enough to dry-slake the lime, or cause it to crumble to a fine dry powder, using about one bushel of cheap salt to five or six bushels of fresh lime. Slake the lime no faster than it is wanted for a given layer of muck, and apply it immediately, while warm by slaking, to the muck. Allow one bushel of fresh lime to each half-cord of muck, the lime, however, increasing very much in bulk by slaking. A larger proportion of lime may be used, and, indeed, may be necessary, if the muck is quite green and wet, but one bushel to the half-cord is the least quantity of lime that will properly expel the acids of the muck. Pile the muck in thin layers at a time, say five or six inches thick, and put the right proportion of lime on each layer of muck. Make the pile about five feet high, and of a convenient width and length. Do the work of composting nicely and accurately, for the value of the heap will much depend upon its proper mixture. After the pile is completed, let it lie two to four weeks, and then shovel it over thoroughly, after which it may lie through the winter. Or you can make the compost next spring, a few weeks before it is wanted for use, shovelling it over once. The best time of all, however, to make the heap, is in the hot weather of summer, as that greatly insures a decided fermentation and decomposition. After being shovelled over, the heap can lie till the following spring, or until wanted. But then you are not confined to any particular season, and can make the compost at any time, only give the heap a few weeks' age after mixing, and shovel it over well once. If this compost is spread broadcast, apply thirty to forty loads per acre.

Plaster is not valuable for composting with muck; but unleached ashes are valuable for that purpose. If ashes can be procured for not more than fifteen to eighteen cents per bushel, perhaps a given outlay in them, for the purpose of composting with muck, would be more profitable than the same amount laid out in lime and salt. If ashes are used, put up the compost heap in thin layers at a time, as directed in composting with lime, and use two bushels of good unleached ashes to each half-cord of muck. A larger proportion of ashes will be well if the muck is considerably green. Two bushels of ashes to a half cord of old, dry, well pulverized muck, is as good as four bushels would be with the same bulk of muck, raw and wet from the swamp. The same conditions are to be observed in managing this compost, as to the time of mixing, shovelling over, &c., as those mentioned for the muck and lime mixture. The muck and ashes mixture makes an excellent fertilizer to put in the hills of corn and potatoes. I have seen remarkable crops of potatoes, both as regards quantity and quality, and continuing very healthy throughout the season, raised on old pastures broken up from the sod, and manured with a shovelful of this kind of compost in each hill. It is also a good dressing for the ladies' flower-beds, for trees and shrubs of all kinds, and for lawns and grass lands generally.

Muck may be composted with potash, dissolv-

ing the potash in water, and sprinkling the liquid upon each layer of muck, while making up the heap. My friend, Mr. Dudley, of Chesterfield, N. H., a few miles from here, informs me that he has for two or three years past been using potash, alone, for manuring his corn in the hills, and with satisfactory results. I have several times promised to go and see the corn, while growing under this treatment, and suppose I should have visited him before this time, but one thing and another has prevented. It appears to me that if potash works so well, alone, in the corn hills, it would be still more valuable if suitably composted with good dry muck. I think I shall try it another year. The only rule necessary to observe, as to the quality of potash to be used in the compost, is to keep within reasonable bounds of expense, as compared with other composts.

A mixture of muck with superphosphate of lime makes a good dressing to put in the hills of corn and potatoes. In a recent communication of mine in the *Farmer*, I described the effects of this compost, as used by my neighbor, Mr. Rufus Clark. By mixing the superphosphate with old, dry, fine muck, it becomes well diffused through the muck, and is safer and more effective in the hills of corn than when used alone. A week or two previous to planting-time, mix the two on a floor in a dry place, in such proportions as to give a large handful of the compost to each hill, and include a moderate table-spoonful of superphosphate in each handful, being careful to use muck which is dry and fine.

Construct your cattle-stables on a plan similar to that which I recently gave in the *Farmer* to Mr. A. C. Powers, making the stable floor just long enough for the cattle to stand or lie upon comfortably; and immediately behind them have a water-tight plank trench, about four inches deep and twenty inches wide, and use your muck daily in the trench during the season that the cattle are stabled, putting about a bushel of it behind each grown animal. This is one of the very best ways for making compost; for you thus save the liquids, which are the most valuable part of the manure, you mix the various parts minutely and perfectly and make a large quantity of effective and enduring manure, excellent for any kind of a crop.

In the fall, spread muck six to twelve inches thick over the bottom of your yards and sheds, to become mingled with the manure and litter made in them through the winter, carting out the contents to the tillage-fields in the spring; or, after spring work is over, piling them snugly, for use the next fall or spring. A still better way, however, is to draw the muck by sledding, at two or three different times during the winter, and spread it thinly in the yards and sheds, say three or four inches thick each time, thus exposing it thoroughly to the frost, as well as more perfectly mingling it with the litter and manure.

Put muck into the pig-pens, a little at a time, and often. Put the horse manure in there also, and the pigs will keep it from over-heating and burning, and mix it well with the muck. Or the horse manure may, from time to time, at short intervals, be composted directly with muck, mixing the two in thin layers, and using two or three

parts of muck, if it is old and fine, to one of horse manure.

But I have neither time nor space now to go fully into the various details of composting. It is a large subject. If, however, there are some particular points, not touched in this letter, which you would like to confer with me about, I shall be happy to answer your inquiries.

Very truly yours, F. HOLBROOK.

THE MAPLE.



THIS is one of the most splendid of American forest trees. There are commonly enumerated three species of the maple, viz.: White maple, *Acer dasycarpum*, Red Maple, *Acer rubrum*, and the Hard or Rock Maple, Sugar Maple, *Acer saccharinum*. The first is a tall, stately tree of two varieties; one of which presents a straight an smooth grain, and is much used for a variety of purposes connected with the mechanical arts, for ship timber and for fuel; the other is less free in rift, presenting usually grains more corrugated and convolved. The latter is often called "birds-eye," and is really a most desirable and durable wood. Like the former, it is much used for various artistic purposes, being remarkably hard, firm and ponderous, and capable of receiving a high polish.

The *Acer saccharinum*, or rock maple, is probably the most beautiful and valuable of the three. It is sometimes known by the appellation of the sugar tree. On the banks of the Saco, in Maine, where it imbibes the rich matters essential to its growth from the inexhaustible deposits contained in the fertile alluvial soil, it attains, ordinarily, a most majestic development. The sugar maple abounds extensively in most of the New England States, though it is most common in Maine, New Hampshire and Vermont. In Massachusetts, it is also quite common, and sometimes constitutes extensive forests which are possessed of great value, both for the wood, which is much prized for fuel, and for fine cabinet work, and for the sap, which is boiled into sugar. The maple is very easily propagated, and when used for ornamental purposes, is unrivalled in the richness of its luxuriant shade. The white maple has a rapid growth, does well on almost any kind of soil, and when transplanted in the spring, and properly tended, grows with scarcely any diminution of vigor.

THE PRACTICAL MACHINIST is a new, handsomely printed and well filled paper—published in New York, weekly, by T. H. LEAVITT & Co. Price one dollar per annum.

INVITATIONS---THANKS.

The agricultural festivals of this and other States have taken place this autumn in unusual number, and have clashed with each other so that in some instances three or four have occurred on the same day. The three great counties of Essex, Middlesex and Worcester, all held their shows at the same time, thus depriving the people of the opportunity of attending the exhibition of their nearest county neighbors.

We have been kindly invited to attend most of the county shows in this State, and to attend the State and county shows in other States. As many of these as we have had opportunity and strength to reach, we have attended, found much to commend, and but little—though some things—to condemn. We desire to express our thanks for invitations to the Vermont, New York, New Hampshire and Maine State societies, and to the Nantucket, Plymouth, Barnstable, Essex, Worcester, North and South Middlesex, Franklin, Martha's Vineyard, Norfolk, Worcester North and Bristol county societies, and to various town associations in Massachusetts, and to several county and town societies in other States.

We shall be glad to receive the published transactions of any of the societies in the State, or country, and to call attention to any new and useful facts and suggestions which they may contain, or warn the managers of these institutions of the approach of any insidious foe that we may discover from our stand-point, so that this new fabric, reared with so much pains and cost, may not be crushed, like those of old, under the shields which it assumes for its own protection.

NEW PUBLICATIONS.

DADD on the Nature and Treatment of the Diseases of Cattle, with Descriptions and Illustrations of various Organs and Functions of the Animal Economy. Containing, also, useful and practical Information on Breeding, Ventilation and Diet. By GEORGE H. DADD, Veterinary Surgeon, &c., &c. Boston: John P. Jewett & Co. New York: C. M. Saxton.

Every stock-breeder, and even the farmer who keeps ten or a dozen head of cattle, and raises two or three annually, must find himself occasionally with a sick animal before him, whom he knows little how to treat, so that the anxiety about the creature occasions more trouble than would its actual loss. He cannot judge from symptoms, and is puzzled to know whether the disease is in the head or heart, lungs or liver, or whether he should administer tonics or cathartics, or let nature take her own course, and cure if she can. In such cases there is really aid and comfort in the possession of a plain, sensible book, treating of the diseases of animals, showing what diseases certain symptoms indicate, and what medicines ought to be given to cure them. If this book recommended such terrible

remedies as similar ones have heretofore contained, we would condemn it at once; but it seems to advise to the use of moderate ones. If the usual Homœopathic remedies were added, as they are in Youatt and Martin's work on cattle, the book would be still more valuable. The work is very neatly printed and bound, and ought to be on the table of stock-owners who do not now own one.

For the New England Farmer.

BARNs FOR NEW ENGLAND.

In your paper of Sept. 10 we have a long and ably written article from "J. W. K., Strawberry Bank, Durham, N. H.," upon the construction of "Our Barns." Will you allow me to say that I fear many of your intelligent readers, who have an eye for the practical, and a keen perception for the useful, will justly imagine that "J. W. K." was but throwing out marks for others to shoot at, instead of giving us what we are ever anxious to receive, i. e., *practical* information upon subjects connected with our farming and our farm buildings.

And allow me to accept the proposition of "J. W. K." as regards the three important requisites for a good barn, viz: "stowage, stable and manure-factory," and then follow his imaginary ramble through his unimaginable barn, which reminds one of the wanderings of a huge ant among a box of berries from that "Strawberry Bank," more than the every day *choicing* in a farmer's barn.

And, 1st, our friend "K." objects to our plans of barns, and suggests the most common. Let him consider that a barn without a sizeable floor-way, with a good tight floor, is as deficient as a house without a cellar or cook-stove. I ask every reader of the *Farmer*, how could you dispense with your threshing-floor, spacious, tight and handy? The machine may do the most of our threshing, but the machine is not always at hand for our Indian wheat, buckwheat, peas and beans, and all the lesser grains. Again, we want the floors to store corn for husking, to pass to and fro, as we feed the various kinds of stock with as various kinds of fodder; and will not "J. W. K." require as much room when he feeds stock in his "clapped up stalls anywhere?" to say nothing of his "horse pitch-fork, and machinery" for doing so much of his work? Say, farmers, will you give up the floorway? Imagine "J. W. K." wheeling his uncut hay upon a wheelbarrow, without space to move! The floor is never necessarily expensive, and when not wanted for other uses, may be filled with hay or corn fodder, without a *horse-fork*, or any machinery whatever.

2. "The *cellar* is at best an ugly, inconvenient, costly and dangerous affair, and should never be used on a farm." New England farmers, who have good cellars, what do you think of this? If inconvenient, keep out of it; if costly, make cheaper next time, and if dangerous, fill it with manure twice a year! No barn of any size is often built where either a cellar or a framed basement cannot be made to good advantage, and if convenience and profit are consulted, no barn ever will be. The manure and muck to be mixed

are here in a position where they can be much more easily composted than when they are both to be wheelbarrowed to a separate room and there mixed. When "J. W. K." has taken care of a stock equal to his 500 tons of hay one winter, won't he bless the institution of wheelbarrows? Drop the manure from the stable upon the muck, and then throw in more muck, and the work is done until overhauled. The space for muck may be under the floor, and by dumping it through the floor the labor of shovelling it into "J. W. K.'s" muck room is entirely saved, while it will be exactly where wanted for composting.

"The cost of digging and stoning a cellar, and building a floor over it, is as much as a good barn with ten times as much convenience for making and saving manure ought to cost." In most of our New England towns, a good cellar, fifty feet by seventy, and eight feet high, may be dug and stoned in a safe and durable manner, open on one end or one side, at a cost of from one to three hundred dollars. Will "J. W. K." build his great box 30 ft. high and 80 to 100 feet square, of stone, sand and gravel, without either floors or conveniences, for ten times this cost? "We say then the most approved plan of barns in New England is" not "defective in these two requisites of a good barn."

3. The height of our barns. Where we can so arrange as to drive in above the sills we may build higher. But where the ground is level, and we have no "horse-forks," &c., this is about as high (fifteen feet) as is convenient.

4. The roof. Our barns, generally, are not roofed at an angle of 15°, but about 40° to 42°, and nearly every foot of the space covered is available for storage, especially if we have the horse-fork, and can pitch as easy 30 feet, as 15, while the cover to "J. W. K.'s" being flat, will render a space of several feet useless for want of room to work his pulleys and ropes. The cost of our friend's roofing, when he takes into account the shovelling off snow and the extra number of posts, and strength of inside supports to his flat-topped barn, will be found to be no less, either in first cost or future repairs, than a good shingled or slated roof. Composition roofing is far more expensive than shingles, or even slating in most sections of New England, and so far as experience proves, is not so durable as either, for common buildings.

5. "The walls shall be of stone, &c., 30 feet high, with convenient doors, &c." Now let any experienced mason calculate the cost of these huge walls, and report the same to "J. W. K.," and his barn will be built—never!

Now, considerate readers of the *Farmer*, for such by personal acquaintance I know thousands of you to be, will you take the trouble to read over "J. W. K.'s" plan of a (*cheap*) barn. See how easily he can "drive all over the barn and into every corner of it (when empty!) and with a horse pitch-fork, &c." Imagine you see him unload one tier of loads over the sand floor, and where will he drive next? No floor-way, no windows. What, then, but to his ever ready wheelbarrow! Wheel in and wheel out! Well, this is an age of improvement. Won't that hay be musty when taken out next spring from his damp mud floor? Finally, look over his summing up of advantages. "I can take the dry muck," &c.

As he has no floor, his muck has been wheelbarrowed into its room, and then so re-wheeled out. Look, also, to the fact that he is going to sell his hay, after making all this preparation for keeping stock, and tell me if our cautious editor has not admitted to his columns one chapter on "Book Farming," from a man whose theory will not bear to be carried out in practice, except by those whose cash is more plenty than ours. Yet we need an occasional antagonist in order to wake up sluggish energies, and set us to thinking.

And now, Mr. Editor, if you can find time and space for this hasty review, please do so, and afterwards give us your views upon the most convenient plan of a common barn for common New England farmers.

P. J.
Glover, Vt., Sept., 1859.

REMARKS.—"J. W. K.'s" article has had the effect we expected from it—roused up one mind, at least, to the important subject. But "P. J." has found it easier to pull down than to build up. What is *his* plan for the "most convenient and economical plan of a common barn for common New England farmers?" That question settled beyond cavil, will be of great value to the world.

EXTRACTS AND REPLIES.

SOFT, INTO HARD SOAP.

Can you, or any of your readers, give a receipt to change common soft soap into hard soap? By what means is it done? A SUBSCRIBER.

East Wallingford, Vt., 1859.

REMARKS.—We find the following in Miss Leslie's House Book.

Having made from hickory ashes, or the best oak, a sufficient quantity of lye, which must be strong enough to bear up an egg, allow to each gallon three-quarters of a pound of clean kitchen fat of the best kind, (that has been clarified by melting it with water,) and a bit of lime the size of a large hickory nut. Put it into a large kettle, boil it very fast, and stir it frequently. It must boil hard for several hours. Try it by taking out a little and cooling it on a plate. When you find that it becomes a thick jelly, and no grease appears about it, stir fine salt into the kettle, allowing a pint of the salt to three gallons of the soap. Let it boil for ten minutes after the salt is in. Then take it out of the kettle, and put the soap in tubs to cool, and wash the kettle clean. Next day cut the soap out of the tubs, and melt it again, and cool it in wooden moulds, if you have them. When it is firm, cut it into square pieces of convenient size for washing, and place it on the shelves to harden, not allowing the pieces to touch each other.

The best kitchen fat for soap is that of beef and pork, or bacon. Should any pork or bacon skins be among it, you must allow a pound of fat to each gallon of lye.

If in trying it in the plate, before putting in the salt, you find the soap too liquid, add a little water to that on the plate, for the purpose of making it jelly. You will then be able to ascer-

ain how much cold water must be added to that in the kettle, for the same purpose; it being evident that the lye is too strong. This must be done before the salt is put in. A larger quantity of lime put in while boiling, will make the soap still harder.

You may harden it, also, by adding, while the soap is boiling, a little sulphate of iron. This will give it a marbled or mottled appearance.

SQUASHES.

I have never seen any superior in size and beauty, to some grown at South Danvers the present season. I believe these all sprung from a squash grown on the ground of Wm. Walcott, Esq., in the season of 1858. The largest of these squashes grew in the garden of Mr. Andrew Porter, near the fence. It weighed, when entirely clear of the vine, 164 pounds. It was symmetrical in form, and girted 79 inches, or 6 feet 7 inches. There were several other squashes in the immediate vicinity, that would weigh from 30 to 40 pounds each. Whether any of them came from the same vine, I cannot say—but think they did. From what I have seen of other squashes, I should think the meat of this must be three or four inches thick. Of its quality I cannot speak—it not having been opened. The original from which the seeds were taken made as good pies as any I ate for the season. What was required to be mingled with the squash to bring this about, I cannot say, never having taken a part in the making of pies, until after they were baked. Another neighbor, Mr. Wm. S. Osborne, grew on one vine two squashes, weighing 138 pounds and 62½ pounds—but not so handsome as the first mentioned. The soil on which Porter's squash grew was a hard gravel, well fertilized with manure from his tannery and currier's shop. J. W. PROCTOR.

September, 1859.

DOMINIQUE FOWLS—BAYBERRY BUSHES.

Where can I get a pair of Dominique fowls and at what price? Can you tell me through the monthly *Farmer*, what will kill Bayberry bushes? the berries from which we make bayberry tallow of. They are over-running my pastures very fast. Epping, N. H., Sept., 1859. J. J. LANE.

REMARKS.—We cannot tell you about the fowls—do not know.

Cut and burn the bushes and plow, if you can. If too stony for that, sow grass on the ashes and scratch it in with an iron rake. If very rocky, let it grow up to wood. We hope some one has a better practice, and will communicate to you and us what it is.

BEST TIME FOR CUTTING FENCE POSTS.

In answer to the inquiry of Mr. John W. Townsend, as to when to cut fence posts, I will state that I believe the month of June to be the best time to cut them; peel the bark off, and set them green, and I think they will last three or four years longer than they will, cut at any other time.

Ludlow, Vt., 1859.

R. C. H.

DRAINING—DOUBTS.

Can you answer a question or two which are of much interest to me, and I presume may be to many others, novices in this department of farming. I have underdrained a muck meadow in which the depth of the muck varies from six inches to a foot and more; a stratum of blue clay mixed with sand, very hard, underlies some parts, and sand the rest.

What I am desirous to know is this—will it be well in plowing, to bring much or any of this clay to the surface, mixing it with the muck? Will this thin layer of very hard clay be an injury to the meadow, by holding surface water too long, or an advantage, by keeping the meadow from leaching? In short, will it be best to break it up entirely, if possible? T.

Keene, N. H., 1859.

REMARKS.—The understratum will probably be found to contain more sand than clay, and when exposed to the atmosphere, will soon pulverize and so give more firmness to the soil, and at the same time furnish silex which is wanting in muck soil—to the plants. We should not hesitate to plow up a couple of inches of the subsoil, whether sand, clay or gravel, with the muck.

It is rare that a stratum of clay is found beneath muck, in your locality, close enough to be impervious to water. What is called compact clay, in such positions, is in nine cases in ten found on examination to be mostly sand, and to be readily drained. We do not believe much in the advantage of any compact subsoil to hold up water.

Soil that is of any value holds water enough by attraction to prevent drought, and stagnant water in the soil is death to most valuable plants. So we advise to drain deep and plow deep, and trust to the higher laws of nature to supply moisture, rather than to the lower notion of arresting the water near the surface.

French's "Farm Drainage" discusses these points fully.

CAN I MAKE A CRANBERRY MEADOW.

I have a meadow in Rochester, N. H., which lies on a high ridge of land, and is made up of the finest vegetable deposit I ever saw. A stream runs through it, and at its mouth there is a dam, so that in twelve hours I can throw three feet of water over the whole. On a portion of it I have planted potatoes,—but what I wish to do, is, to get it into cranberries. Shall I haul on yellow loam, as I cannot get sand? Shall I plow it? Shall I set wild or cultivated vines?

Lawrence, Oct., 1859.

O. PEARL.

REMARKS.—The condition of your land is unlike that of any which has come to our knowledge, where the cranberry culture has been attempted, and we do not feel sure that any advice we can offer will be serviceable. You say the meadow is "the finest vegetable deposit you ever

saw." If you mean by this expression that it is rich, black, highly decomposed vegetable matter, and continues so to the depth of two or three feet, we do not think you will succeed in making a profitable cranberry meadow of it. But if of this character for ten or twelve inches of the surface, and then comes white or yellow sand or gravel, you may be encouraged to proceed.

If it were ours, and we were desirous to get it into cranberries, we should plow one-eighth of an acre of it six or eight inches deep, take out all the weeds and grass, and then set the best wild vines we could find, about as close together as we could conveniently get them in with a garden trowel. In this manner they will shade and protect each other, and prevent the growth of weeds and grass, and at the same time you indulge the plant in growing up in its thick and natural habit.

In the spring, the water may be kept back so as to come around the plants, or to completely cover them, as the weather may be, and it will also check the growth of other plants. At the time of blossoming and setting of the young fruit, if there is a prospect of frost the water may be thrown back to cover them, letting it down in the morning, and flooding towards night for a few days until the danger is over.

When the water is off, and weeds and grasses begin to grow, the utmost vigilance must be observed to pull them out before they take much root,—for in pulling them afterwards, they start the roots of the cranberry runners and ruin them. We have a small plantation now doing finely, and mainly by observing this suggestion. The extent of space which we have indicated—one-eighth of an acre—will be quite likely to afford you as much of an exercise or amusement, as you will desire for the first experiment.

LEAKY WALLS AND WINDOWS.

You or any of your numerous readers would greatly oblige a constant reader of your valuable paper, by informing me through your columns what is the cheapest and best method of preventing water from beating through the lime or mortar of a new house? Also what is best to put around the windows, as the water comes in around them? **BRICK TENEMENT.**

South Reading, Sept., 1859.

REMARK.—These are home questions, and we hope some of our able correspondents, who are masons and carpenters, will answer them.

BUNCHES IN COW'S TEATS.

I had a cow with bunches in her teats which prevented her giving down the milk freely. I would like to know what is the cause, and what would prevent it. **YOUNG FARMER.**

Candia, N. H., Sept., 1859.

For the New England Farmer.

ESSEX AGRICULTURAL SOCIETY.

The fortieth exhibition by the Essex Agricultural Society came off at Danvers, on Wednesday and Thursday, 28th and 29th of September. The conveniences for the exhibition on the margin of Frost Fish Brook, (so called,) were of the first order; and the several parts were well sustained.

On the forenoon of Wednesday, was the annual choice of officers, when Col. DANIEL ADAMS, of Newbury was re-elected President, and also, enough of the proved trustees, with the veteran Treasurer and Secretary, remain in office, to ensure the safety of the society for one year more, at least.

I was so occupied with the constitutional concerns of the society that I failed to notice the particulars of the exhibition, to all of which full justice will be done by the intelligent committees selected from all parts of the county. I believe there is no society in the county, that has been more uniform and consistent in its movements than this, and none that has been more careful to save its funds, intact. Nearly all the money it has ever received from the State is now securely invested in dividend-paying stocks; and not in race courses for fast horses, or decaying halls, or fancy gardens, as some would have advised. Its permanent fund exceeds \$10,000, notwithstanding for the last twenty years, it has expended more than \$1000 a year in premiums paid, and the publications of the society. It has availed itself of the considerate wisdom of a Pickering, a Colman and a Fay, in the management of its concerns. It has found it true that old men are good for council, while young men are best for action. May it always have due regard for this rule of action.

As I glanced my eye along the stock in the pens, I noticed twenty-five milch cows in one pen, all from one farm—the same that exhibited about the like number the last year. This is coming at a view of stock in the natural way, without any pampering or extra effort to show off. I should value such a view of the stock of half a dozen farms, more than all the animals kept, singly and alone, that could be collected in the county. I think that societies would do well to offer premiums for the best herd of milch cows, not less than twelve in number, with a specific statement of their feed and products, for six months next preceding their exhibition. **P.**

September 29, 1859.

ATTENDING THE FAIRS.

Let every one get some good at the fairs. Go with a distinct object, and aim at becoming wiser. Seek what is superior, and take advantage of the labor and skill of others. The practice of finding fault with everything seen, is despicable. The man who is heard saying he has better sheep, better cows, better oxen and better pigs at home, may be set down as one who would get in, and not pay his entrance fee. We despise, above all others, the man who sneers at the effort another may make for improvement. There is a class of men who appear to live by fault-finding. That class are the self-constituted judges-general at

the fairs. They not only criticise the arrangements, but they ridicule the show. Well, let them. Society must drag along the dead carcasses of such ones. They may as well vent their spleen upon the fairs and their management, as upon their neighbors. Let them chafe and fret. The world gets along with them, and could get along without them.—*N. H. Journal of Agriculture.*

For the New England Farmer.

INFLUENCE OF THE MOON UPON THE WEATHER.

MR. EDITOR:—I have just read an interesting article from your Springfield correspondent, J. A. A., and the candor, good sense and information pervading it induces me to notice it. His remarks respecting the influence of the moon on crops, long vines, &c., are just. His average of observations on high and low moon for the year does not seem to favor either theory. Still, I wish he would make his average for the five successive summer months for a series of years, commencing with May, and let us have the result. But there is one remark to which I cannot yet assent; that "early and late frosts did not often occur when the moon was high, but as often when it was low, and as often at new moon as at full moon." The last clause militates most against my own experience, though I regret that I have not the precise facts at command.

In the latitude where I reside we rarely ever have a frost in September, till the full moon, and if we can pass by that, we are not usually troubled with a killing frost till the full moon in October. Exceptions I know do occur, but I believe I have stated the general rule. I can give no theory; nor would I be too presumptuous in opposing an opinion so carefully presented by your correspondent. I am inclined to think that these differences are more marked where I reside, in the vicinity of the White Mountain range, and at an elevation of 650 feet above tide water, than in Springfield. His closing remarks respecting a series of observations extending over a term of years are valuable, and it is just such facts as he has presented that will decide many of these now unsettled questions. His observations, seventy-four in number, on the mean temperature of high and low moon, giving almost three degrees colder in high than in low moon, is as wide a difference as I should have expected, for even one degree too low in sometimes pretty trying to the farmer.

It is now well understood that the moon does influence the temperature in the upper regions of the atmosphere. Prof. Piazzi Smith made experiments on the Peak of Teneriffe two years ago, at the heights of eight and ten thousand feet, which settled conclusively this point. Still, there are so many modifying circumstances connected with the whole subject that it is not best to be too positive.

"Modest doubt
Is called the beacon of the wise."

Then again it is a question how much influence the moon has in promoting crystallization in the freezing process.

I wish your correspondent would give us the average of the temperature of high and low moon

for a number of years past in September and October. Also answer this question: Do we seldom have a frost till the full moon, or two or three days after in September? And do we not almost invariably have a frost at this time? I speak of the latitude of forty-five degrees. Perhaps he may not have it cold enough at his locality, so far south. I believe here is a legitimate and fruitful field of inquiry, and without knowing J. A. A., I do not hesitate to pronounce him the man to pursue the subject.

I believe a book might be written on Meteorology, adapted to agriculture, containing essentially the following chapters: A description of the different forms of clouds, and their indications of the weather. The barometer, including not only the mercurial instrument, but all mechanical contrivances to indicate the weight and changes of the atmosphere. The influence of the moon on the weather, and on the temperature of the earth at its different periods of revolution. The instinctive conduct of plants and animals, especially just before a storm. A consideration of the combination of various causes in effecting atmospheric changes, miscellaneous topics and conclusions. The merely negative results of such a work would be valuable, especially on the prevailing opinions in regard to the moon.

Bethel, Me., Sept. 26, 1859.

N. T. T.

For the New England Farmer.

THE LAWTON BLACKBERRY.

I think the reply to your Newbury, Vt. "Subscriber," about the Lawton blackberry, partially erroneous. From experience, I am satisfied that Massachusetts is not too far north to grow the Lawton blackberry successfully. It is an enormous bearer, and the vines grow to a great size. I have them now sixteen feet in height, and laterals three to five feet in length, all the growth of this season. I had berries, fully ripe, previous to the first of August, and yesterday I found some fine fruit from the same vines.

When fully ripe they are very sweet, and the flavor is not equalled by any berry that I ever tasted. I measured one berry—and many others were as large—and found it three and three-fourth inches in circumference!

Many people call them sour—so is other unripe fruit. They should never be plucked till a gentle touch of the finger will cause them to drop from the stem, which will be many days after they are perfectly black. They are ill calculated for marketing, for when fully ripe they cannot be carried to market in a state fit to be seen,—even in the most careful manner; more wine than berries would be for sale. Please call upon me next August, and I will satisfy you that all of the above is correct. A SUBSCRIBER.

New Bedford, Sept. 24, 1859.

REMARKS.—We sincerely hope we are mistaken in saying that "Vermont and Massachusetts are too far north to ripen the Lawton blackberry." We have had ample demonstration of its rapid growing and great bearing qualities, but never procured a ripe berry. We cultivated it carefully for three successive years, in a warm

and early piece of land; the canes grew most vigorously, blossoms were abundant, and the fruit grew in profusion, attaining the largest size and most beautiful form, *but none of it ever ripened!* In the early part of last October we had an abundance of it, but no person on the farm, not even the hired men, could eat it. Indeed, we have not put it too strong when we say that not a berry on our bushes ever ripened. Such has been the general result where we have known it in Massachusetts. On the same soil where the Lawton grew we have no trouble in ripening the Dorchester or the wild blackberry.

We presume the climate of New Bedford is much milder than that of most parts of Massachusetts or Vermont. But we hope it will succeed with us, and it will afford us pleasure to test the qualities of those of our friend, "A Subscriber."

AGRICULTURAL SHOWS.

WORCESTER COUNTY AGRICULTURAL SOCIETY.

This old and influential Society held its annual Show, Sept. 28 and 29, in the city of Worcester. A good many people attended, and we suppose they had a good time. There was the usual show of stock, and the several exercises common to such occasions. At the horse exhibition on the second day, there was quite a large attendance. Eighty-four horses were entered, of all classes. At the dinner, WM. S. LINCOLN, Esq., the President, congratulated the society on the success of the exhibition, which, in spite of some adverse influences, was equal, he thought, to those of former years. He remarked that the society was not situated as it once was. It had, in former years, a cash fund of over \$20,000 invested in paying securities; but now it had its real estate and a large debt. It lived only by the good-will of its friends.

In the morning there was a trial of mowing machines in a field at some distance from the fair ground. The "Manny" and Ketchum" machines were entered by their manufacturers, and the "New England Mower" by Mr. I. S. Richardson, of Boston. Experiments were made with one and two horses, and with four and six feet cutter bars. The committee are to report to the trustees hereafter.

WORCESTER NORTH SOCIETY.

This Society held a two days festival, Sept. 27 and 28. The show of fruits, vegetables and manufactured articles was very fine. Dr. FISHER, of Fitchburg, displayed forty-two varieties of fine pears, some fine peaches, and a plate of superb Concord grapes. A beautiful dahlia tree, laden with yellow blossoms, contributed by Josiah Sheldon, of Fitchburg, graced one of the tables. A

new feature of the occasion was a dish of Davis Seedling potatoes, *boiled*. Address by Gov. BOUTWELL.

MERRIMACK CO., N. H., SHOW.

Two days—Sept. 28 and 29. A large attendance, especially when the horses were on the track. No military attended, we believe, but to make up the deficiency, there was a portion of the Concord fire department, three engine companies and two bands of music.

NORFOLK COUNTY SHOW.

This energetic society held its annual show two days, Sept. 27 and 28, at Dedham. There was a fine display, we understand, in all the departments, and the attendance numerous. The exercises at the church and at the dinner-table, were exceedingly interesting. Mr. President WILDER made some introductory remarks at the church, saying this anniversary is no mean occasion, for the agricultural art was the basis, the foundation, the sustenance of all other arts. The growth of interest in agriculture within a quarter of a century was very marked, and much of it was due to the existence of such societies as this. He said that success had attended all the operations of the society the past year, and marked improvement is visible in every branch of its exhibitions this day.

The address was by HENRY F. DURANT, Esq., of Boston, and from portions of it which we have seen, we should think it must have been a very able and highly interesting production. We shall give some extracts from it in another column.

Col. WILDER presided at the dinner-table, and in his felicitous manner introduced the distinguished gentlemen whom he had called around him. Among these the Rev. A. L. STONE, of Boston, expressed his pleasure at seeing so many ladies present:

There was an intimate connection between the wives and daughters of agriculturists and the interests we all had at heart to-day. Woman was by nature a helpmeet to man. Husband and wife could give each other mutual help and forbearance in all their walks in life. If a couple wishing marriage came to him with any other intention, he would not unite them, no matter how large the fee. Not that he disliked the fee—(laughter)—he was always ready at his office, just near the corner of Park Street—(renewed laughter)—but it was necessary that a practical and intelligent sympathy should always exist between husband and wife.

He thought many ladies might know more of agriculture to their profit and that of their husbands, and he would have agricultural works on every drawing-room table. Ladies should spare no effort to make the farmer's home one of refinement. And the younger ladies might do a good part toward this. Let the younger la-

dies he as ready to place their delicate hands into the full healthy hand of the young farmer, as into those of the merchant's clerk and the professional aspirant. He had looked on the sculptured heroes of the ancient Olympic games, and read their story, but when he looked upon a farmer, he saw a nobler man—a man who had coped with nature and triumphed. In conclusion, Mr. Stone hoped that for all present every season would be a campaign, every harvest a victory, and that God would crown them all with his blessing, even as they were already crowned with honors.

He was followed by Judge ROCKWOOD, who "warmly complimented that most successful presiding officer, Mr. WILDER," and closed with an excellent sentiment respecting natural laws. Mr. GEORGE B. EMERSON spoke of the means of improving *farmers' homes*. He said American trees are superior to those of Europe in beauty and variety. CHARLES G. DAVIS, of Plymouth, made an appropriate and valuable address upon the rearing and management of sheep, and the Rev. H. N. CHAMBERLAIN, of Canton, closed by speaking of the *poetry of the farm*. The minor things of the field he said, were worthy of more attention than they had received.

The tone of thought and feeling in all these addresses is honorable to the speakers and creditable to the society that called such men around its festive board. We have often expressed something of these ideas in more homely garb, and do not hesitate now, to say that farmers need that their attention shall be turned more to this train of thought and feeling, than to any manipulations of the farm itself.

THE DRAINAGE OF PARIS.

The termination of the great conductor beneath the pavement of Paris is regarded as an immense success* by the engineers connected with the enterprise. This gigantic drain is considered one of the wonders of modern engineering, and is destined, it appears, to form the great artery of a system of sewerage which has long been in contemplation both for the salubrity of the city and for economy at the same time. Two of these stupendous drains are to be constructed in a line parallel with the Seine, and to conduct the refuse water of the city into a vast reservoir, whence they are to be disseminated as liquid manure over the most barren of the plains round Paris. The system adopted is that experimentalized at Berlin with such eminent success that the sandy plains in the midst of which that city is situated have been converted, within the space of a few years, into the richest meadow land in the whole of Northern Germany. The prevalence of epidemics and miasma during the autumn months in Paris has always been attributed to the immense mass of stagnant waters left to corrupt beneath the slightly covered drains which run beneath the houses, whence they creep as lazily as they list into the Seine. The new

system, which will come into action in October, is considered one of the greatest benefits conferred as yet upon the inhabitants of Paris by its very liberal municipality.

THE AMERICAN AUTUMN.

BY FANNY REMBLE.

Thou comest not in sober guise,
In mellow cloak of russet clad—
Thine are no melancholy skies,
Nor hueless flowers, pale and sad;
But like an emperor, triumphing,
With gorgeous robes of Tyrian dyes,
Full flush of fragrant blossoming,
And glowing purple canopies.
How call ye this the season's fall,
That seems the pageant of the year?
Richer and brighter far than all
The pomp that spring and summer wear,
Red falls the western light of day
On rock, and stream, and winding shore;
Soft woody banks and granite gray
With amber clouds are curtained o'er;
The wide, clear waters sleeping lie
Beneath the evening's wings of gold,
And on their glassy breast the sky
And banks their mingled hues unfold.
Far in the tangled woods, the ground
Is strewn with fallen leaves, that lie
Like crimson carpet: all around
Beneath a crimson canopy.
The sloping sun, with arrows bright,
Pierces the forest's waving maze;
The universe seems wrapt in light,
A floating robe of rosy haze.
O, Autumn! thou art here a king—
And round thy throne the smiling hours
A thousand fragrant tributes bring,
Of golden fruits and blushing flowers.

O, not upon thy falling fields and fells
In such rich garb doth autumn come to thee,
My home! but o'er thy mountains and thy dells
His footsteps slowly fall and solemnly.
Nor flower nor bud remaineth there to him,
Save the faint breathing rose, that, round the year,
Its crimson buds and pale, soft blossoms dim,
In lowly beauty constantly doth wear.
O'er yellow stubble lands in mantle brown
He wanders through the wan October light:
Still as he goeth, slowly stripping down
The garlands green that were the spring's delight.
At morn and eve thin silver vapors rise
Around his path; but sometimes at mid day
He looks along the hills with gentle eyes,
That make the fallow woods and fields seem gay.
Yet something of sad sovereignty he hath—
A sceptre crowned with berries ruby red,
And the cold sobbing wind bestrews his path
With withered leaves, that rustle 'neath his tread;
And round him still, in melancholy state,
Sweet solemn thoughts of death and of decay,
In slow and hushed attendance, ever wait,
Telling how all things fair must pass away.

CULTURE OF THE ONION.—Mr. MILTON WOLCOTT, of Fairlee, Vt., informs us, that after losing many crops of onions by the maggot, all the remedies he applied having completely failed, he has at length succeeded in forming a compound that has in one or two trials proved completely successful.

THE SCOTCH PINE, (PINUS SYLVESTRIS.)

Most men, and all women, love trees,—and they love those trees, or shrubs, or plants best, that they have cultivated, or assisted in cultivating, with their own hands. The person of taste who erects his house in a charming natural grove, though it may be made up of a variety of the most showy and graceful of our forest trees, is not content to stop there. He wants something before him that he has been instrumental in calling into being himself—something to which he has given thought, and labor, and affection, and which will still require his care, and will bud, and bloom, and exhale its fragrance or bear its fruit, especially for him.

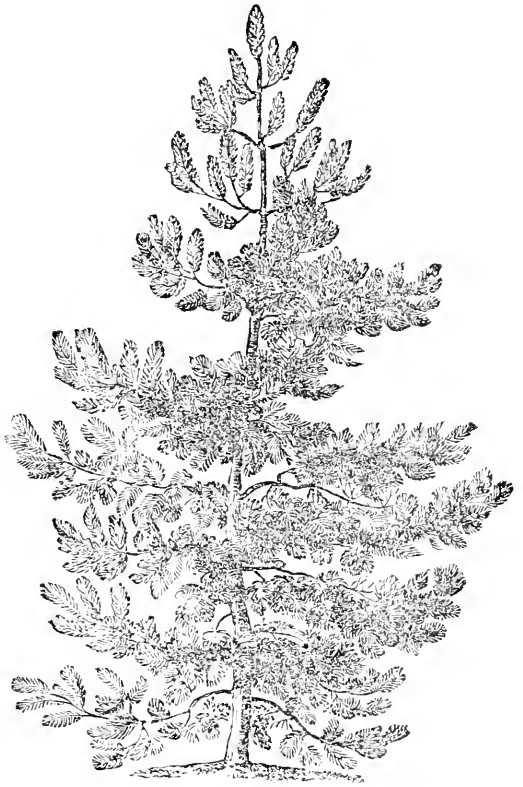
This good taste, we believe, is natural to all persons, but in most, remains hidden for want of circumstances to develop it. He who delves fifteen hours a day on his farm, grudgingly returning to the bosom of his family to partake of his accustomed meals, will seldom indulge his mind in meditations of the beautiful, either in nature or art.

“A primrose on the river’s brink,
A yellow primrose is to him—
And nothing more.”

But as literature, commerce, manufactures, and the various arts, combine to help us to the necessities and luxuries of life, that dormant germ for the beautiful is unfolded, and man seeks to surround himself with the creations of his own fancy and labor. He carves statues, paints pictures, and plants and gives form to trees and shrubs, and thus lives delighted in a little world that he has long imagined, and at length brought into actual being.

When this taste has become active, he seeks everywhere for objects to supply the form or shade that seems lacking in the picture which he has formed, and lays all countries under tribute to gratify his wants. It is this taste that has introduced into our gardens and grounds so many beautiful trees and shrubs from our native forests, and so many of the exotics that grace and bless other lands. It was this taste that introduced the *Scotch Pine* into our collections of ornamental trees, a portrait of which embellishes the page before you.

This pine is one of the favorite European species, and as it succeeds remarkably well in this country, will be likely to become a favorite tree. It has many varieties, and they are very dissimilar. In favorable situations, the Scotch Pine will grow eighty or one hundred feet high. The leaves are glaucous, and in pairs; in young trees



they are from two to three inches long, and do not drop from the tree until the fifth year. The cones open of themselves shortly after being gathered from the tree, and spread out in the sun. The seed should be sown on a finely-prepared sandy soil, in March or April, and on land not entirely open to the sun.

We are permitted to copy our engraving from WARDER'S excellent work on "Hedges and Evergreens," published by A. O. Moore & Co., Agricultural book publishers, N. Y.

For the New England Farmer.

USE OF TAN BARK.

MR. BROWN:—Some years since I received an invoice of French rose bushes, and on unpacking them, found the roots quite dry; I set these plants out at once, at the entrance of the garden, where tan had been placed from time to time. I had the top tan taken from this, and the land dug over, this article being mixed in the soil in different stages of decay; upon this spot I placed the bushes thus dry. These all, with but two exceptions, (say some thirty,) grew and flowered the following summer. Ever since that time I have continued the use of this article, placing it around the gooseberry and currant bushes, and

also around dwarf pears, and have found it a good dressing, particularly in preserving them from insects. I have placed it between rows of strawberries, particularly the large varieties, which I cultivate as single plants, by cutting off the runners; it will retain heat and moisture during the warm months. For all purposes of mulching young trees in the fall, I have found it to be a good article.

J. M. I.

Salem, 1859.

THE STATE REFORM SCHOOL.

The recent partial destruction of this institution by fire has naturally awakened a desire in the public mind to know its history and practical results. That there is a widely spread impression that it has failed of its legitimate purpose to a greater or less extent, is most evident. But while parties, hostile to the school, are loud in its denunciation, the discerning and the philanthropic demand facts and statistics, and reserve their judgment till these are furnished from reliable sources.

One inquiry of importance in deciding the general question is, the cost of supporting this institution, compared with other institutions of a similar character; another is, what proportion of the boys committed to the school are thoroughly reformed, and go out into society to become useful and honorable citizens?

After long and careful investigation, aided by the present and past officers of the school, the writer is able to furnish the following answer to these questions:—

The number of boys committed to the Reform School since its opening in 1848 is 2537. The number of inmates at the present time is 507. The number known to have deceased is 42. This leaves a total of 1988, whose history is the subject of our inquiry. Of this number, the career of about 300 cannot be traced with certainty. This comprises the boys who were committed on short sentences; those who were in feeble health; those who have left the State; and those who were committed under assumed names, &c.

The history and character of 1653 boys who have been inmates of the school have been ascertained. 281 of these have turned out badly. This is fourteen and one-seventh per cent. on the total of 1988. 1372 of these boys are known to have done well. This is 69 per cent. of all who have gone forth from the institution.

In this calculation, in all cases of doubt, the doubt is reckoned against the Institution; although in a large number of instances, the probabilities were in favor of a thorough reformation.

This is a better record than has ever been claimed by the trustees; and, considering the disadvantages under which the Institution has labored, from want of the means of a proper classification; the advanced age of the majority of boys when committed; and the great number of short sentences, it is a better result, the writer confidently believes, than the truest friends of the school have ever dared to hope for.

But, as will be evident to any one familiar with the school, this does not exhibit the actual results of the training and discipline of the Institution. It is well known that provision is made

in the statute for the remanding of such boys committed to the school, as the Trustees find, on a brief probation, to be confirmed and hopeless criminals. Such are sent to their alternative sentence in the House of Correction, and are not therefore the subjects of the Reform School discipline. Deducting the number thus remanded, 126, leaves as the true result, 1372 reformed boys in a total of 1862 graduates, which is seventy-three and two-thirds per cent.

In regard to the expense of the school at Westborough compared with other kindred Institutions, the following table, compiled from published reports for 1858, will show the cost per capita in the Institutions named:

Maryland House of Refuge.....	\$122
Providence Reform School.....	94
Industrial School for Girls at Lancaster.....	130
Chicago Reform School.....	100
St. Louis House of Refuge.....	122
Western House of Refuge, New York.....	100
Cincinnati House of Refuge.....	112
House of Refuge, Philadelphia.....	95
State Reform School, Maine.....	114
House of Refuge, New Orleans.....	154
State Reform School, Connecticut.....	97
House of Refuge, Randall's Island, N. Y.....	80
State Reform School, Massachusetts.....	80

The average age of the inmates in the schools above enumerated is about 13 years. The numbers vary from 95 to 500. In the large institutions the cost is least. \$80 each, at Randall's Island and Westborough, where the numbers are 540 and 590. In the small institutions the cost is greatest. \$130 at Lancaster, with 95 inmates; \$123 at St. Louis, with 121 inmates; \$154 at New Orleans, with 95 inmates; \$114 at the Maine Reform School, with 214 inmates.—*Westborough, Sept. 28, 1859.—Daily Advertiser.*

For the New England Farmer.

RAMBLES ON THE MERRIMACK.

Having just returned from an excursion of about eighty miles, along the bank of the Merrimack, I thought I would put on record my impressions, before they escaped from the mind. I started with a view of seeing the great show of the season at Albany—but when I reflected how well that would be described by their indefatigable Secretary, a man of all work, (as we say of a horse,) I thought his description would be more instructive than any observation I could make. Further, I do not entirely coincide with the foreign taint of the New York gentlemen, in their notions of cattle. The magnificent Short-horns—the beautiful Jerseys—the pampered Ayrshires—and the fine horned Devons, so fill their eye, that the neglected natives stand but a poor chance.

As I walked through our own street, this morning, I saw Mr. Rogers' team of four oxen, six years old, averaging in girth 7½ feet, deep red color, equal in my judgment to any that can be brought from England, Scotland, or Kentucky. When such animals can be grown among us, what occasion is there to go abroad for better? I know of none—therefore I do not feel like encouraging any such movement.

But the Merrimack is my theme. My first inquiry was, of course, as to the corn crop of the season; this I am sorry to say is not as good as

I hoped it to be. The fact is, there have been no warm nights, to press forward and mature corn. On some pieces where the land was thoroughly pulverized to the depth of eight inches or more, liberally fertilized by home-made manure, and early planted with the right kind of seed, there will be sound corn to the amount of sixty bushels to the acre—but generally the crop will not be found to exceed thirty bushels to the acre. The old fashioned way of cutting the stalks has generally been followed, but nobody can tell exactly why it is done, except that the fodder is better.

When the corn stalk fodder is the principal reason for growing corn, then this will be a good reason for the practice of cutting the stalks; but while it is grown for the corn that will mature the best, such management should be adopted as will yield the greatest quantity of best corn.

Of potatoes the report is highly favorable—little or no rot, of large size, and excellent in quality. What more can be asked?

Of grass—there has been enough of it where the land has been properly taken care of, and where it has not, there is no right to expect a crop. My attention was particularly called to the ancestral farm of the Walker family in Concord, N. H., now cultivated by the Hon. Joseph B. Walker, who has had the wisdom to leave the law of quibbling and to engage in the law of culture. If more of our kid-glove gentry would do the same thing, they would earn a reputation "more durable than brass or bronze." P.

Oct. 6, 1859.

For the New England Farmer.

TOBACCO VERSUS USEFUL CROPS.

It is not without much hesitancy that I attempt to introduce anything into the *Farmer* relative to the most worthless of all cultivated products—*tobacco*. I have observed, with pleasure, that this vile weed is not allowed the distinction of ranking among those farm crops, to the discussion of which, and the best method of raising, our best agricultural journals are devoted, and that they are inclined to discourage its culture. But the rapidly increasing attention paid to this crop, and its usurpation of the best lands of the country, which might otherwise be devoted to *useful* and almost as *remunerative* crops, induces me to write a few words upon the subject.

Many farmers, carried away with the idea that growing tobacco is superlatively a money-making business, devote to this crop the attention and manure properly belonging to the other and more legitimate farm products, and often find, at or before the sale of their tobacco crop, that "all is not gold that shines," and that money cannot be plucked from the passing breeze, or obtained honorably without hard toil, at least on the hills and plains of New England. Recently the culture of tobacco has increased surprisingly, and it has been stated that during the past season there have been 250 acres raised in each of the towns of Hatfield and Whately, in this State, 200 in Hadley, 125 each in Northampton and West Springfield, and probably 100 in Springfield and Westfield, and from 50 to 200 or more in all the towns in this State and Connecticut that border on the Connecticut river, besides a large amount

in other towns, and patches scattered about all over the New England States. How many thousands of bushels of corn, or rye and wheat, or of root crops, this land might be made to add to the annual amount of these crops grown in New England! and how much richer the country would be by their culture in the place of tobacco!

I propose to notice a few items in regard to the *real profits* of raising tobacco. First, the very best land must be employed, and highly manured, to ensure a remunerating crop. It cannot be manured too highly; and a field that would produce a fine crop of corn, an old tobacco-raiser would not set with tobacco plants.

The average amount of tobacco per acre is generally regarded as 1700 pounds; some lands yielding much more, while a good deal yields less. Let the medium price be twelve and a half cents per pound, and it will give \$212.50 as the product of an acre; though I believe \$200 is considered as the average amount of money per acre for tobacco. The cost of the various items in its culture may be stated as follows, after the land would be considered well fitted for a crop of corn and potatoes, which is rather a low estimate, however, of the cost of raising an acre of good tobacco, and does not include many little things always occurring to be done in the culture of the "weed."

Cost of extra plowing and harrowing.....	\$ 1 00
" hilling out.....	1 25
" plants.....	6 00
" setting.....	4 00
" being three times.....	12 00
" topping, mowing, &c.....	3 75
" suckering.....	4 25
" cutting hancing, twine, &c.....	12 50
" stripping, packing, &c.....	9 60
	\$56.75

In addition to this is the rent of storage-room, while the tobacco is curing, or the interest of capital invested in tobacco sheds—say at least six dollars, for I have heard it remarked by old tobacco-growers that a barn of ordinary height, 40 feet long by 30 in width, is none too ample accommodations for an acre of stout tobacco. And the expense of getting plants, when not raised at home, is often considerable; for instance, I have known people to travel twenty miles and back, repeating the journey two or three times, in procuring plants for an acre.

The money received for tobacco is not *all profits*. I have known tobacco culturists to offer fifty dollars for the use of an acre of ground for tobacco, and manure to fit it with, or eighty to one hundred dollars after the ground was fitted. Deducting about ninety dollars for the use of the ground, manure, fitting, &c., in addition to the expense of raising, leaves as small a per cent. of profits on the amount of capital invested as the majority of farm crops. And I believe that people are deceived in regard to the real amount of profits in tobacco growing, by the large amount of cash received as the avails of an acre, and do not stop to consider the costs of growing, nor estimate the risks incurred. The labor bestowed on one acre of tobacco would cultivate quite a number of acres of corn, which, if grown on the ground devoted to tobacco, would yield 60 to 70 bushels per acre. The gain on the money invested in the culture of corn is generally from thirty to fifty per cent., but by the above estimate,

drawn from actual observation, the profits in tobacco culture generally fall to, or below, thirty per cent., besides the inconvenience suffered in growing it. Consequently, I strongly incline to the opinion that the notion that tobacco "pays" better than any other crop, or than other crops in general, is a mistaken one. True, there are instances of large profits from tobacco, in consequence of a high price in conjunction with a great yield, and the lucky man tells his success to his neighbors, and it gets into the newspapers, and sets a hundred farmers itching to engage in the business.

To sum up the matter, allowing it is a very profitable crop, there are at least six good reasons for raising other crops in preference to tobacco, worthy of consideration by every farmer, especially by every one inexperienced in the business, who contemplates raising it.

1. It is a very exhausting crop, and, as above stated, requires land in the highest state of cultivation for a good yield, and growing rapidly, must necessarily draw heavily upon the resources of the soil, as experience proves, to mature so heavy a growth of foliage.

2. If raised by a farmer in common circumstances, it robs the remainder of the farm of its proper food, unless the manure be purchased. It is virtually the same as selling the manure directly from the farm, comparatively nothing being returned to the soil from the tobacco; and instances have come under my observation of farms becoming considerably reduced by this process.

3. It is more risky than other crops, from various causes, as hail, and early frosts in autumn. That man need to consider himself fortunate who does not lose, or receive great injury to a portion or all of his crop of tobacco as often as once in four or five years, which forms a material discount on the general profits. A heavy hail storm, or a severe frost, renders the crop worthless for market.

4. It requires skill and experience more than other crops; indeed, by some, raising tobacco is regarded as little less than a trade, and many are the vexations, and often losses, the inexperienced grower meets with.

5. It is a disagreeable and hard crop to work among. With the exception of hoeing, from setting till the crop is harvested, the laborer must be more or less in a stooping posture, with his head in an unnatural proximity to his feet, and his face brushing the green tobacco leaves, assuming the characteristic attitude of a quadruped—on all fours—in his groveling, eager pursuit after "filthy lucre."

In the business of suckering and harvesting, much of the work is of the hardest kind, as well as nastiest, and a chapter might be written on its horrors; of the back-aches and head-aches, sickening odor of the tobacco, and gummy hands and clothes. If a man would grow old prematurely, let him raise tobacco, and labor in it himself.

I quote from the *Springfield Republican*, of Sept. 17th, concerning the work of tobacco-growing, and the appearance of the workmen:

"If there is any dirtier work than raising tobacco, except chewing it, we should like to know it. A gum issues from green tobacco that covers everything that it comes in contact with. It

is sometimes a practice among tobacco-growers to put on a shirt outside of their clothes, and wear it without washing all through the season. At the end of the tobacco year, if indeed, it lasts so long, it goes into paper rags, but usually long before that it loses its original color. We met recently a troop of men fresh from the tobacco field, that in any other portion of the world than this, would pass for Hottentots. They looked as if they had always burrowed in the ground, and in hands and face, as well as dress, were the color of woodchucks. Where is Barnum?"

The worthy editor would have found, had he approached near enough, that the nauseating odor of green tobacco, from their person and clothes, was no less offensive and disgusting than their appearance. The gum is very viscous, and hard to remove from whatever it besmears.

6. It is a worthless crop, and a curse to the community, which alone should be an argument sufficient to prevent a conscientious man from raising it, because he thinks it profitable. But few approve of the distillation of corn or other grain into intoxicating liquors; yet the tendency of tobacco-growing is the same—a useless waste—preventing the culture of useful crops.

May every man who has grown tobacco the present year sum up the expenses of his tobacco crop, the risks, the tendency of the business, and then ask if it *pays*, in the true sense of the term—is it *honorable*? And let every man who contemplates raising it in the future, investigate the subject well, in all its bearings, before he commences.

J. A. A.

Springfield, Mass., Sept. 27, 1859.

REMARKS.—"J. A. A." has our hearty thanks for this timely and excellent article.

For the New England Farmer.

FISH POND---MEADOW MUD.

MR. EDITOR:—As you are always ready to give information on anything connected with a farm, I will ask a question or two. This season, while the water was low in a meadow near my house, I dug a round pond, 300 feet in circumference, which will hardly, if ever, be dry; it is in connection with a stream of water running through the farm. I dug the pond for two purposes; first, for getting the mud for manure, from which I got a large quantity; and secondly, for the purpose of having, and multiplying, some kinds of fish. The stream, which I can easily control, is some 200 rods in length, and from three to six feet in width, through the meadow. Are these dimensions, with a living stream of water, sufficient to multiply fish to advantage; and if so, what kind would be most suitable, and in what manner would it be best to confine them?

Would it be profitable to spread meadow mud, after it has had the action of the frost one winter, on uplands, to be plowed in, and to what kind of crops would such land be best adapted?

Cordaville, Oct., 1859. JAMES HOWES.

REMARKS.—We have had no experience, and not much observation, in relation to the piscatory matter upon which our correspondent asks for

information. Mr. Humphrey, of Lancaster, or some other of our friends, may be able and willing to communicate valuable information. The application of the muck, as you propose, would be judicious, and the land under such treatment, aided by proper dressings of manure, would be in condition for any of our common crops.

For the New England Farmer.

"IS THERE ANY PROFIT IN FARMING?"

MESSRS. EDITORS:—Your correspondent, T. J. Pinkham, judging from the tenor of his article under the above caption, published in the *Farmer* a short time since, and from the "facts" he has given, must be located in a very ill-favored portion of the country; but, notwithstanding the state of things he describes, I think he may work long before he will convince the generality of farmers in New England that farming is unprofitable, and that they are destined to the poor-house, if they continue its practice.

That farming is profitable, and that farmers are the most independent class of people in the world, and that the major part of the rest of the world, who are engaged in other pursuits, are dependent upon their industry and products for sustenance, seems to be perfectly evident from the nature of things, and it may be proved to be thus, if need be, by practical demonstrations without number. I suspect that Mr P., having probably been employed in other pursuits before engaging in agriculture, "some seven or eight years" since, may possibly be lacking somewhat in agricultural experience, so necessary to success, and has had the misfortune to locate in a bad situation, both combining, perhaps, to render him sick of his new vocation, and consequently he looks upon the dark side.

It is well in all matters of business to keep an eye for the profits, and not a bad thing to count up the outlays and incomes of the farm, at the end of the year, and count the profits, as most farmers can. The facts he has given in support of his point are new to me, certainly, and probably are to most of the readers of the *Farmer*; that it "costs twenty-three dollars to raise a yearling," and \$57,20 to keep a cow a year, and that a good cow gives on the average, four quarts of milk per day through the year. A good cow (and none other should be kept,) should give four quarts at each milking, at least, or eight quarts per day, through the greater part of the year, and even more than this a considerable portion of the time, which would double the avails of the cow, at your correspondent's low price for milk, and give a fair profit at his rather high price of keeping. I believe that a cow may be kept well, in most localities, for about forty-five dollars per year, and should yield an average of six quarts of milk per day. The milk-men generally get from four to six cents a quart for milk, and consequently the farmer should not receive less than three, or three and a half cents, for his milk at his door.

It is a curious anomaly, indeed, that so large a portion of the intelligent people of New England should be engaged in such a disastrous business as friend P. represents farming to be. A

ridiculous idea, certainly, that the thousands of people engaged in farming, should be such fools as to follow in the footsteps of their infatuated predecessors in agriculture. Does it appear plausible that of all the money made in the world, none is gained from agriculture? that the poor farmer toils and digs the live long year for a mere living, and hardly that, while the results of his labors feed the world? Farmers know too well that this is not their reward, to need to be told by me that farming is profitable.

There are some departments in agriculture more profitable than others, I have no doubt, and while the growing of stock and the dairy are found profitable to farmers, I am inclined to believe that generally the growing of crops is found more so.

I might occupy several columns of the *Farmer* with statements, from my experience and observation, in various departments of farming, showing that farming, when properly conducted, does really pay good, and often large profits; but I consider it unnecessary, as most of the farmers who read this paper can call up numerous instances from their own observation corroborating the fact, and, from their own experience, are already convinced that farming pays.

Springfield, Oct., 1859.

J. A. A.

For the New England Farmer.

THE PEACH AND PLUM.

MESSRS. EDITORS:—A writer in your paper, in allusion to an article which I forwarded some weeks since, headed "Doubtful Items in Culture," infers that I have had much experience in the culture of the peach. Without pretending to have cultivated many varieties, (as few have in New England,) I will merely state, that so far as my experience goes in this matter, I have found that the most profitable varieties for culture in Massachusetts are the late sorts. Our markets are ordinarily well-supplied with early peaches from New Jersey, and consequently, we are unable to compete with them in the market. The most profitable variety I have cultivated is the Red-Cheek Melocoton; it is an American seedling, and has been extensively grown in some parts of our country; it often reproduces itself from seed under new forms. Crawford's Early, as well as the Late Melocoton, are seedlings of this sort, and although the latter produces rather larger fruit than its parent, it is, however, not so productive. The Oldmixon Freestone and Prince's Late Red Rareripec are valuable peaches for our culture; in fact, I consider the Red-Cheek Melocoton, and the other two, to be, on the whole, as good as any we have grown for the market; they come when the southern peaches are here scarce. The Heath, as well as the Lemon Clingstone, so popular at the South, will not ripen well with us.

Regarding early peaches for the amateur or garden, I know of none better than Coolidge's Favorite, Malta, Royal George, Noblesse and Early York. As regards the Druid Hill, a Baltimore seedling, I have never seen it, as also the Welsh Freestone; I do not find the latter in "Manning's Book of Fruits."

As to the inquiry, "Whether peach trees are ever much troubled by the black knot?" I can

only say, that I have never observed anything of the kind upon the peach. This tree frequently exudes gum, particularly in a wet and cold season; this, and the work of the "Grand Turk," or borer, and the curl in the leaf, are about the only difficulties I encounter in the cultivation of this fine fruit.*

In regard to the inquiry, "Whether the wild plum trees of our country are affected by the knot," I would say that they are on even the Peach plum at Ipswich, Plum Island, to a considerable extent, and I have not as yet been able to say whether it is the work of an insect, or a diseased state of the sap, that produces these unsightly excrescences, which have been so destructive of late as to render the cultivation of the plum not desirable.

J. M. IVES.

Salem, Oct., 1859.

* In "Narr's Tour round my Garden," this French writer, in referring to the peach, says, "We find upon the branch of a peach tree, a sort of tub-rot which appears to be a gall of the tree, produced by the puncture of some insect."

For the New England Farmer.

FARMING IN NORTHERN NEW HAMPSHIRE.

MR. EDITOR:—This region is one of the most diversified in New England. From almost any elevated point the eye may pass over barren granite, rough pasture, good upland tillage, fertile intervals and reedy swamp—every elevation, from the hillock to Mount Washington—every size of stream, from the rill to the placid Connecticut.

Of the Farms.—The acres are well divided among the people—the farmer usually possessing from one hundred to four hundred acres. Each farm usually presents the diversified character of the country at large. Almost every farm borders on a small stream. There are moist hollows for grass, warm hillocks for tillage, and high hills for pasture—while here and there are basins filled with decayed vegetable matter, and overgrown with flag and swamp grass. Each farm is well supplied with water, wood and stone.

The staple production here is grass. The roughest and most distant portions of each farm are devoted to pasture—the most moist portions to mowing. Oats, potatoes and corn come next in importance. Wheat is an uncertain crop, and but little cultivated. Buckwheat and barley are more cultivated than formerly.

Of the Dwellings.—The dwellings may be divided into two classes. The first class consists of nearly square, one or two-storied, small-windowed, flat-roofed, unpleasant and inconvenient buildings, with enormous chimneys, and low, dark, damp cellars. Vermin swarm unmolested, and the whole is protected by an embankment of chips thrown up about the house nearly to the windows. Extending from the dwelling is a long, low, narrow building, in which are assembled a wagon, sleigh, cart, sled, some chains, cast-off washing-machines and churns, a grind-stone, old scythes, scraps of iron, old harnesses, ashes and fire-wood. Immediately above the wood-pile is the hen-roost, and beyond it the odoriferous pigsty. Near the swine's apartment are swill kettles hanging in the most primitive style.

These dwellings were erected from twenty to forty years ago. But a different taste is now prevailing. This class of dwellings is rapidly giving place to a second class. This second class consists of well proportioned, painted, lighted and ventilated buildings, with neat chimneys, and cellars protected from cold and vermin by walls of brick, lime and double windows. Connected with the dwelling is a wood-house. Beyond the wood-house is a carriage depot, and further a building for swine, conveniently-arranged boiler, bins for vegetables, neat eating troughs and warm sleeping apartments.

Farm house architecture has rapidly improved within the last ten years. Twenty years ago the builder aimed at great size, while economy, beauty, convenience and ventilation were overlooked. But there is yet great improvement to be made. Farmers' dwellings are too expensive—often inconveniently located—without shade trees, and neat and convenient adjacent fences and gates. Out-buildings are often situated so near that every breeze brings to the parlor a disease-bearing stench, and every shower filters through the cattle-yard into the wood-shed. Large, richly-furnished, inconvenient and badly-located farm-houses have paralyzed many a strong arm and blanched many a blooming cheek. Farm-house architecture is an important subject, and one that should be more attentively studied.

But more of this in my next. w. c.
Bath, Grafton Co., N. H., Oct. 10, 1859.

REMARKS.—Thank you, Doctor. Just what we want—short, energetic, picture-like sketches of the homes of farmers, pointing out defects, and showing how to remedy them. You shall have a hundred thousand readers.

THE CONCORD GRAPE.

The Concord Grape is gaining troops of friends at the South and West, and is spoken of in our agricultural exchanges in high terms. Mr. GEORGE HUSMAN, of Hermann, Missouri, an experienced and successful grape-grower, and a person well acquainted with the qualities of our grapes, describes it as follows:

"Bunch, large and heavy, compact shouldered; berry larger by one-third than Catawba, round, black, with a slight bloom; skin somewhat thick; flesh juicy, pulpy, buttery, sweet, and luscious, with an agreeable flavor. Not affected in the least by mildew and rot; very productive. Ripens two weeks before Catawba. Not tried here for wine, but said to make a good red wine.

"Vine, a strong and robust grower, very hardy, and will keep its leaves fresh and green till frost, ripening its shoots well to the remotest points, yet not so rampant but it can be well kept in order in the vineyard. It is a fine vine to cover arbors, as it has a very large, healthy leaf, and will never suffer from frost in winter.

"The real value of the Concord can only be appreciated when we compare its healthy appearance, and its beautiful, perfect bunches of fruit, with the sickly foliage, and imperfect bunches of the Catawba. While we have lost full one-half of our Catawba crop this season, by rot and mildew, the

Concord lost not a berry, and is a truly glorious sight. Take all its qualities—its splendid large bunch and berry, its good quality, and its early ripening—and we have a market grape which is truly ‘hard to beat.’”

Mr. SAMUEL MILLER, of Calmdale, Pa., says that—

“At the east and north they do not know what a really good Concord is, and the further it is removed south, the better it becomes in quality. Such is the Concord, as I have found it, the last two unfavorable seasons, and my firm belief is, that it will never fail to bring a good crop here. I hope that all your readers who have a few feet of ground to spare for a grape vine, will try it.”

For the New England Farmer.

HARVESTING CORN.

The question as to which is the best mode of harvesting corn seems to remain undecided. In these parts, the old method of topping and leaving the corn to ripen on the butts has been mostly abandoned. Farmers now generally cut up their corn and shock it as soon as it begins to grow hard or gets glazed.

In this way we avoid the labor of cutting the stalks, which requires nearly as much time as it does to cut up the whole at the roots and shock it.

The quality of the fodder is, also, much better. When the butts are left standing in the hill, they become hard and dry, and are worth but little to feed out; but if cut when they are green and properly cured, they make excellent food for cattle, an acre being nearly equal in value to an acre of hay. It is supposed by some that the quality of the grain is not as good as it would be if it was left to ripen in the hill, but, from my own experience and the testimony of many farmers in this neighborhood, I am satisfied that, when well secured in the shock, the corn will be as sound and bright, and will weigh full as much as it would if allowed to mature in the hill.

Another advantage secured by this mode, is the protection which it ensures against frost. In many parts of New England, frost often occurs before corn is far enough advanced to be out of danger; and when left standing in the butts, it is often seriously damaged. I know of several cases this fall where farmers neglected to cut up their corn in season; and it was so badly injured by frost as to be nearly worthless.

Notwithstanding the many and manifest advantages secured by this mode of harvesting, some still continue to advocate the old method of topping. I noticed a case in the *Farmer* of Sept. 24th, which is a fair sample of the arguments used by those who support this method. Mr. Underwood, writing from Lexington, says: “A few years ago I had occasion to pass along the road by a neighbor’s corn-field that had been cut up at the roots and shocked about two weeks previous. Some of it was standing up straight, some leaning, some half-way over, and some wholly prostrate.” From this description the corn was not well secured, and should not have been taken as an example; but he “selected a shock that had nearly fallen over,” and examined one ear which happened to be in a bad condition,

when he “came away fully convinced that that was not the best way to harvest corn.”

It seems to me that he must be very easily “convinced,” or he had no great desire to ascertain the facts of the case. If we draw our conclusions from such slight premises, we shall seldom arrive at the truth. I think if he would carefully consider the question, and give it a fair investigation, he would come to a different conclusion.

E. H. H.

Troy, Oct. 3, 1859.

FALL PLOWING.

We ask the attention of the reader long enough to consider two or three reasons for plowing stubble land in the fall.

1. It makes the same work easier in the spring.
2. It covers the grass and weeds that have sprung up since the last hoeing, or on land that brought a grain crop, and places them in a condition to get rotted before planting or sowing the land again.
3. By plowing in the fall, a large quantity of fresh soil is brought to the surface to be fertilized, in some degree, by atmospheric influences through the winter. Then, when it is again plowed in the spring, still another portion is brought up to be in turn made richer in the same manner. It may seem to some that little or no benefit will be derived from this process, but we feel quite confident that examination into the subject will satisfy any inquirer that it will be of especial advantage.
4. The finer our soils are made, the more fertile they will be, and the more easily they may be wrought—so that if these objects alone were sought, it would be advisable to plow in the fall.
5. The shortness of the time allowed us to get in spring crops, makes it expedient to do everything we can to expedite the spring work.

For the New England Farmer.

HORTI-AGRICULTURAL SHOW AT NEW-BURYPORT.

This exhibition at Newburyport was made on Tuesday last, in their commodious City Hall; one of the best rooms for a display of the various articles usually seen at such shows. One of the features of the exhibition in the hall reminded us of the annual festival of the American Institute at New York, in their admission of shop goods. The carpets, rugs, fancy pictures and flowers were very tastefully arranged, which I was told was due to the ladies of the city. The fruits were fine. The most notable dishes of pears were the Duchess of Angouleme, many dishes of large size, Uvedale’s St. Germain, Catalac, Seckel and Beurre Diel. Of apples, the Hubbardston Nonsuch and New York Pippin, of F. C. Thurlow, of West Newbury, were very conspicuous. Fine dishes of the Moody, (a seedling of Newbury,) as well as the Gravenstein,

were equal to any I have ever seen. The show of vegetables, particularly corn, potatoes and cauliflowers, was excellent. This part of the exhibition was very creditable to persons in the north part of the county.

Among the fancy articles, I was struck with the paintings of autumnal leaves, so true to nature, executed by Annie B. Ashby. Two landscapes in oil, by Bricher. The marine aquarium, or ocean world in miniature, and a collection of insects, from W. H. Merrill, and the fine hair work of R. E. Mosely, were much admired.—There were upwards of twenty contributors of wines, from rhubarb, currants, grapes and blackberries. The above, with the market day and the trial of fire engines in the afternoon, brought together a large company to the city. I.

For the New England Farmer.

HUSKING CORN.

MR. EDITOR:—Will you allow a subscriber to suggest to those who have stooked their corn this fall, to try the plan of breaking off the ears before they husk them. Let one hand, (or the thumb and fingers,) be pressed tightly against the butt; take hold near the top of the ear with the other, and bend over, and break off. A little skill and practice will enable one to break off many of the ears, so that very few, if any, of the husks will remain.

To do the thing easily, lay the stook upon the floor, (a platform made of a door or boards, and high enough to get your feet and legs under, is better.) the butts to the right, and tops to the left. Begin on one side, and take the ears "clean as you go." The stook need not be untied, but may be put away when all the ears are off. Just try the plan, fellow-farmer; we doubt whether you will be willing to go back to the old method of stripping down the husks of stooked corn, first, especially if they stick close.

October, 1859.

CORNHILL.

TRANSPLANTING TREES.—We have but a moment to call attention to this important item of autumnal work. As soon as the leaves have fallen, it is a good time to transplant apple, pear, or shade trees. Some think the fall a better time than the spring, saying that the small roots start a little, and get a hold that helps them very much the first summer. But the trees should be well banked up with earth, to keep them in a steady position. Business is not usually so pressing in the fall as in the spring, and the trees will, for this reason, stand a better chance of being well transplanted.

THANKS.—Friend STANLEY, of South Attleboro', will please accept our thanks for the polite invitation extended to us. Engagements for some time to come, will prevent us from availing ourselves of the pleasure and profit we might receive by the proposed visit. But, at some future time, we shall be glad to make it.

LADIES' DEPARTMENT.

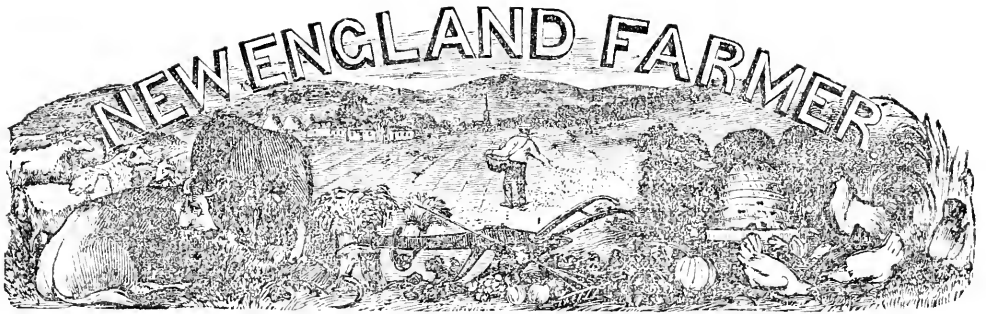
CARVING AT DINNER.

This extract from the recently published volume entitled "Dinner, Breakfast and Tea," furnishes some very interesting facts touching that most oppressive and laborious accomplishment, carving, and how burdensome it was made in olden time:

Carving was anciently taught as an art, and it was performed to the sound of music. In later times, we read in the life of Lady Mary W. Montague, that her father, the Duke of Kingston, "having no wife to do the honors of his table at Thoresby, imposed that task upon his eldest daughter, as soon as she had bodily strength for the office, which, in those days, required no small share; for the mistress of a country mansion was not only to invite—that is, to urge and tease her company to eat more than human throats could conveniently swallow, but to carve every dish when chosen, with her own hands. The greater the lady, the more indispensable the duty. Each joint was carried up in its turn to be operated on by her, and her alone; since the peers and knights on either hand were so far from being bound to offer their assistance, that the very master of the house, posted opposite to her, might not act as her croupier; his department was to push the bottle after dinner. As for the crowd of guests, the most inconsiderable among them, if suffered through her neglect to help himself to a slice of the mutton placed before him, would have chewed it in bitterness, and gone home an affronted man. There were at this time professed carving masters, who taught young ladies the art scientifically, from one of whom Lady Mary took lessons three times a week, that she might be perfect on her father's public days,—when, in order to perform her functions without interruption, she was forced to eat her own dinner alone, an hour or two beforehand.

DISINTERESTED LOVE.—Yes! man has a strong yearning for disinterested love; much more so than woman. Once convince a man that you love him, truly for himself—for his own self—independently of riches, rank, station, position, or any of the thousand and one advantages that he may be possessed of—only, I say, make him feel that and you need not be very nice about the mode in which you go to work. Men are as voracious as boa-constrictors, they will swallow almost any quantity of flattery, provided always that it be offered at the right time. It won't do to flatter one man in the presence of another. Be careful of that; but let a woman take the lucky moment, seize upon the right opportunity, and she may make a man—ay, in spite of all his wondrous sense and reason—her slave for life.—*Millicent Neville.*

GLOVES.—In the early ages of Christianity, gloves were a part of monastic custom, and, in later periods, formed a part of the Episcopal habit. The glove was employed by princes as a token of investiture; and to deprive a person of his gloves was a mark of divesting him of office.



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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SIMON BROWN, EDITOR.

FRED'K HOLBROOK, / Associate
HENRY F. FRENCH, } Editors.

DECEMBER.

"Old Winter is coming again, alack!
How icy and cold is he!
He cares not a pin for a shivering back—
He's a saucy old chap to white and black—
He whistles his chills with a wonderful knack,
For he comes from a cold countree."



DECEMBER has come round again, and we must now prepare for that "three months of winter," and nine months of *considerable* "cold weather," which somebody says is the usual allotment.

There are various ways of preparing for the unwelcome tyrant, in order to make his

reign as tolerable as possible, and it is curious to note the efforts for this end made by man and beast. The bear retires to his den, and "sucks his paws till spring," it is said, which

we always considered a highly philosophical proceeding, besides being a great saving of food and fuel. To say nothing of wear and tear of nerves in bawling those contingencies which cannot be avoided.

The birds, those summer friends of ours, [we hardly know whether it is quite fair to call those robins that stole all our cherries and strawberries, "our friends,"] most of them leave us, and sing their songs to other ears. The frog goes down somewhere out of sight, and never deigns another croak, till spring lets loose the streams and rivers once more. He greatly enjoyed his summer life in that pool with the yellow cowslips on its bosom, and the wild pines and hemlocks

on its margin. The old moss-covered log that fell across it ten years ago, and has been slowly going to decay ever since, has got to be a kind of home to him, but he knows too much to put his head out such weather as this, so we will leave him to his meditations till next April.

And the dragon-fly and devil's darning-needle, which used to hold their carnivorous revels over that same pool, where are they now? Is it possible that creatures so insignificant, are remembered by the great mother Nature, and have had imparted to them the secret of self-preservation?

Go, lean over the tumble-down rail fence by that "frog pond," next summer, and you will be convinced that it is so indeed; for you will see, if not the identical insects that you knew a year ago, at least, their children and grand-children.

But man, the lord of creation, cannot shirk out of winter by retiring to his den, or diving into the mud, there to await returning spring. It is his to battle with the elements, and to turn their fury to his own account. Those animals which lie torpid during the winter, lose nothing thereby. To be active, would be to suffer; while they sleep, they are not falling behind the march of progress, but they will come out of their torpidity precisely on a level with the rest of their race. Yes, even the toad which lives a hundred years imbedded in a solid rock, will be no whit behind his fellow toads, who have enjoyed all the privileges of the age. But man cannot afford to lose three months in ignominious oblivion. There are planets to be discovered, Atlantic telegraphs to be invented, Great Easterns to be got to the Western Hemisphere, and balloons to be perfected; so he builds him a house for shelter, he has a fur coat to brave the northwester, and fires to make his dwelling of summer temperature. So to every creature, according to its degree, is given wisdom sufficient for its comfort and preservation.

The mere matter of warming our houses, by

the way, forms a pretty important item in our preparations for winter, and we are inclined to think the *ne plus ultra* has not yet been invented, and that a triumph still remains for somebody in this line. The old-fashioned fireplace is faultless as it regards ventilation, or as an ornamental object, merely, but it lacks the one essential quality of warming the room! You may sit and gaze at it in a poetic ecstasy, and see all manner of things in the coals, and think how your great grandmother sat by just such a fire, but you feel a cold wind playing about your ankles; you change your seat, and a blast sweeps over your shoulders, and creeps down the back of your neck; you change your seat again, and are greeted by a gale from that closet, which always howls as if it had a squalling child shut up in it, and you begin to think the customs of your ancestors may be improved upon in some respects. You next try an air-tight stove. It is an invention of the adversary, unattended by the proper ventilation. Why! a pair of bellows could not blow in such an atmosphere! But it is cheap, and *does* warm the room,—so air-tight stoves are almost universally used where wood alone is burned, and will be, till something shall be invented possessing these advantages, and some besides.

All furnaces are open to one objection. There is no "ingle-side" to gather around—no bright, cheerful fire to form a centre of attraction for the family group,—and the heat, moreover, is by no means as agreeable as that of an open fireplace, provided you could contrive to escape the draughts attendant thereon. But of all contrivances yet discovered for warming dwellings, manufactories, workshops, or public buildings, nothing is so healthful, so easily managed and cheap in the long run, as *steam*. A moderate amount of steam will pervade and warm a large room, much quicker than furnace or stove heat,—and as there are no outlets for the escape of air, there will be no cold currents as in the case of open stoves or fireplaces. The reason why steam is not more generally employed,—though it is now coming into use in private dwellings,—is the first cost of the fixtures. As the materials for conducting steam are expensive, and as the work must all be exact the first cost is higher than for any other mode of heating; but in the use of steam for a series of years, there is so much saving of fuel, that the cost of the fixtures would be paid for in that item.

Though keeping warm is a great desideratum, it is not the only thing to be attended to, for winter brings with it an entire change in our mode of life.

To the dwellers in cities, amusements increase, rather than diminish, as winter approaches. There

are balls, parties, and theatres, for the pleasure-loving, operas and concerts for the musical, and lectures for the more sober-minded. In short, "the season opens" for all but the poor! and it opens to them with the sad question, how shall they keep off cold, and nakedness, and hunger and yet not be tempted to break the commandments, and covet or steal their neighbors' goods!

"Yes, winter is coming, and God help the poor!
I wish he were going away!"

Winter in the country—what a scene of desolation, where a few months since all was so calm and beautiful! Where the green leaves trembled in the breeze, naked branches now bend before the north-west wind. The houses which were softened and shaded by the trees and vines, now stand out in bold relief, like beauty bereft of the veil with which she delights to enhance her charms. The broad stretch of land which you have often likened to the

"Sweet fields beyond the swelling flood,"

are now one bleak, unbroken desert of snow,—and how the wind blows the snow about, down in the very spot where only a few months ago, little bare-footed children were out blueberrying, laughing, as they filled their baskets, with the ringing, happy laugh, which only children have!

No longer can you sit at your front door and watch the sunset, as it throws a glow on the tree-tops, and the church spire, and listen to the many voices with which nature is speaking, while you think of Abraham at the door of his tent, or Adam in the garden of Eden. No pleasant reveries, no quiet musings now. But still there is work to do—and the season brings with it the very energy which we need to accomplish it. Well is it for us that we have not to contend with the stern requisites of winter, without this additional vigor.

For the New England Farmer.

FARMING IN NORTHERN N. H.—BARNS.

MR. EDITOR:—At a distance, the barns are the most prominent objects upon each farm. There are usually two to four in number—each measuring about forty by fifty feet. They are well roofed with shingle and walled with single boards. They are so arranged as to form a part of a hollow square for the protection of the cattle-yard. The walls present a large double and two or three single doors, and a row of manure windows. A shed usually extends from one side. Through the middle of the interior extends the floor—upon one side the "bay"—upon the opposite the "stable" and "scaffold." A grain room often occupies a portion of the bay.

This is the most usual arrangement of our barns. Connected with it are many evils. From the number there is waste of building-material, space and labor. It certainly requires more material to build two or three small barns than one

barn covering an equal space. Proportionally less flooring would supply the one larger barn—and time and labor would be economized in feeding, clearing and stabling the cattle.

Improvements in barns have been made. Many have converted their two or three forty by fifty feet barns into one measuring fifty or sixty by ninety or one hundred feet—a floor extending the whole length. But these are not models. The form necessitates proportionally more floor building material than if it were more nearly square.

Again, many have increased their “barn-room” by making to one side of a barn of usual size, sufficient addition for a stable—and converting the old floor into bay and the old stable into floor. Thus the amount of stowage is almost double, at small expense. This is a profitable plan for those who are slowly but surely increasing their amount of hay and grain—and one that is extensively followed.

The proper protection of domestic animals, the making of manure, the economizing of labor and building material, the safe and convenient stowage of the bulky farm products, and the fact that much of the farmer's labor and nearly all his available property are in and about the barn for full one-half the year, render this the most important subject connected with agriculture. Saving as well as producing is necessary to successful farming.

But improvements in building are not so rapidly or generally diffused through the community, as those of the various farming implements. An improved tool may be manufactured and scattered among thousands of farmers, while an improved style of buildings would be unknown beyond the adjoining farms. Again, from the expense, an old cannot be often exchanged for a new and improved style of building.

This evil should be counteracted by engaging experienced builders—by offering prizes for the best plans and models at our fairs—and discussing the subject in the agricultural journals.

But more of this again. w. c.
Bath, N. H., Nov. 3, 1859.

COST OF FARM PRODUCTS.

In another column we give an article upon this subject, which may prove discouraging to some, but one which well deserves attention and critical investigation. We understand that the world is sustained by agriculture; that in it, it lives and moves and has its being; so there must be profit somewhere. Whether that profit is to be found among our New England people, is the question to be solved.

In looking over the items set down by our correspondent, we believe he has allowed about *twenty-six* days' labor as necessary to produce one acre of corn. On referring to the “Transactions of the Massachusetts Society for the Promotion of Agriculture,” we find that in the year 1800, they sent out a series of questions all over the State, making such inquiries as would elicit replies likely to show the average cost of our

common farm crops. Among these questions was the following:

“How many days' labor of a man are usually employed on an acre of Indian corn, including the getting in of all the stover and stripping the husks from the ears?”

No question among the *fifty* which they propounded brought so many widely-different answers as this.

Dr. Payne, of Worcester, set it at *ten* days; Dr. Hubbard, of Concord, at *fifteen*; Mr. Babbit, of Brookfield, at *sixteen*; Mr. Heath, of Brookline, at *fourteen*, and Mr. Gardner, of the same town, at *eighteen*; the Middlesex Society at *fourteen*; Mr. Kent, of Newbury, at *twenty*; Mr. Packard, of Marlborough, the same; and Col. Parsons, of New Gloucester, at *thirty-two*. The average of these returns gives *seventeen and two-thirds* days' work for a man to produce an acre of corn, beginning with the plowing and placing the corn in the bin. With the improved implements of the present day, we ought to be able to accomplish the work with two or three days' less labor than they did then.

The subject is an important one, and we hope it will receive careful attention.

EFFECTS OF HEAT UPON MEAT.

Prof. Johnston, in his Chemistry of Common Life, says that a well cooked piece of meat should be full of its own juice, or natural gravy. In roasting, therefore, it should be exposed to a quick fire, that the external surface may be made to contract at once and the albumen to coagulate, before the juice has had time to escape from within. The same observations apply to boiling; when a piece of beef or mutton is plunged into boiling water, the outer part contracts, the albumen which is near the surface coagulates, and the internal juice is prevented either from being diluted or weakened by the admission of water among it. When cut up, therefore, the meat yields much gravy, and is rich in flavor. Hence, a beefsteak or mutton chop is done quickly, and over a quick fire, that the natural juices may be retained. On the other hand, if the meat be done over a slow fire, its pores remain open, the juice continues to flow from within as it has dried from the surface, and the flesh pines and becomes dry, hard and unsavory. Or if it be put in cold and tepid water, which is afterwards brought to a boil, much of the albumen is extracted before it coagulates, the natural juices, for the most part flow out, and the meat served is nearly tasteless. Hence to prepare good boiled meat it should at once be put into water already brought to a boil. But to make beef tea, mutton broth, and other beef soups, the flesh should be put in cold water, and this afterward very slowly warmed, and finally boiled. The advantage derived from simmering—a term not unfrequent in cookery books—depends very much upon the effects of slow boiling, as above explained.

THE NORTH AMERICAN REVIEW AND
AGRICULTURE.

We deem it a good sign of the times, that the leading literary publication of the country in its October number gives to the world an able article upon "Educated Labor."

The treatise of our associate, Judge French, upon "Farm Drainage," is made the principal text upon which the writer has based an elaborate article of twenty-five pages, which we should be glad to copy into our columns, could we find pace.

We recognize in the finished and classical style of this article, and in its bold and vigorous tone, the well trained mind of an old correspondent of the *Farmer*, formerly of New Hampshire, but now known, and hereafter, we doubt not, to be more and more distinguished, as Chancellor of the Washington University at St. Louis.

When such men as Chancellor Hoyt, of St. Louis, and Dr. Peabody, the learned editor of the *North American*, come before the public as the advocates of the interests of agriculture, we may well rejoice in the assurance that our cause will have, at least, a fair hearing before the world. In no way can we so well indicate the general drift of the writer of this article, as by a few extracts. See how "like apples of gold in pictures of silver" are his "words fitly spoken:"

"A nation is strong only when, like the fabled Libyan giant, it rests its feet upon the solid earth. Land is the basis of our power; the everlasting hills are the pillars of our imperial sovereignty. Men, in successive generations, may give themselves up in mad frenzy to slaughter and extermination; dynasties may follow dynasties in lengthening cycles of misrule and oppression; the reflux wave of barbarism may dash against the broken arches of a former civilization; palaces, temples, capitols, all the trophies of art, may pass away in the ages like the ephemera of a summer morning; but Nature is eternal, and the husbandman is her minister, and should be her interpreter."

Land drainage is the principal topic of discussion throughout the article, and the recent work of Judge French comes in for the following notice:

"Every book which sheds new light upon the principles and processes of agriculture in any of its departments, we welcome as a contribution to the public welfare. Such is the work whose title we have placed first at the head of this article. Elaborate in its explanation of methods, and lucid in its philosophical statements, it leaves little to be said by others on altogether the most important branch of American husbandry. It is tastefully printed and illustrated; and, if read at every farmer's fireside morning and evening with 'judicious care,' it would soon renovate the face of the country, clothing the exhausted fields at the East with fresh verdure, and turning the ocean-like prairies of the West, now to a large

extent too wet for tillage or for health, into the very garden of the world. The author is one of those versatile, open-eyed men, whose constant and careful observation of minute and disconnected facts is happily accompanied by a rare power of analysis and generalization. He presents a pleasant combination of scholarly culture and practical energy, and is equally at home at the forum and in the field, discharging with singular tact the two-fold function of an accomplished jurist and a skilful tiller of the soil. He seems to receive from frequent contact with the earth fresh vigor for wrestling with hard questions of law. For many years associate editor of the *New England Farmer*, and special contributor to other similar journals, he has devoted the leisure wrung from a laborious profession to the study and practice of agriculture. His articles and addresses are not the mere speculations of a white-handed theorist, but they all have the flavor of fresh-plowed fields and new-mown hay. As a racy and instructive writer upon the various topics connected with the garden, the orchard and the farm, he has no superior and few equals in this country. He has the faculty of making all his resources, of whatever nature, contribute to the illustration of the particular subject in hand, no matter what that subject may be. The necessity of 'gratings at the outlet of drains,' in order to keep out all sorts of vermin, is not a very promising topic for pleasant rhetoric, and yet the pages occupied by him in its discussion sparkle with flashes from Virgil and Shakspeare, Coleridge and Matthew Prior."

"There are," he says, "many species of vermin, both creeping things and 'slimy things that crawl with legs,' which seem to imagine that drains are constructed for their especial accommodation. In dry times it is a favorite amusement of moles, and mice and snakes, to explore the devious passages thus fitted up for them; and entering the capacious, open front door, they never suspect that the spacious corridors lead to no apartments, that their accommodations, as they progress, grow 'fine by degrees and beautifully less,' and that these are houses with no back doors, or even convenient places for turning about for a retreat. Unlike the road to Hades, the descent to which is easy, here the ascent is inviting; though, alike in both cases, '*Revocare gradum, hoc opus, hic labor est.*' They persevere upward and onward, till they come, in more senses than one, to an 'untimely end.' Perhaps, stuck fast in a small pipe tile, they die a nightmare death; or perhaps, overtaken by a shower, of the effect of which, in their ignorance of the scientific principles of drainage, they had no conception, they are drowned before they have time for deliverance from the strait in which they find themselves, and so are left, as the poet strikingly expresses it, 'to lie in cold *obstruction*, and to rot.' In cold weather, water from the drains is warmer than the open ditch, and the poor frogs, reluctant to submit to the law of nature, which requires them to seek refuge in mud and oblivious sleep in winter, gather round the outfalls, as they do about springs, to bask in the warmth of the running water. If the flow is small, they leap up into the pipe, and follow its course upward. In summer, the drains furnish for them a cool and shady retreat from the mid-day sun, and

they may be seen in single file by scores, at the approach of an intruding footstep, scrambling up the pipe. Dying in this way affects these creatures as 'sighing and grief,' did Falstaff,—it 'blows them up like a bladder.'

As to advantages of Drainage at the West, Dr. Hoyt remarks :

"It is to be remembered that the agricultural districts of this country are lower and flatter than those of England, and that they receive double the amount of rain-fall per annum. We have no doubt that the value of the prairie lands in Illinois, Indiana, Iowa and Missouri might be at least trebled by a proper distribution of drain tiles, four feet under ground. Corn, instead of being dropped into sub-aqueous drills from a raft, in June, with poor prospect of a harvest, might be planted on dry ground, early in May, with an assurance of reaping a hundred-fold. Wheat, no longer frozen out of the clayey soil every winter, might yield, not twelve, but, like John Hudson's on his Castle Acre farm, 'forty-eight bushels to the acre.' The farmers themselves, now shaking with intermittent chills amidst the noxious miasmata that rest like a pall upon coarse sedge and miry pools, might riot in fragrant clover and luxuriant health."

The following remarks forcibly express the principles which we have constantly advocated in our columns and elsewhere, wherever our voice could be heard.

"Every profound thought lifts a shadow from the earth. Every good book, whether it treat of 'Farm Drainage' or 'Celestial Mechanics,' helps forward the millennium.

"The advantages of intellectual culture are as obvious in those pursuits involving manual labor, as in the learned professions, so called. A good education is of some consequence to the lawyer and physician; it is of not less consequence to the mechanic and the farmer. We have known professional men who could make a little learning go a great way with the wondering multitude; but such poor tricks cannot be played off upon the hidden forces of nature. It is the finger of Intelligence alone which can touch the secret springs that set the mountain streams to the music of machinery, and clothe the naked fields with waving grain. It is a maxim in New England factories, where a fluctuating and often hostile tariff has taught a wise economy, that they cannot afford to hire cheap, ignorant labor. Not many years ago a factory in Lowell imported a large number from England. But it turned out that these persons, though paid but half the wages of the better-educated operatives at home, were nevertheless an expensive luxury to their employers. They could not earn their living, and, in a few weeks, they were all, with three or four exceptions, dismissed. A partner in one of the most respectable mercantile houses in Boston, having the principal direction of extensive cotton-mills, stated, a few years ago, in reply to the interrogatories of a Congressional Committee, that, of the twelve hundred operatives annually employed by him, forty-five only were unable to write their names; and that the difference between the average wages of these forty-five and

of the remaining eleven hundred and fifty-five was just twenty-seven per cent. in favor of the latter. There were also in the same mills one hundred and fifty girls who had been engaged in teaching school. The wages of these school-mistresses was seventeen and three-fourths per cent. above the general average, and more than forty per cent. above the wages of those who were obliged to make their mark. It is safe to affirm, that there is not a cotton-mill in the country, with operatives, whether native or foreign, too ignorant to read and write, which could be made to yield a profit in the best times. The fabrics would be inferior in quality and in quantity; the machinery would be misused and prematurely worn out; and the stockholders would be soon brought to a realizing sense of the difference between dividends and assessments."

The following sly hit at our political aspirants, deserves to be repeated: "We may in accordance with a well-known political principle, select for our premium crop a piece of land, which, like a candidate for some high office in the nation, has a southern exposure, and which will, therefore, receive a greater number of solar rays on a given area than a northern slope or a horizontal level."

We hardly know where to stop in our extracts from this article. Every page abounds with sentences which are worthy to be written in letters of gold and displayed on the door-posts of every farm-house in New England. The dignity of labor, the superiority of force guided by intelligence over mere physical power, and the importance of cherishing a taste for the beautiful in the farmers' home, are among its prominent topics.

Then the writer, by various illustrations, brings out clearly to view the advantages of scientific knowledge to the agriculturist, showing the effect upon vegetation of *heat*, of *light*, of *air* and of *moisture*, and as incidental to those essential conditions of vegetable growth, the importance of thorough drainage and deep culture.

Then follow some carefully considered remarks upon protection of crops from insects, showing that the farmer has in the insect world friends as well as foes, and the necessity of his knowing how to discriminate between his friends and foes.

Then we have a kind word for the beautiful singing-birds, and finally an exhortation to cherish our *Home*, as the centre of all true civilization, with which we must take leave of an article which we trust will be generally read throughout the country.

"How shall we render our homes more pleasant and attractive? Some one has said that the three most beautiful words in the English language are *Mother*, *Home* and *Heaven*. They naturally go together, either of them implying the two. The great error in Plato's Republic is

his subversion of the family. No mere 'community,' whether foreshadowed by a Grecian philosopher or organized by a French Socialist, can develop in men the deepest sympathies and the highest energies of their nature. Sunder the ties which unite them in family groups, and the incentive to labor is gone. The sweet charities and beautiful amenities which spring up and flourish in the magic circle of home, cannot take root by the wayside of a nomadic life. They require 'a local habitation.' Family and property are correlative terms; the love of the one creates a desire for the other. The incentives which impel men to the drudgery of the shop or field lie in the fact that they 'have given hostages to fortune;' that they can in reality, or in prospect, enjoy the fruits of their industry around some warm domestic hearth-stone.

There are many homesteads which are not homes. Philosophically speaking, a true home has an attractive outward seeming and a luminous inward life. To secure the former, there must be some architectural fitness about the buildings, and an exhibition of good taste in the grounds. To secure the latter, there must be books, social and intellectual culture, and the hallowing influence of every Christian virtue. Human beings may exist in a habitation whose uncouth ugliness, concealed by no overshadowing tree or climbing vine, is a pain to the eye. They may accustom themselves to its shapeless deformity; to the rude inconveniences which fruitlessly exhaust time and strength; to the 'ear-piercing life' of half-starved squealing brutes, looking wistfully from hollow eyes, like animated 'anatomies of melancholy,' or wallowing in impassable mud before the kitchen door; to the stercoraceous stanches which, exhaled from contiguous manure-heaps, do not 'waste their sweetness on the desert air,' but pour through the windows, checked by no intervention of 'shocking bad hats,' and neutralized by no fragrant breath of flowers. Such a place is not a home, but rather a lair for wild beasts; and the children who come forth from it will carry its taint and its barbarism to the grave.

A fine-looking house, on the other hand, like a fine-looking woman, cannot but exert a cheerful and elevating influence upon the community. There is a renovating power in every object of beauty and of worth on which the eye of man can rest. Steele was not extravagant when he said of a certain lady, whom the poet Congreve had admired and celebrated, 'that to have loved her was a liberal education.' We always grow into the likeness and catch the spirit of our surroundings."

TREATMENT OF GARGET.

Within a year or two past some of our cows have been troubled by one quarter of their udders becoming hard, and would give bloody milk for a few days, then would dry away and lose the use of it entirely.

G. M. K.

This is a clear case of garget, and if taken early, the remedy is simple; but first it is an inflammation of the bag or one or more of the quarters, and arises from various causes. Almost universally it is accompanied by coagulation of milk

and a sluggish circulation, except in these spots where the inflammation is intense. The cure in the early stages is effected usually by kneading the bag, frequent milking, and washing with warm soap and water, or spirits and water, or both; often, however, the bag is so sensitive that the cow will neither allow the calf to suck nor the udder to be touched, even. The use of *Tincture of Arnica* has come in great repute for the allaying of this sensitiveness. Its effects are wonderful. We have known this tried, when immediately, a cow with a most painful udder, at once permitted it to be pressed and worked by the hands, washed with soap and camphor, etc., allowing the application of any of the common remedies.

We advise in this and similar cases to use arnica at once. Take tincture of arnica and dilute it with twice as much water, or rum and water, and wash the bag with it. Then milk and knead it, and then let a hungry calf take a turn at it awhile; wash thoroughly with soap and water, and then anoint with sweet oil.—*Homestead.*

ABOUT DRYING APPLES.

October and November are the best months for drying apples, and the well-ripened, choice fall varieties are by far the best for the purpose. Some people have an idea that anything in the shape of an apple, big enough to pare, cut and core, let the flavor be what it may, is just as good for drying as another. We beg leave to correct this error. It is just as important to have a good apple to dry, as to eat raw, cook or bake. To those, therefore, who want good dried apple, we will offer a few suggestions.

1. Let your apples be of good size, fair in shape, choice in flavor—sweet or tart, as you may prefer; both are good for a variety of purposes. They should be gathered without bruising; laid by till nearly ripe, but not quite ripe; pared with a machine—if you have a good one—and quartered, or half-quartered, according to the size of the fruit, or the use to be made of the article when dried.

2. Let the work be done as rapidly as possible, for the fruit may ripen too fast after beginning to do them, and keep the cutting and coring up with the paring; for the moment the open flesh of the fruit becomes exposed to the atmosphere, or heated, it begins to lose its aroma, moisture, and flavor, all to the damage of its quality when dried.

3. If you choose to string them, which may be done, or not, as you prefer, do it as soon as you can. We should not dry thus, preferring wire-racks for the purpose. Then instead of hanging them up by the side of the house, in the sun, or in the kitchen, where millions of flies will alight upon, and live on them for several days, put them in a kiln, or drying-room, with a heat of a hundred degrees of thermometer. Let the kiln be ventilated at the bottom and top, to pass off the exhaling moisture, but not enough to make a perceptible draft through it.

4. When the drying heat has sufficiently closed the pores of the cut fruit to prevent the escape of its aroma, the heat may be modified ten or twenty degrees, and so continue until they are

sufficiently cured for storing away, which may be known by breaking a few pieces, and the absence of any settled moisture in the flesh, showing fermentation.

5. When sufficiently cured, pack them away in small bags, or sacks, not closely crowded in, but as they will naturally fill; tie them closely, and hang them to nails on the side of a dry room. They will thus keep indefinitely, or till you want to use them.

A well selected apple, properly pared, cut, cored and cured, is one of the best luxuries of the table, while indifferent varieties, carelessly worked up, strung and dried in the kitchen, half covered with flies, fused with the steams of cookery, dust, and the accumulations and exhalations of an open and disordered living room, are not fit to eat, nor even to sell. We have seen apples dried after the latter fashion, even in the households of otherwise tidy people; and to those who are in the habit of doing so, we say, try the other plan, and if they do not acknowledge it a better way, in every possible use an apple can be put to, call upon us for the difference in expense. —*American Agriculturist.*

For the *New England Farmer.*

CALEDONIA COUNTY FAIR.

MESSRS. EDITORS:—The annual fair of the Caledonia County (Vt.) Agricultural Society was held upon the new fair ground in St. Johnsbury, Sept. 28th and 29th; and the grounds were occupied by the company for a trial of speed and equestrianship, the 30th. The weather during the last two days was exceedingly fine, and the exhibition, as a whole, was considered a complete success. The ground has been in preparation for about two years, and at an expense of nearly \$8000, has been put in readiness for the present year's exhibition. It comprises twenty acres of land, and is surmounted by a substantial fence. The chief building, comprising the Ladies' or Floral and Mechanics' Halls, is 240 feet in length; the principal part two stories high, with an observatory. The judges' stand is a very convenient little building, of two stories from the ground, the judges occupying the first and the music the second story; the lower or ground floor is finished for a committee-room. Both buildings are very conveniently arranged, tastefully ornamented and well painted. Directly in front of the judges' stand are elevated seats for the accommodation of those desiring them. Within the enclosure is a half-mile trotting-course, which is well made, and properly guarded by a railing on each side. As a whole, probably this fair ground is second to none in the State.

But to the fair. The first day was devoted principally to the show of stock. There was a large number of cattle present, particularly oxen. The town of Waterford led in this department, presenting 111 pairs. St. Johnsbury, also, presented 75 pairs; many from both towns being extra cattle. The show of bulls, milch cows and young cattle, generally, was good, some of them possessing very fine qualities. The Devons and Durlam bloods are most prevalent in the county, although there are many fine specimens of the Ayrshires and Herefords, each possessing their

peculiar "superiorities," as claimed by their owners.

The exhibition of horses, including stallions, matched spans, mares and foals, and roadsters, was a credit to the county, many very superior animals being present. They are principally of the Morgan blood, and exhibit very generally, their especial traits of character.

The number of sheep was not large, but there were some fine specimens—bucks in particular, which were worthy of note. The show of swine was similar to that of sheep; few in number, but good in quality.

The second day was devoted more particularly to the display of horsemanship, the ladies' handiwork, mechanical exhibitions, and the balloon ascension, by Mr. Wise. The display of matched horses was unusually large; there was, also, a very good show of stallions and roadsters.

But the great central point of attraction was Floral Hall. The ladies did nobly, in adorning and beautifying their apartment so extensively with their rich handiwork. Nearly 400 entries were made for premiums, besides many which were presented merely for exhibition. There were some fine specimens of painting, hair-wreaths and embroidery, which exhibited much taste and skill on the part of the ladies of the county. Mechanics' Hall contained specimens of high order, which, together with Floral Hall, formed a very interesting feature of the fair.

The show of farm products and garden vegetables was very good, considering the season. Corn, potatoes of extra size, pumpkins, squashes, melons, onions, turnips, peas, beans, tomatoes, &c., were numerous exhibited. The display of fruit was quite meagre, but little having been raised in the county, the present year.

The ascension of the aeronaut was a capital affair. The day was unusually favorable, it being very fair and the sky clear. Mr. Wise ascended at about 3 o'clock, and after an aerial voyage of about an hour and a half in duration, descended in an adjoining town only ten miles from the point of starting.

The third day was occupied in exhibiting the speed of horses, either in or out of the county, and by a display of equestrianship. There were several horses entered to compete for the premiums offered by the fair ground committee, but no very fast time was made. The fastest was 2.45 by "Arctic Maid," a horse owned by Charles B. Ballard, of White River Junction, Vt. E. H. Gilman's "Baldwin Horse," of Bradford, made the same time.

Five *equestriennes* displayed their skill in horsemanship very satisfactorily. They made a good appearance, and did their work admirably.

This was followed by a display of equestrianship by eight young lads, who came forward like so many marshals upon a muster-field, and did themselves honor in their exhibition of horsemanship.

Thus ended Caledonia County Fair for 1859. It was estimated that twelve thousand people were in attendance, which is sufficient proof of its popularity and success. I. W. SANBORN.

"The Meadows," Lyndon, Vt.

There is many a man whose tongue might govern multitudes, if he could govern his own.



THE HONEY, OR SWEET, LOCUST.

The Honey Locust, *Gleditsia triacanthos*, is common in New England, but flourishes best in the Virginia valleys, or on the fertile bottoms which are watered by the streams emptying into the Mississippi river. We have seen it in great perfection and beauty growing on the banks of the Potomac river, with the spurs or thorns ten inches in length. Michaux measured several stocks in Ohio, which were three or four feet in diameter, and, which appeared to equal in height the loftiest trees in the immemorial forests of that State. Some of them had the trunk undivided for forty feet. This plant makes admirable hedges when properly trained, and endures the climate well. We have one which has been growing ten years, and presents so many sharp points that few animals would venture to pass through it. We copy the engraving, by permission, from WARDER'S Hedges and Evergreens, published by A. O. Moore, N. Y.

The sweet locust is easily known by its bark, which, at intervals of a few inches, detaches itself laterally in plates three or four inches wide and two or three lines thick, and by the form of its trunk, which appears to be twisted, and which presents three or four crevices of inconsiderable depth, opening irregularly from the bottom towards the top. The large thorns which cover the branches, and frequently the trunk of young trees, afford another very distinct characteristic. These thorns are sometimes several inches long, ligneous, of a reddish color, and armed, at some

distance from the base, with two secondary thorns, about half the size of the first.

The leaves of the sweet locust are pinnated, and composed of small oval, serrate, sessile leaflets. This foliage is elegant, and of an agreeable tint; but it is thin, and scarcely obstructs the passage of the sunbeams. It is shed annually at the approach of winter.

The flowers are small, not very conspicuous, and disposed in bunches. The fruit is in the form of flat, crooked, pendulous pods, from twelve to eighteen inches long, and of a reddish-brown color. The pods contain brown, smooth hard seeds, enveloped in a pulpy substance, which, for a month after their maturity, is very sweet, and which then becomes extremely sour.

PERUVIAN GUANO.

We find an article in the papers stating that the importations of Peruvian guano have greatly decreased. We are glad of it. Not because we think the article is worthless in itself—but because we are satisfied that the extravagant prices demanded and paid for it, make it worthless to the farmer. We are glad the importations are falling off, because the prices fixed by the Peruvian government are exorbitant and unfair, and such as ought not to be submitted to, if there is any way of preventing it; if not, let us refuse to purchase a single ton of it. It ought to be afforded in Boston for less than \$40 a ton. The American guano is a safe article, and is probably

as good a fertilizer as the Peruvian, and we predict that vast quantities of it will be sold the coming year for \$40 or less, per ton.

The quantity of guano shipped from the Chincha Islands in 1857, was 490,657 tons; in 1858 it was 266,709 tons,—a falling off in a single year of nearly one-half. In the first six months of 1859, it was 46,577 tons, a much smaller amount than at the same time last year.

The quantity of guano on the islands has been computed at three millions of tons—an amount absolutely inconceivable by any of us, and yet, with thousands of vessels lying idle at the wharves for want of employment, we are told we must pay \$65 per ton for the Peruvian guano! We should be glad if all our people would refuse to purchase another pound of it.

For the New England Farmer.

THE YEAR CROWNED WITH GOODNESS.

And when, Messrs. Editors, have we seen a year that was not? All not equally so, but enough every year to fill all hearts with wonder, gratitude and praise. And yet, how many complaints are uttered every year of cold, backward spring, of late or early frosts, drouth, blighting, hail, wind, insects or something else destructive to the crops and ruinous to the hopes of the husbandman! But has any man living ever seen a year crowned with wrath? Would such a year be strange? Shall unthankful and disobedient children receive, year after year, only good at the hands of God? This is not the manner of men. God's ways are not our ways, nor His thoughts our thoughts. He causeth His sun to shine on the evil and the good, and sendeth the rain on the just and on the unjust. What living man, indeed, has ever seen such a year of scarcity and want as we read of, 2 Kings, sixth chapter, when an ass's head was sold for four-score pieces of silver, (about \$40,) and a fourth part of a cab of dove's dung, (supposed to be an almost worthless vegetable resembling dove's dung,) for five pieces of silver (about \$2,50); or, when one mother said to another, "Give thy son, that we may eat him to-day, and we will eat my son to-morrow." Had we ever witnessed one such year, it might cure our complaining, and inspire our hearts with gratitude for years of no greater abundance than the present.

I have been young, Messrs. Editors, and now am old, yet I have never seen a year that was not crowned with goodness, especially as respected the productions of the earth. I remember that in my boyhood, the crops were sometimes shortened by drouth, insects, or some other cause, and there were no such facilities then as now, for getting supplies from a distance. I remember going to mill, ten or twelve miles, on horseback, with the last bushel of corn, and then going into the field, and gathering the first ripening ears, and drying them in the sun, or by the fire, for the next grist. But still we had Thanksgivings, and thought we had something to be thankful for. But now, instead of "eating and giving God thanks," as was then customary,

I often hear complaints (Moses might call them murmurings) of bad weather, unfruitful seasons, light crops. Have we not, at this moment, much greater cause to speak of His goodness? "O, that men would praise the Lord for His goodness."

My father, who has long since gone to his rest, used to tell us of a British soldier, who remained in this country after the Revolutionary war. He said he never saw such complainers as the Yankees were. It was always too wet or too dry—too hot or too cold; and if there came ever so pleasant a day, they were suspicious of it. It must be a weather-breeder. I have often marvelled, after hearing the complainings of people in spring and summer, to see what crops they have gathered in the fall.

The years vary. Rarely does the earth yield every kind of crop in abundance. Indian corn and the smaller grains, wheat, rye, &c., do not often yield largely the same year. In some localities in this region, there is but little fruit, and corn will be light. All other crops are not often better. It seems good to see potatoes come out of the ground free from rot, and of good size and quality. Some old writer has said, "He that will observe providences, will have providences to observe," and he will often find that what, at the time, seemed a judgment, was a real blessing.

Some five or six years since, we had a very warm April, and it hatched out an innumerable multitude of grasshoppers. But in the early part of May there came, not merely a frost, but a hard freeze, which killed them before their depredations became visible. The frosts of last May and June had a similar effect. Some years it has seemed as if the grasshoppers would devour every green thing. This year, there have been but very few. I did not see one until the 18th of July, and he, though pretty fully grown, had been so excluded from the air and light in the thick grass, that he could neither fly nor hop. I doubt not that frosts in May and June that nip our vines, and are regarded as a calamity, do much less injury than would be done by the insects which they destroy.

Let, then, farmers of every class learn this consoling truth, that whatever else may be wrong, He that ruleth the weather and causeth the earth to yield her increase, understands His work, and doeth all things well.

N. S.

Monadnock, No. 4.

BUCKLIN'S IMPROVED HARROW.

Messrs. HOBART and SPAULDING, of East Pepperell, Mass., are introducing a new implement called *Bucklin's Improvement in Cultivator and Harrow Teeth*, one of which we have used several times, and on different kinds of soil. It is a heavy implement, and requires a strong team, and when provided with it, accomplishes a great deal of work in a given time. On wet lands, the soil adheres to the teeth—the teeth being somewhat in the form of cultivator teeth—and consequently the draft is heavy; on sandy loams, it will bring a newly-turned sward into a finely pul-

verized seed-bed, so that the labor of planting and hoeing is very light. Our use of it has not been sufficiently extended to justify a positive opinion in regard to its merits, and we can only say, as we do of all implements and machines, that the farmer should be slow in adopting them until he has given them personal attention and investigation.

For the New England Farmer.

CROPS IN ESSEX COUNTY.

MESSRS. EDITORS:—Below may be seen some statements as to the yield and quality of crops in this town and vicinity.

Although the nature of the season has been favorable, our people have realized only a fair crop of English hay; but it is of the finest quality, having been well matured in growth and cured in the best order; some stubbles have come in well, while old bound-out lands have produced light burdens. A few fields have produced two tons per acre, but in such cases the ground has received outside dressing, or has lately been laid down. Although some of our farmers have given their attention to the improvement of mowing lands by converting intervals and previously unproductive land into English mowing, yet, generally, this is not the case, and though the present progressive age calls loudly for such improvements, there are hundreds of acres still in the crude state, only waiting to be turned upside down and sown to hay seed to produce the owners two tons of hay to the acre.

The meadows on Mill's river, and the "River Meadows" in Topsfield, have produced well. Some seasons, when heavy and early rains fall, these valuable meadows are flowed, and in many cases cannot be cut during the season. This year they were cut early, and are well secured.

Rye has yielded well, and is of very good quality. Some pieces of winter rye were so stout as to make harvesting quite slow and difficult.

Barley generally yields well, has a good kernel, and pays as well for the land and labor as any kind of grain grown by our farmers.

Oats are raised to some extent, and peculiar soil in favorable seasons will produce oats of a fair quality, but I have never yet seen among the farmers in our own community oats that would begin to compare with those produced in Vermont and Canada, either in quantity or quality.

Pastures became short very early in the season, and of course, this has essentially diminished the products of the dairy. Mr. PRESTON LOVERING, of this town, informs me he has thus far, in feeding his stock of twenty head at the barn, consumed over three tons of English hay. Cutting "second crop" this season is quite out of the question.

Corn, owing to the early frosts, heavy rains, no drying winds following, has proved next to a failure. The ears have very sharp tips, though more in a hill than some seasons, and the husk has lain so close to the ear, being so green and moist, that in some instances sprouts of half an inch long may be seen on the ear. While there are some good fields, the universal cry is poor corn. Mr. WM. POTTER has a field containing

ten to twelve acres of heavy corn, which, on account of its size, and the quality of the corn, is worthy of notice. This field was planted early, on a large plain, and manured well—the ears are large and well filled out, and the yield, per acre, though not known, must be great for this region. Truly, twelve acres of heavy corn upon a plain is no mean sight! Mr. Potter has, in all, about fifteen acres of corn.

Potatoes are better in yield and quality than for several years past. The disease, which has been slight, did not commence till quite late in the season, and fortunately, (providentially, we may say,) that most valuable of vegetables has, to a great extent, escaped the rot, and we have reason to hope that the fatal epidemic will soon disappear. The quality of potatoes this season is particularly spoken of, both in grain and flavor. The "Jackson White" and "Scotch Apple" are of the very finest quality. Potatoes yield from ten to sixteen hills to the bushel. Mr. JARVIS LAMSON, a good farmer here, who raises large quantities of produce, I am informed, is digging potatoes, where they uniformly turn out at ten hills to the bushel! The Chenango, which has been so highly esteemed for years past, and which has rotted the most extensively with us, has become quite unpopular, and seldom planted.

Onions are extensively raised on the place of Mrs. SAUNDERS, of Salem, superintended by Mr. James Manning. Good crops have been realized for a few years past, but the crops of last season and the present, here, suffered from the maggot. Some two thousand bushels a season have been raised on this place.

Pumpkins and squashes did not suffer so much in the early part of the season from bugs as in former years, and have yielded a good supply for family use.

Pears and peaches are not produced among us to any extent. Some gardens have afforded a few bushels of that most delicious fruit, the "Bartlett pear," which have readily brought from \$4 to \$5 per bushel.

Apples are few and far between, generally, though some orchards will yield a surplus above home demand, and some others will just supply the wants for family use.

The cranberries, owing to the early frosts, will not be equal in quantity, if they are in quality, compared with past seasons. The grass and bushes which grow among the vines and shade them, serve to protect the fruit from the effects of frost and therefore these should never be mown off.

Z. A. APPLETON.

Hamilton, Oct. 10, 1859.

ANNUAL MEETING OF THE MASSACHUSETTS HORTICULTURAL SOCIETY.—The annual meeting of the Massachusetts Horticultural Society took place in their building in School Street. From certain causes well understood among the members, but of no public concern, there was an unusually full attendance, and much interest was manifested.

Three tickets were in circulation for officers of the Society for 1860—all, however, bearing the name of the present very acceptable President, Joseph Breck, Esq., for re-election, and differing only in a few of the candidates presented for

some of the minor offices. The following was the successful ticket—a total number of 143 votes being cast.

President—Joseph Breck.

Vice Presidents—E. S. Rand, Eben. Wight, J. F. C. Hyde, W. C. Strong.

Treasurer—William R. Austin.

Corresponding Secretary—Eben. Wight.

Recording Secretary—F. Lyman Winship.

Professor of Botany and Vegetable Physiology—Prof. Asa Gray.

Professor of Zoology—J. W. P. Jenks.

Professor of Horticultural Chemistry—E. N. Horsford.

LETTER FROM MR. BROWN.

An Old Town—Newspaper established—First Editorial—A Young Bride and a New Baby—Tyranny of Business—An Old Church, and an Old Swamp—Effects of Draining and Cultivation—Profits—Sheep on Old Pastures—Rural Residences near the Ocean—Good Examples—Sunday—and Consideration for Hoops.

Hingham, Mass., Oct., 1859.

GENTS.:—Many years ago, I was a citizen of this ancient and pleasant town,—and here, after a ramble through most of the States of the Union in order to see what lay outside of the pasture I had been feeding in, I embarked in business. That business was the establishment of the first newspaper of the place, in connection with a young chum as full of zeal as myself. Never to be forgotten by me, are some things that happened at this period. It was easy to set up a press and finger the types, but where were the editorials to come from? The village must have its newspaper—its advertisements, its political calls, and notices of various kinds, together with its marriages, deaths, poetry and stories. All these now stood in fair array before us, but there was no editorial. There was nothing to *write* about—nothing—the world was blank! “No man knows what he can do until he tries.” This old saw haunted me continually, until in a fit of desperation the pen was seized, and the first editorial was born! Eureka!

Here, too, I brought my young bride, scarcely nineteen, and only a ninety-six pounder, but as full of energy as the largest girl that ever bewitched a boy on the South Shore. In the progress of events, it seemed sort of strange that there were *three* of us in the family; the house appeared odd; there was an air of importance about every body, and a sly winking that betokened something either good or bad! But when the outsiders told me such was the way of the world, I reconciled myself to it with the best grace I could, and concluded to let it wag on. But I could scarcely make up my mind which delighted me most,—the birth of the first editorial, or the birth of the first baby!

All my associations, business and social, with the good people of the town, were of the most pleasant character; acquaintances were rapidly

formed, and mutual benefits, I trust, were received from contact and labor with each other. The newly-born paper flourished in its youth, and grew into a manly vigor, so that “news from all nations is lumbering at its back” at this day.

Business is a tyrant, gentlemen. It had cut us off,—by the word *us*, I mean, not the editorial plural, but the corporeal, flesh and blood, *us*, my good wife and myself,—business had cut us off from all association with our early and excellent friends, now, for some fifteen years, and that is a loss not to be balanced by gold. So we resisted the temptations of business, and came to this old town to see our old friends, when the sun was shining softly upon October leaves, and the earth seemed as lovely as on that delightful May morning, when I entered the town with a young lady at my side, under a Leghorn hat almost as capacious as the hoops of to-day.

This accounts for my dating at this place; and this essential preliminary being settled, I will leave personal reminiscences, and proceed to regale your readers, if I can, with some account of what I have seen and heard here.

HINGHAM lies on Boston harbor, about a dozen miles from the city by water, and a trifle more by land. The town nestles pleasantly among the graceful undulations that form the surface, having several streets lined with substantial dwellings, churches, stores and school-houses. The old church—the oldest in Massachusetts, I believe, if not in the country—stands upon a gentle eminence, still in good condition, and has had but five pastors in the space of *two hundred and twenty-four years!* The population of the town is mainly agricultural, though at a former period, a brisk and profitable business was done in the mackerel and cod fishery.

Unusual attention has been paid to the agricultural capacities and interests of the town within a few years, which has resulted in frequent gatherings of those interested in the subject, in the organization of a vigorous town society, and in the reclamation of new, and the better cultivation of old, lands. One of the finest examples I have ever seen of reclaiming a bog swamp, is on the farm of JEDEDIAH FARMER, Esq. I saw this swamp several years ago, when it was in reality a *dismal swamp*; it was low, wet, uneven, and covered with water brush, brakes, and uncounted numbers of wild rose bushes, that made it perilous to enter its repulsive borders. When these had been cut and cleared off, and the plow put in, the moss was ten inches deep, and would so rise up under that implement as to raise it two feet from the level. But the axe, hoe, plow and fire, reduced all obstacles, aided by the draining which preceded them, and now that home of frogs, muskrats and miasma, is a fertile

and smiling field, whereon corn and cabbages, beets, bagas, and potatoes and pumpkins, do most exceedingly abound. Three tons per acre of the best hay has been cut upon it, and the finest garden vegetables grow equally well. And yet, this land has lain there in gloomy repulsiveness for more than two hundred years, an eye-sore and nuisance, for the want of some one possessing faith and energy to take it in hand. When the present proprietor commenced upon it, he was told that "others had attempted to subdue it, but failed; that he might, possibly, make maples grow there, but *nothing else* would—they knew it." They ridiculed the effort, and sagely reminded him that "a fool and his money were usually soon parted." But, there stands the result, gentlemen; send all your doubters to see it. Each acre of it will yield more profit than two or three of the uplands which surround it, and it is well worth, to-day, \$200,00 per acre for agricultural purposes. Being near the village, the land cost about \$40 per acre, and it cost as much more to reclaim it. Now let us see how the account stands with it? It now yields, and with the aid of a little top-dressing will continue to yield for many years,

Three tons of hay per acre, at \$18,00.....	\$54,00
Fall feed, per acre.....	3,00
	\$57,00
Interest on \$80,00.....	\$4,80
Fencing and taxing.....	5,00
Cost of making the hay.....	9,00—\$18,80
Profit.....	\$25,20

I only give the figures as an approximation of the true result, being aware that the land must be manured annually to keep up this degree of fertility. But thirty-eight dollars, or even twenty-five of it, is a pretty good income from an investment on \$80,00, and would be thought so by most persons engaged in mercantile business.

SHEEP ON OLD PASTURES.

Some of the finest examples are afforded here, of the effects of feeding sheep upon pastures that have become exhausted of nutritious grasses, and grown up to bushes, briars, brakes and moss. I have seen pastures to-day that had become almost worthless, but now green and smiling as a lawn, with every inch among the rocks covered with the richest pasture grasses, and not a blackberry vine, wild rose bush, mullein, or other worthless plant in sight. The sward does not seem compact and bound, but loose and porous, and filled with the most healthy and vigorous roots. The sheep grazing upon these pastures, afford ample evidence of the richness and luxuriance of the grasses upon which they feed. These examples, with similar ones that I have observed in other places widely remote, would seem to shed light upon the perplexing question

so often asked—"How shall I reclaim my old pasture?" All over New England there are thousands of acres producing little or nothing that might be renovated by the introduction of sheep upon them, while the profits from the sheep themselves, I believe, would be larger than from the same amount of money invested in cows. I have been told of an instance where a hundred acre pasture fed scantily only twelve sheep and six cows the first year, but on the second summer fed well twenty sheep and twelve cows, and continued to increase in fertility until more than double this number was well fed upon it!

Men of means, and full of love for agricultural improvement, have erected pleasant country seats in the neighborhood of the bay, or a little back among the hills, as fancy or convenience has suggested, giving striking examples of what an acre of land may be made to produce. These examples are of much value to the common farmer, if he is but an observing one, as they suggest to him what he can himself accomplish on his own premises, if he will but contract his operations, cultivate less, and cultivate better, and by a more thorough preparation of the land by draining, subsoiling, manuring, and careful tending. In this good work I found valuable examples on the farms of the Hon. ALBERT FEARING, ALFRED HERSEY, Esq., JOHN R. BREWER, Esq., and that of THOMAS S. BOUYE, Esq. These gentlemen are all leading members of the town agricultural society, and mingle the influence of their personal example with that of well cultivated fields and abundant harvests. Some of them you know not only as merchants of unbending integrity and honor, but as men whose philanthropy is as universal as the want which calls it into being. They are public benefactors. Fine dwellings crown the hills that overlook the harbor, as well as the wide expanse of sea, strongly contrasting with the huge moss-covered rocks that everywhere line the coast, and lovingly look out from the dark cedars that are indigenous to the soil. The grounds around these dwellings are usually under a high state of cultivation, and many of the elegancies of rural life are introduced, such as flower-gardens, walks, avenues of trees, choice shrubbery and green-houses; and these form examples of taste which most common farmers may properly and profitably imitate in some degree. The whole country—naturally, rough and uninviting—is greatly improved by the introduction of these dwellings, and the true taste exercised in the laying out and managing their grounds. I can scarcely recall to mind any portion of our coast offering so many romantic and beautiful spots for summer residences, as on the graceful

hills overlooking the harbor and ocean in the immediate vicinity of this charming old town.

To show you that I observe my home habits when I am abroad, I will tell you that yesterday I attended a Sunday School in the old church, and then listened to an excellent sermon in the North Church, by the Rev. Mr. NOYES, upon the text—"And he was transfigured." I could give you its outlines if I had room. As I am an observing man, and mean to "catch the manners living as they rise," I must note one thing especially comforting to ladies, even if it does show that I had my eyes open in church! I could not help noticing that the men, with their compact legs in their compact pantaloons, sat in the farther portion of the pews, and the women in the end next the aisle! But my letter is too long now, and I must subscribe myself,

Truly yours, SIMON BROWN.

Messrs. NOURSE, EATON & TOLMAN.

For the New England Farmer.

REPORTS COMPARED.

MR. EDITOR:—On the table before me lay two Reports on Agriculture; the title of one is, Patent Office Report, 1858—Agriculture; the other, New York State Agricultural Report, by B. P. Johnson, Secretary. Just look at these two books, Mr. Editor; for you have them, and your very just and interesting review of the latter in the *Farmer*, a week or two since, proves that you have digested the contents of one of them, at least, and I have no doubt but what you found it very wholesome and agreeable food. The question, however, I wish to ask you is, Can you digest the former—have you a stomach capacious and powerful enough for that? I doubt it; but we shall see what we shall see. The one is all full, as an egg is, of nourishment of the most interesting and instructive matter, relating to the farm and its management, in door and out. It is a "complete guide to the carrying on of a farm," in all its departments, and that of the highest order. I have read it with all the interest of a "sensation novel," and the farmers of New York may well be proud in being the means of bringing out such an instructive book, and by this means showing the farmers of other States how they do their business at home.

But the other Report, book, what shall we say of this? I have read its first article, on Education, with some interest, because I have children to educate; but its exact bearing on the agricultural matters of the United States I do not precisely understand; that, I presume, is of no consequence, provided D. J. B. does. The last article, on Meteorology, by Prof. Henry, is well worthy of being digested; it is good, strong food on the subject of which it treats, though, probably, very few of the farmers in these United States are sufficiently interested in the subject to read his paper. Beside these, there is little in the volume of any interest to the general farming mind, in my estimation. D. J. B. seems to be the Alpha and Omega of the whole Report,

and I am candid to say, after looking every article carefully over, and reading most of them with some care, the question presented itself to my mind, Does such a report as this, emanating from the government, pay—is it worth the cost? My answer is, No. Either give the farmers of this great and progressive country something better than this, or stop it altogether, and devote the money which these two hundred and fifty thousand books cost, to the purchase of the Dioscorea Batatas, and send each owner of a farm one, throughout the Union.

NORFOLK.

King Oak Hill, Oct., 1859.

For the New England Farmer.

FACTS FOR THE SCIENTIFIC.

A neighbor of mine has sown the French turnip for several years, with marked success, for the last three years, from the same seed, and has raised a good crop each year. This year he sowed as usual on ground precisely like his former fields, and manured and tended in the same way, and not a turnip from his whole field! The plants came up and looked finely until July, when they all went—to seed. No root on any plant more than on mustard. A fine lot of good plump turnip seed is all he gets for his crop.

Is there a fixed time in which turnip seeds, kept well, will mature, so as to invariably go to seed as above, or is this a freak of nature? Will any one give us facts in reply?

I also will state a hydraulic fact or two, and ask for a scientific answer upon philosophic principles. As is often done, I have water running to my barn by syphon from a well 12 rods distant, and 18 feet deep. It invariably runs well from October to the next season of warm weather, when it as invariably lessens gradually and stops, and cannot be made to run again for more than a day or two, till cold weather sets in. No matter what the depth of water in the well, it will not run steady in hot weather. When the force pump is applied, the air or gas (which is it?) appears from the upper end, and all is right for a day or two, when it again diminishes till the stream stops entirely. As many others in this region are troubled in the same way, we are anxious to know the cause and the cure. Is it *gas* formed by chemical action of the water upon the lead in warm weather and not in cold, or is there some other cause? What is the remedy?

I also notice in the operation of all hydraulic rams, that at each motion of the spindle valve, the water in the driving pipe is suddenly checked in its downward motion, and is reversed and sent back *into the spring or fountain head*. Now in all the explanations I have ever read, I can find no mention made of the fact, and much less a reason given for it. In the *American Agriculturist* for December, 1858, and in several numbers of the *Farmer* during the past season, we have an explanation of the Hydraulic Ram, and its operation, but in none of them, nor in any school philosophy, can I find a mention of the fact, or a reason for it. By this I infer that the writers of the above newspaper articles were but superficial observers of the ram and its operations, as are too many of our writers for the various agricultural papers. What we want is plain common

sense explanations of facts, with the "whys and wherefores."

From ten years' experience with various kinds of hydraulic rams, in every variety of location, I am fully convinced that any arrangement, or want of arrangement, by which this reverse motion of the water in the driving pipe is wholly prevented, will wholly prevent the successful operation of the ram for any length of time. A practical prevention causes very imperfect operation. Hence, one great cause of failure in the scores of rams set by inexperienced workmen in every part of New England.

Hoping to hear from you or your scientific correspondents soon, I will anxiously watch your columns.

P. J.

Vermont, Sept., 1859.

EXTRACTS AND REPLIES.

INFLUENCE OF THE GENTLER SEX.

In perusing the last number of the *Farmer*, which contains so much interesting information, I was ready to query why the value of this useful work should not be appreciated by every tiller of the soil in New England, at least? It has been my privilege to peruse its contents from its commencement, and it has often occurred to me, that a single number had, to me, been worth a year's subscription, and from present appearances I think it is increasing in interest.

I have again and again perused with deep interest an article in the last number by one of the gentler sex. I think it must commend itself to the admiration of all, as replete with sound sense, and is an honor both to herself and her sex. Let others do likewise. She says, "Farming is an occupation in which woman has a part to perform; then let her express her estimation, her interest in it, and she will help to lend an enthusiasm, a charm to agriculture, such as will interest and animate our young men; and she will prove her influence to be more potent than all the wise counsellors found among our grandfather and father farmers of old New England." What can be more truthful? I rejoice to see such noble contributions of the gentler sex to a paper that I already take so deep an interest in, fully believing that such contributions will have an influence on the circulation of the *Farmer*.

CONSTANT READER.

Vassalboro', Me., 1859.

REMARKS.—Such commendations as the above are not unfrequent in the letters we receive, and they serve to encourage us in our labors. But grateful as they are, they are not so encouraging as the fact to which our correspondent alludes, that women are becoming more and more interested in the business of the farm. There are many who are good horticulturists, as well as floriculturists, now, and some who manage whole farms with ability. The cold barrier of indifference is broken, and a new era in agriculture is dawning upon us.

TIME TO CUT FENCE POSTS.

I wish to thank "R. C. H." for his opinion in your paper of Oct. 8, in regard to an inquiry of

mine, of Sept. 24th, about cutting fence posts. But first, I should thank you for the valuable space you give us in which to make inquiries.

Will "R. C. H." give us his reasons for "cutting them in the month of June, and setting while green?" I have always noticed that stakes, withs and fence poles, cut when full of sap, decayed sooner than those cut when there was the least sap in them.

JOHN W. TOWNSEND.

North Lisbon, N. H., 1859.

A SUBSTITUTE FOR MILK FOR YOUNG PIGS AND CALVES.

A porridge made of Indian meal and hot water is an excellent substitute for milk for young pigs, when milk is scarce, or not to be easily obtained. It will well repay the trouble of making the porridge to witness the thrifty condition of the pigs, they doing equally as well upon it as upon milk, if not better. One pint of meal is sufficient for every gallon of water, sifting it in gradually, while the water is boiling. Or it may be made nearly as thick as pudding, thinning with water while hot. The same is also excellent for young calves, adding a little salt occasionally. This, although it has been well tested, has not become as extensively used as it is worthy to be, and I am not aware of its publication before.

Springfield, Mass., 1859.

J. A. A.

SAW-DUST AS A FERTILIZER.

Can some of your numerous correspondents inform me through the *Farmer* of the comparative value of saw-dust as a fertilizer, and of the best manner of preparing and using the same?

J. BRAD. PHILBRICK.

South Deerfield, N. H., 1859.

REMARKS.—Saw dust, as a litter, and an absorbent, is excellent—whether it has fertilizing properties of its own that are valuable, we must leave to others to decide.

WITCH GRASS.

I noticed in one of your numbers that a gentleman wished to get the seed of dog grass or witch grass. I call it devil grass, as I know of no other seed or grass that's a greater thorn to the flesh. All he need do is to get a few roots and set them fifty feet apart, and I guarantee he will have his farm seeded as fast as he wants it.

M. ROBINSON.

Wareham, Mass., Oct., 1859.

CONTRARY COLTS.

What is the best method of preventing contrariness in colts that seem inclined that way? If the habit is once formed in a horse, young or old, can it be broken? If so, how? QUERO.

REMARKS.—A friend at our elbow, who knows every hair in a horse's hide, says, "Be gentle, be patient; use soft and persuasive language; make the animal understand, what you want to teach him by kind words and acts, and when he learns that, he will serve you cheerfully to the extent of his power. You must be in sympathy

with him, and he will soon appreciate, and reward it, by his obedience. It is hard to teach an old horse, as well as an old dog, new tricks; but if you can change a vicious habit, it will only be by kindness.

GOOD CROP OF ONIONS—HINT FOR A NEW LAW.

As you and your numerous subscribers are always glad to hear of a good crop, and how procured, I will state for mutual benefit, that Mr. K. DRAKE, one of my neighbors, raised on $7\frac{1}{2}$ rods of land, $36\frac{1}{2}$ bushels of silver skin onions, worth 80 cents on the ground; yielding him the neat little profit of \$20. He used hog manure and ashes.

Will our Legislature pass a law this coming winter, making it a criminal offence for every robin detected in stealing our cherries, strawberries, currants, &c.?

We have a very stringent law for one race of *bipeds*, of the *genus homo* species. Should a poor half-starved boy pick up an apple, or get a few cherries or currants to eat, they fine him \$100, or send him to the Reform School,—the mean little rascal! But don't hurt the poor robins, they are of more consequence than those whom Christ called fit for Heaven. C. CLARK.

Stoughton, Oct. 10, 1859.

For the New England Farmer.

WHY DON'T MY ORCHARD PRODUCE BETTER?

The above inquiry is often made, and with some, at least, I apprehend, without much investigation to ascertain for themselves the cause, which, in most cases, to a close observer and a rational thinker, would be found so plain as to need no reply.

I will instance one case of a similar inquiry, out of many of a similar character, that might be added. A neighbor, pointing to his orchard, wished to know what I thought could be the reason that his trees, which used to bear so finely, and which were not old, had for several years become so barren? I asked him how long it had been mowed without manure? His reply was, sixteen or seventeen years. I asked him how long he thought his cornfield would produce under similar treatment? Well, he supposed it wouldn't do very well; but he didn't know but apple trees would bear without manure? Such are the limited views of some; but it is probable there are but few farmers, or fruit cultivators but that would reason very differently.

I visited another orchard in Nova Scotia of about two hundred trees; the ground was in a good state of cultivation, and the trees and fruit showed a very striking contrast to the one alluded to above, and the results much more satisfactory. The proprietor informed me that he sold his apples the preceding fall for \$1200, and he thought his present crop would be five hundred barrels, worth two dollars per barrel, giving him \$2200 for two years.

It is an old, and I think, true maxim, that what is worth doing is worth well doing; and as it has been proved beyond question, that no part of farming will reward the husbandman equal to

fruit raising, it often looks strange to me that so large a majority of orchards should be left to take care of themselves, and then charged with blame for unfruitfulness, when it belongs to the owner.

D. TABER.

Vassalboro', 1859.

REMARKS. — Thank you, friend TABER; we hope to hear from you often. These are the kind of facts to set people thinking, and acting too.

EXAMPLE IN A POPLAR TREE

OF WHAT NATURE WILL EFFECT WHEN ASSISTED BY ART.

On the 10th of August, 1842, the lightning struck our Lombardy Poplar tree, not far from the house, with a crash as though the house itself had fallen in ruins. This tree, at 18 feet from the ground, branches out into three principal leaders. The one which faces the west received the full force of the thunder storm, and it exhibited an excavation of 26 feet in length, and at one part of 22 inches in breadth. Independent of this sad stroke at the western side of the tree, its bole to the north was struck at the same time, and denuded of its bark to the extent of 6 feet by 14 inches. Some idea may be formed of the vast injury which this tree received when the reader learns that I picked up fragments of its wood full 50 yards from the spot where it stands.

After a close inspection of the lacerated parts I conjectured that there was still enough of solid wood remaining to resist the violence of the wintery wind. Having cut out all the shattered parts, I placed a series of thick slates on a solid bed of mortar, quite up to where the tree takes its three leaders: thus forming a hard and permanent covering of 18 feet in extent. At the edges of the slates we applied Roman cement nicely sloped off; so that the future wood and bark might have an easy passage over them, at each returning season, for increase of growth. Thus, all being rendered safe from wind and rain we ceased our work, and left the tree to Nature's healing care. She has not disappointed us. Yesterday I got up into the tree, and I inspected minutely the injured parts throughout their whole extent. Their condition was prosperous in every point of view. The new wood and bark have rolled over the slates to a close or joining within 11 inches, binding the slates down in an everlasting prison.

A Spanish proverb says: "Thou art welcome, evil, if thou comest alone." But, in this instance, our poor poplar could not have such a consolation; for another thunder-storm broke over it, and the lightning struck it on the northern side, riving off the bark for a space of 33 feet in length, and at places of 15 inches in width. Singular to tell, no apparent injury was inflicted on the wood itself. The bark alone had suffered, so that a new supply of slates and mortar was not required. This victim to the lightning's fearful rage is now in health and vigor, whilst its summer foliage is of as rich a hue as that of its surrounding neighbors. Should future tempests spare it, the tree will be quite right again in a few years more; and its bole will be as beautiful as I remember it in times long gone by. The day may come

when this Lombardy Poplar's history shall be forgotten. Then, should it be felled, to serve domestic purposes, woe to the carpenter's axe and saw! They will have hard work when they shall have penetrated into the interior of the tree.

From this brief account, the admirer of trees may learn that it may be in his power to do wonders with them in their hour of accident, provided that he goes the right way to work, and lets Dame Nature have her own wise course. A lofty and majestic tree is a jewel of inestimable beauty on a villa's lawn, and is worthy of the owner's utmost care.—*Charles Waterton, Walton Hall, in Horticulturist.*

INFLUENCE OF RURAL LIFE.

The following just and eloquent remarks were quote from the Address of HENRY F. DURANT, Esq., of Boston, delivered before the Norfolk County Agricultural Society, Sept. 29, 1859. Mr. D. said:

He did not come here to attempt any instruction in agriculture. But there was a common ground where we could all meet and learn something from each other. Other lessons might be learned in the green fields, than the best mode of raising crops. Education in the widest sense was the great end and mystery of life. We were here to unfold and educate ourselves—to find the development of heart as well as of brain, of the affections and the moral nature. In the country might such an education be the most usefully obtained.

He first spoke of the democratic aspect of rural life, of the happiness, the necessity, the dignity of labor, and its tendency to elevate the mind as well as to secure competence. Labor was the law of our being. Its results were fixed in the Almighty decrees. Sunrise and sunset, winter and summer, were not more sure than the results which waited upon the footsteps of strong endeavor. The law of "no work, no wages," should be to us a source of deepest gratitude. The New England farmer should be peculiarly grateful for the hard soil which he finds in this section of the land—calling forth those efforts which, under the guidance of Christianity, have elevated him high up in the lists of true manhood.

Rural life had its lessons for the heart and the affections. In the city, men hardly knew the names of their next door neighbors; in the country, though half a mile apart, men were neighbors. Country life taught men the value of sympathy and of society. It gave woman her true sphere, too, as no city homes ever gave.

The country refined and elevated. It taught us on every hand lessons of infinite good. Scenes of grace and beauty spread themselves abroad on every hand. In Rome stands a great obelisk, brought long centuries ago from Egypt—from the centre of mysterious ruins—and men travel thither from every land, and seek to read the story of the ancient days, and gather wisdom from the strange hieroglyphics inscribed upon the column. Yet all around us, we had greater mysteries than those of ancient hieroglyphics or Egyptian obelisks. Every blade of grass which raised itself in the breeze was a tower, built story

on story, with its foundations deep in the earth, mocking with its elastic strength and beauty the poor imitations of man. It had its origin long before towers and obelisks sprang into being at the touch of man, and came down to us perpetuated, from year to year, fraught with wondrous memories and suggestions.

This was but one form of that strange mystery which enveloped us on every hand, which, for want of a better name, were called beauty. Its influence on man was boundless, and the son of labor, "Gerard Massey," in one of his songs, called "The People," sang of it in fitting strains. This wonderful book which we called nature, rural life, was a pleasant story which had no end, and on every page we found the word "Excelsior." Taught by the flowers which raised their beauties up from the cold ground, taught by the trees which lifted their arms heavenward, taught by the mountains whose lofty peaks seemed to unite earth with heaven, taught by the constellations which never ceased their progress through the grand and boundless realms of space, we should seek to make our lives like the star which waited never, but hastened on its appointed way to the zenith of eternity.

For the New England Farmer.

CHARITY FOR THE ROBIN.

FRIEND BROWN:—In your issue of Sept. 3d, "Charity" has attempted to furnish facts gathered from the investigations of Prof. Jenks. He says that nine-tenths of the food of the robin found until the first of May, consisted of the larvæ of the *Bibio allissennis*, an insect, in the opinion of entomologists, capable of producing one million from each parent, each season.

Prof. Jenks demonstrates that the robin, during the months of March and April, sixty-one days, consumed from one hundred to two hundred of those terrible scourges to the tillers of the soil, daily, each bird destroying some six or eight thousands yearly. During those months, robins are very scarce, not many having returned from their southern quarters, averaging two, or, at the most, three pairs to a farm.

O, what incalculable benefit to the poor soil-tiller are four or six birds destroying some five or six hundred worms daily out of millions of millions! How soon they must all be destroyed, and then, cock robin must starve.

If the Professor's theory is correct, to annihilate the *Bibio*, robins must abound plentifully enough to out-number all other birds in existence. Why, sir, the number must be so vast, that ten months starvation must follow, for all the crops used by the human family would not suffice to sustain the robins needed for such a glorious worm-slaughter.

"Charity" would have us protect the highwayman, the banditti, the poacher, because they may have some redeeming qualities; generosity, even charity may be dispensed by them, when it comes cheap—stolen charity.

I wish to say a few words about the bird law. Common law gives a citizen self-protection in person and property from poachers. Massachusetts statute law says he shall be mulcted for every robin killed, or found dead on his premi-

ses; he is mulctable (if I may use the word,) for every robin's grave. The statutes ought to have provided a robin cemetery, then all will be saved from being dragged before some Justice Innocent.

Know Sir Walter Scott's idea on the law, and its process of being carried out. "If the citizen makes over to society the natural, indisputable and inalienable right of self-defence, society is bound to maintain its share of the contract in full and adequate protection, and the contract is violated unless it does so. When society fails to protect personal rights, it becomes, for the time being, and for the purposes of that act, resolved into its elements, and the power goes back by primary right to its constituents. No majority, however large, may place men under a sham government, and make them amenable to its penalties, while it refuses to protect them in those rights which they hold from a source higher than government. Still less can it assume to prevent them from redressing those wrongs which its authority sanctions or permits by its neglect."

Government binds the citizen to loyalty no farther than it is itself bound to justice. If government does not adequately protect, every man may take law into his own hands against poachers upon his labor, his own and his family's living, answerable only to his fellow-man. He only transfers his allegiance from a sham statute to common law.

J. S. NEEDHAM.

South Danvers, Sept., 1859.

AUTUMN.

Leaf by leaf the roses fall,
 Drop by drop the springs run dry;
 One by one, beyond recall,
 Summer beauties fade and die;
 But the roses bloom again,
 And the spring will gush anew,
 In the pleasant April rain,
 And the summer sun and dew.

So, in hours of deepest gloom,
 When the springs of gladness fail,
 And the roses in the bloom
 Drop like maidens, wan and pale,
 We shall find some hope that lies
 Like a silent gem apart,
 Hidden far from careless eyes,
 In the garden of the heart.

Some sweet hope to gladness wed,
 That will spring afresh and new,
 When grief's winter shall have fled,
 Giving place to rain and dew—
 Some sweet hope that breathes of spring,
 Through the weary, weary time,
 Budding for its blossoming,
 In the Spirit's glorious clime.

SAWYER'S IMPROVED CULTIVATOR.

During the past summer, we have used in our fields an implement with the above name, and have found it in reality, a labor-saving implement. It is our practice to hill potatoes at the first hoeing, all we intend to hill for the season,—because we have found each successive hilling to induce a new set of roots to start out higher up the stalk, and from these a new crop of pota-

toes. Under this practice, the forming of a large hill is a work of considerable labor, and the Improved Cultivator performs it quickly and admirably. It may be conveniently changed to throw up a little earth, or a good deal, by removing the side shares, or allowing them to remain on. Wherever it is wished to hill up plants, it is the best implement in our knowledge. It works clean, also, cutting up all the weeds in its path. We like it much. We do not know who sell or make it. They must speak for themselves.

For the New England Farmer.

FALL PLOWING, AND THE ADVANTAGES OF DEEP PLOWING.

It is always desirable to do as much of the farm-work in the fall, preparatory to spring operations, as possible. If the plowing for next year's crops can now be done, that will relieve the team from a heavy task in the spring, as well as give considerable more time in that hurrying season to devote to other needful work. The fore part of November is a favorable time for plowing, the land then being generally in fine condition to plow, the weather cool and bracing, the team hearty and vigorous for the work, and there is usually leisure to devote to it.

Sod land, well plowed in late autumn, will be mellow to cultivate and clear of grass and weeds, the next season, than if it were plowed in spring,—the frosts of winter killing the up-turned roots and disintegrating and crumbling the soil, so that in the spring it will readily yield a deep, mellow and clean seed-bed, fit for any kind of a field-crop. Not only will the land be clean of grass and weeds, but clean of grubs and cut-worms also. By plowing green-sward as late as November, the worms and their eggs are turned to the surface in a torpid state, their arrangements are reversed, and the frosts of winter immediately succeeding, they are cleared out of the land. I have found late fall plowing a perfect mode of ridding my land of these two varieties of worms.

November is a good time to plow stubble or old ground, that is to be sowed with grain and stocked to grass the next spring. If the land is in corn-stubble, it will be well first to put on a heavy harrow, and passing with it once in a place, astride of a row each time, loosen the hills and scatter the corn-stubs about, which will make the plowing easier and more effective, and the stubble being separated in loose pieces by the harrow, will more readily fall to the bottom of the furrow than if remaining in unbroken hills or clumps of roots and stems. Lying beneath the furrow through the winter, with the soil settled down upon them, the stubs are not liable to be pulled up to the surface when harrowing in the grain in the spring. I have practised the plowing of corn-stubble and potato-ground in the fall, for several years past, and like it well, on such of my land as is not subject to overflow by freshets from the river, or is not on so steep a declivity as to be liable to be washed by heavy rains in the winter or early spring. The land does not need plowing again in spring, but is ready to receive the

seed the very first day that the surface has become sufficiently dry to harrow well, which will usually be several days earlier than the land would do to plow, or could be got ready for seeding, if to be plowed. The grain and grass-seeds committed to the ground thus early, have the benefits of the early rains, and become well rooted before the hot and dry weather comes on.

In the older settled districts of New England, it is often the case that the land, by long and quite shallow cultivation, together with a system of close cropping, is now too compact and hard, and needs deeper plowing and more thorough pulverization than when it was new, and naturally more mellow and friable by the presence of vegetable substance in the soil. Then, again, the oft-repeated treading of the cattle, and pressure of the sole of the plow, in invariably shallow furrows, has, in all those lands of a close texture approaching to clay, with a strong and compact subsoil, created an artificial hardpan, quite too near the surface, which operates deleteriously upon the crops, both in a wet and a dry season: in the former, by preventing the superabundant moisture from readily sinking below and relieving the surface of wetness and cold; and in the latter, by preventing the roots of vegetation from striking deeply into the soil, away from the parching effects of the sun. The roots of our cultivated plants will adapt themselves to the peculiarities of the season, if permitted to do so; that is, in a dry season, they will strike deep into the soil for moisture and a grateful temperature, and in a wet season keep nearer the surface, especially if made dry and warm by deep tillage.

Where the land is of a close texture, with a strong compact subsoil, it is not unusual to find a better farm underneath, than that which has been worked so long and so shallow on top. By breaking through this artificial hardpan or crust, and bringing up a portion of the under soil to the light of day and the influence of manure, the crops are by that operation considerably increased, even though no more than the customary quantity of manure per acre is applied. And if high manuring is practiced in connection with the deeper cultivation, the crops will be very much increased over what could be realized from the old shallow plowing and artificial hardpan near the surface, accompanied by as high manuring. Then there is the difference, too, in the case of tilling the crops raised on deep, mellow land, as compared with those on hard, shallow plowed land.

If deep sod plowing is to be practiced, it is especially desirable to do it in the autumn, that the atmospheric influences may ameliorate and modify the upturned subsoil, preparatory to future cultivation. Plow the green-sward in November, say eight to nine or ten inches deep, according to the quality of the subsoil. In the spring spread a good coat of manure, which, if fine compost, can be sufficiently mingled with the soil and covered by the harrow and cultivator; or if coarse, can, by lightly cross-plowing, be turned under three to four or five inches deep, according to the depth of plowing in the fall. If the plowing was, say nine inches deep, there will be no difficulty in guaging a light plow, with a sharp share, and wheel on the beam, so as to cross-plow in the spring and cover the manure

about four inches deep, without disturbing the sod underneath. Green manure, well covered that depth, will decompose readily, and be more active and effective on the succeeding corn or other hoed crop than if turned down under the sod.

A neighbor of mine spread his manure on grass-land, a year ago last spring, and turned it under the sod, about six inches deep, and planted the field with corn. Nearly half the crop was destroyed by grub worms; and the soil, being a close compact loam, the manure under the sod was too inactive, so that the corn which did survive was backward in maturing. Last fall he consulted with me as to what he had better do with a piece of green-sward adjoining and similar to his corn-field, and which he wished to plant the present season with corn, but the sod of which was infested with grubs, as any one could see by digging into it. I advised him to plow it in November, turning the sod over from nine to ten inches deep. He did so; and in the spring harrowed the ground lightly first, to level the furrows and make cross-plowing convenient, then spread the manure on the furrows, and cross-plowed, turning the manure under four to five inches deep, harrowed lightly, marked the field off in hills each way, dropped a spoonful of superphosphate in each hill, and planted it with corn. No traces of worms have been discovered in the field this year, and although the season has not been favorable for the corn crop, he has considerably more corn to the acre than last year—probably twice as much. The land has also been very mellow, and free from grass and weeds, and easier to till, every way, than the piece last year that was plowed six inches deep. The subsoil here was a close, light-colored loam, of a clay nature, and by spring had changed to a darker color, by several shades, than when first turned up in the fall. The field will doubtless show the good effects of deep plowing for several years to come, especially while in grass again, lasting considerably longer in productive mowing than if the plowing had been not more than five or six inches deep. The grass-roots, having a deeper range, will not so soon become webbed and tangled together, and the sod "bound out," as it is termed.

A friend of mine, who, a few years since, purchased a tract of old worn-out plain land, is having remarkable success in rejuvenating the land by deep plowing, accompanied by high manuring. The land had, for many years, been under the wasting effects of shallow plowing and severe cropping with rye, until at length it was quite exhausted, and abandoned to pasturage, yielding a scanty herbage in the early part of the season, but becoming dry and sere by midsummer, and remaining so through the remainder of the year. My friend found that the surface soil was of little or no account any way, but thought there might be some hopes of making productive land of the subsoil. He accordingly commenced upon a piece of the tract, of about five acres, by at once putting in his universal sod and subsoil plow ten inches deep, in the month of November, and turned up a subsoil of yellow loam, fine-grained and free from stone, and that had never before seen the day. In the spring following the plowed land was manured broadcast, at the rate of about twelve cords per acre,

and cross-plowed with a sharp steel plow, turning the manure under four to five inches deep. The field was then harrowed, furrowed out in rows each way, a table-spoonful of superphosphate put in each hill, and the piece planted with corn. It yielded about seventy bushels of shelled corn per acre, and the next year a good crop of oats, and is now well set in grass, for a mowing-field. Other portions of the condemned old plain are now undergoing a similar process of deep plowing and high culture, with good results; and this desert will doubtless soon blossom as the rose.

Where land is of a loose, sandy or gravelly nature, with a feeble subsoil, and has never been plowed deeply, it will not be advisable to plow so deep at once as nine or ten inches, unless there is a large amount of manure applied. But even such soils may be gradually deepened, without the necessity of extra large dressing of manure, by bringing up an inch or two of the subsoil at each rotation of crops; and thus, in time, a good depth of active soil may be obtained. The best general rule, however, in farming, is deep plowing and high manuring.

F. HOLBROOK.

Brattleboro', Oct. 26, 1859.

MAKE FARM LABOR FASHIONABLE.

At the base of the prosperity of any people lies this great principle—*make farm labor fashionable at home*. Educate, instruct, encourage; and offer all the incentives you can offer, to give interest and dignity to labor *at home*. Enlist the heart and the intellect of the family in the support of a domestic system that will make labor attractive at the homestead. By means of the powerful influences of early home education, endeavor to invest practical labor with an interest that will cheer the heart of each member of the family, and thereby you will give to your household the grace, peace, refinement and attraction which God designed a *home* should possess.

The truth is, we must *talk* more, *think* more, *work* more, and *act* more, in reference to questions relating to *home*.

The training and improvement of the physical, intellectual, social and moral powers and sentiments of the youth of our country, require something more than the school-house, academy, college and university. The young mind should receive judicious training in the field, in the garden, in the barn, in the workshop, in the parlor, in the kitchen—in a word, around the hearthstone at *home*.

Whatever intellectual attainments your son may have acquired, he is unfit to go forth into society if he has not had thrown around him the genial and purifying influences of parents, sisters, brothers, and the *man-saving* influence of the family government. The nation must look for virtue, wisdom and strength, to the education that controls and shapes the *home policy* of the family circle. There can be no love of country where there is no love of home. Patriotism, true and genuine, the only kind worthy of the name, derives its mighty strength from fountains that gush out around the hearthstone; and those who forget to cherish the household interests, will

soon learn to look with indifference upon the interests of their common country.

We must cultivate roots—not the tops. We must make the *family government*, the school, the farm, the church, the shop, the agricultural fairs, the laboratories of our future greatness. We must educate our sons to be farmers, artisans, architects, engineers, geologists, botanists, chemists—in a word, practical men. Their eyes must be turned from Washington to their states, counties, townships, districts, *homes*. This is true patriotism; and the only patriotism that will perpetually preserve the nation.—*Gov. Wright*.

For the New England Farmer.

FARMING IN NORTHERN NEW HAMPSHIRE.

MR. EDITOR:—Farm-house architecture was mentioned in my last. The interior of our dwelling is somewhat deficient. First—a small apartment often serves as wash, cook, eating, library and living room. Here are assembled a steaming wash-tub, seething cook-stove, cupboard, tables, chairs, sink and wood box. Various articles of clothing, files of newspapers, almanacs and shelves of books, are hanging on the wall—dried apple and pumpkin depending from the ceiling. Here the family take their meals and pass their leisure time.

Second—the larger and more pleasant portion of the dwelling is divided into two or three well papered, painted, carpeted and curtained rooms. Here are costly mirrors, paintings, tables, chairs, gifts, gilt-covered books, artificial flowers, an ornamented stove, polished shovel and tongs and the family ambrotypes. But, alas, these rooms are Holy of Holies, to the family. The mother alone, as high priest, enters there semi-annually to overturn and then re-adjust their contents.

Now here are two great evils—first, confining the family to so small an apartment, and allowing papers, books and clothing to become injured by steam and smoke; second, expending so much time, labor and money in furnishing those spacious but useless apartments—the parlors.

The remedy is simple and inexpensive. Convert the most spacious of these rooms into a well lighted, ventilated and warmed living apartment—render it free from vapor and smoke, and exchange that costly but useless furniture for a globe, maps, a variety of engravings, scientific and other works. Have these tastefully and conveniently arranged.

Such a reformation in our dwellings would be of incalculable value. If farmer's workmen and sons could assemble in such a room after the day's labor; there would be less murmuring—thought would be awakened, and youth be protected from the fatal allurements of idleness.

Who shall begin this reformation? None so competent as the *wives* of farmers. If parents desire honorable men and noble women for sons and daughters, they must remember that youth must have an acquaintance with facts—with the true, beautiful and useful things of nature. Then make home attractive, and let that attraction consist of something profitable.

This is a practical question. Fashion is the great obstacle. All are peculiarly able to have

such an apartment, if they have parlors. Now shall an injurious, inconvenient and expensive habit be cultivated, because, forsooth, we must imitate our wealthy city friends? Shall we expend time, labor and money for that which can be of no possible benefit to any one? Let those who think farming unprofitable and unpleasant, consider this question. W. C.

Bath, N. H., Oct. 24, 1859.

REMARKS.—Excellent—these are the phases of rural life that need especial attention.

For the New England Farmer.

IS THE STOMACH MERELY A CONDENSER?

Agricultural chemists—perhaps the majority of them—inform us that vegetable or animal food passed through the stomach and body of an animal, receives no element which makes it more valuable as a manure than it was before. One hundred pounds of hay passed through the body of an animal, will give about forty of manure—the sixty pounds loss being carbon and water expired as carbonic acid gas, of little value—in so great a proportion, as is stated—in the manure heap. In other words, that the hay is simply reduced, having neither lost nor gained anything of much value as a manurial agent. And so with all other kinds of food; as is the character of the latter, so is the manure.

The late Prof. J. W. F. Johnston entertains the same opinion in his "Elements of Agricultural Chemistry and Geology." He says: "The vegetable food, by respiration, is freed from a large portion of its carbon, which is discharged into the air, while nearly the whole of the nitrogen remains behind. In the food consumed, the carbon was to the nitrogen as nine to one; in that which remains in the body after respiration has done its work, the carbon is to the nitrogen in the proportion of only two to one." Mr. Johnston observes, that *weight for weight*, the manure of an animal must, in all its important forces, be richer than the vegetable food consumed; but he does not admit that it contains anything more, but rather less, besides the loss of carbon, which he regards as an unimportant ingredient.

In the last February number of the *Genesee Farmer*, the able editor asserts the same doctrine in a still more unequivocal manner. "It cannot be too often repeated," he observes, "that the value of the manure depends primarily on the composition of the food eaten by the animals. 'You cannot make a whistle out of a pig's tail,' neither can you make a good manure out of an old straw stack. You may rot it down, or feed it to animals; but it is straw still." * * * * "Unless the substances from which the manures are derived contain the necessary elements, it is in vain to expect to make a valuable manure from them by any known process of feeding or fermentation."

In an article entitled "Barn-yard Manure," in the "Annals of Science," by Hamilton L. Smith, it is stated: "There are no fertilizing properties gained by passing food through the body of an

animal, and there may be nothing of material consequence lost."

All this authority would seem to shake, if not entirely dissipate, the common belief, that vegetable food receives important fertilizing matter from the perpetual waste of the animal system, or that it is transformed into such by the influence of respiration and the mysterious process of digestion. If non-nitrogenous or even azotized food, however, takes from the system more than it gives, the animal in time must grow poor upon it, unless it has other resources of nutrition—from the air it breathes and the water it drinks, or unless the stomach has the power of chemically changing the food, or of creating new substances—which may find more belief. If heavy drafts are made upon the food alone to build up or sustain the animal system, enough for the formation of muscle or of fat, then the food must lose important substances in its passage, and would suggest to the reflecting agricultural economist, whether there is not some better method of manufacturing manure than the feeding of animals. In respect to growing animals, Prof. Johnston acknowledges their manure is not so rich as those which are fattening; but he seems to admit no important loss in that of the latter, as nothing is taken but starch and sugar.

But, per contra, I pass to what another writer says. In the last volume of the "Massachusetts Society for Promoting Agriculture," there appears a Prize Essay on manures, by Joseph Reynolds, M. D., who seems to entertain the more common belief that there is an important, nitrogenous and saline accretion in vegetable matter in its transit through the animal. In this particular, he seems to ignore the doctrine of those quoted above, though he does not directly combat it. The essay is clearly, logically and forcibly written, generally, without extra verbiage or abstruse technical terms; and appears to me well worthy the award it received. In the extract made, I have taken the liberty to italicize a few words or phrases, for an obvious reason. Dr. Reynolds observes:

"Vegetable substances are also decomposed in the digestive organs of animals, by a process, in many respects, similar to that which we have already described. The vegetable fibre is communicated by the teeth, and softened and permeated by the fluids contained in the organs of the animal. A large portion of the starch, gum, sugar, gluten and salts, are dissolved out and taken up by the lacteal vessels of the animal, to serve the purposes of nutrition. The remainder, mixed, as we have said, with the *juices of the animal*, containing in solution various substances, is ejected. This process is accomplished much more rapidly than the ordinary process of vegetable decay, and the substance resulting is mixed with a *large amount of animal matter*, which fits it for rapid putrefaction. The animal matter acts the part of a leaven, which sets up the putrefacting process, wherever the necessary conditions are present. There is this difference between the reduction of vegetables by the ordinary process of composting, and by the process of animal digestion, viz: that in the latter process, vegetables are made to afford nutriment to animals while undergoing reduction, and yet in consequence of the condition to which they are brought, and of

the additions which they receive, they are more valuable as manures, than when, without serving the purposes of nutrition, they are reduced by the former process. These two processes, vegetable composting, and the feeding of animals with vegetables, are the sources from which carbonaceous manures are chiefly obtained."

Digestion is a vital process and seems to possess the power of changing the nature of food submitted to it; of causing re-formation; and, perhaps by the aid of respiration, (drawing in the gases of the atmosphere,) of generating or accumulating nitrogenous substances. Whether a man or brute live on vegetable or animal food, his body is the same. The flesh and bones of the lion and the lamb are alike. The processes which go on in the stomach are not well understood, and probably never will be. That the latter is not a machine which compounds or mixes up its food, but a receptacle having peculiar and mysterious functions, seems to be admitted. The celebrated John Hunter once laconically observed to his students: "Some physiologists will have it, that the stomach is a mill; others, that it is a fermenting vat; others again, that it is a stew-pan; but in my view of the matter, gentlemen, it is neither a mill, a fermenting vat, nor a stew-pan; but—a stomach, gentlemen, a stomach."

At present, it is confessed, physiology and chemistry are unable satisfactorily to explain the animal economy. Liebig's beautiful theory of nutrition is said to be rapidly losing its hold upon the scientific mind, and confusion and mystery still reign. The blood is supposed to be the nutritive vehicle in animals; yet substances are found in the tissues and bones which cannot be discovered in the blood—nor in the food, in sufficient quantities. Neither is the blood the same in any two individuals, and is perpetually varying in the same. Phosphate of lime is found in the whole organism of man; yet it is said none has ever been found in the blood. Azotized food has been regarded as the most nutritious; yet a writer in *Blackwood's Magazine* says that "water is as nutritious as roast beef." It may perhaps be well supposed, that the water which animals drink—charged with various salts, in connection with the influence of the atmosphere—would greatly modify the food in the stomach, and enrich that which is passed off as manure.

Prof. Johnston states that thirty-six pounds of sheep manure are worth one hundred and twenty-five of cow. In feeding one hundred pounds of English hay to a cow, and the same to a sheep, in which do we get the greater value as manure? Or is the product from either more valuable than the hay would have been—aside from its reduction—or does it contain more nitrogen and other manurial ingredients?

I would not pretend to answer these questions; and although I believe rich food will produce rich manure, I am in doubt whether poor food may not give a manure of higher relative value than the substance consumed.

D. W. L.

West Medford, Oct. 13, 1859.

VEGETABLE LEATHER.—Messrs. Spill & Co., the well known army contractors, are issuing from their works at Stepney, portions, as samples, of a novel material, intended to take the

place of leather. It is a very economical fabric, or rather series of fabrics, cemented together with caoutchouc, wholly inodorous, and of amazing strength and tenacity. It assumes a polish like leather, is marked in some instances, like morocco, bears a beautiful enamel, is susceptible of the most delicate embossing, resists the stains to which leather is subject, damp does not affect it, and the application of a sponge removes all dirt and restores it at once to its pristine character. It is being already applied to countless purposes, and may be ranked amongst the most valuable of the boons which the discovery of caoutchouc has conferred upon civilized humanity.—*Globe.*

For the New England Farmer.

COAL ASHES AS A FERTILIZER.

FRIEND BROWN:—Your paper is taken at our office by A. H. Grosvenor, for the general instruction in agricultural gardening, &c., at our section of the Shaker Village at Harvard. Among the farmers' reading matter it contains, I have been pleased to observe an occasional article upon the general uses of coal ashes as a fertilizer.

In your last issue, the editor of the *Commercial Bulletin* has presented to the public a good article on this subject, but in perusing it, I was led to suppose that many disposed to be skeptical on this subject would argue that the editor's test of anthracite coal was not a clear one, because he incorporated with said ashes equal parts of horse manure and loam in one general heap, as an auxiliary to his pleasant half acre.

Such skeptical friends would be apt to contend that the horse manure and loam did all the work, while the ashes, like the white soft-handed gentleman farmer that simply rides through his plantation, received the honor, and made all the noise. But as we too think different, please allow us to state our reasons for endorsing his opinion.

We consume at our large dwelling-house a number of tons of coal each winter, and having added portions of it to our composts, with little calculation or observation, we determined to test it singly this past season, and closely observe its effects. On an old mowing field too much run down, we top-dressed a square piece of ground fairly with clear coal ashes early in the spring. While the crop was growing, at all stages the difference was perceptible. When ready for the scythe, it was more in quantity; and as to quality, it produced about equal parts of herds grass and red clover. If the clover was not introduced by the agency of the ashes, we know not how it was introduced, for four years none was seen there before, or in any other part of the field, and this was the only clover seen in said field the past season. Both grass and clover was more vigorous, green and lively within the top-dressed square, and just as visible all around was the exhausted crop, which said as audibly as grass could say, in its declining state, that it had received no such assistance from this individual fertilizer.

On a hill-side not at all renowned for its wealthly properties in soil, we planted the Davis Seedlings and Jenny Lind potatoes in clear coal ashes, half a shovel full in a hill. Below, on equally

as good ground, we planted the same kinds of potatoes in compost manure, and the coal ashes, single handed, turned out the largest, best, fairest and most numerous quantity of potatoes. In reality, they were the best we raised on the farm. Almost side by side, in compost manure, our potatoes were somewhat infected with rot; in the ashes they were all healthy and sound almost to a potato.

In kindling fires, it is true, we use shavings and a little light wood, but the quantity I consider almost too insignificant to take into the account.

These experiments convince us that as a fertilizer, anthracite coal ashes possess the life and energy to produce the above effects on common crops. Hence, whatever theoretical lecturers or writers may present to undervalue the better qualities of the article, while it continues to improve quantities and qualities of grass, and give us sounder and larger crops of potatoes, we conclude to give it an honorable standing among the general agents which have long held undisputed station in the farmers' compost.

South Groton, Oct., 1859. WM. LEONARD.

WINTER BARLEY.

Winter barley is a variety of grain that has only been tried in this State for a few years, and has not yet got largely into cultivation. Wherever it has been given a fair chance, it has done well, as we know by the crops which we have seen. In a letter to the *Branch County Republican*, Mr. James Clisbee, a well known and prominent farmer, thus writes of winter barley:

"The winter barley has been grown in this vicinity for the last three years, and is, consequently, no longer an experiment. With us it has done well in every instance where it has had any chance. The general yield is from 20 to 24 bushels to the acre. Judging from what we have seen of the grain, it is capable of yielding 80 bushels per acre. During the past season, it has been raised by the side of spring barley, and has produced four bushels to one of the spring variety. Mr. Amos Culver, of this place, (Quincy,) has raised during the past season 60 bushels per acre on oat stubble once plowed, or 180 bushels on three acres, and on land that has been cropped for eight years in succession.

We think it has decided advantages over spring barley, viz:

1. It may be sown after farmers get through with their hurry in sowing winter wheat.
2. It may be harvested before wheat is ripe.
3. It has no black, or false heads.
4. It yields two to one, at least.
5. The insect will not hurt it in the fall, and it is so early that the weevil will not hurt it.

We are in hopes this barley will prove a substitute for the wheat crop, if we should be obliged to give up the cultivation of that grain in consequence of the insects and weevil, which at present threaten its destruction in Michigan.

This variety of barley should be sown sometime between the 15th of September and the 1st of November, requiring about two bushels of seed per acre. It will ripen ten days earlier than wheat, and leaves the ground in good condition for that grain.—*Michigan Farmer*.

For the New England Farmer.

THE HYDRAULIC RAM.

MR. BROWN:—Some months ago I sent you an article upon the hydraulic ram. One of your readers reminds me that something more was promised.

Perhaps I had better, at once, give you my experience. In the spring of 1858, I bought a hydraulic ram, and about one thousand feet of half-inch lead pipe. At the time, the pipe was in the ground, and the ram in the mud. It had been set up where the fall was wholly insufficient, and had proved of little value.

I placed the ram near a little pond in my nursery, from which there is a fall of four feet.

The driving pipe is stout inch and a half size, and sixteen feet long. The service pipe is half inch size—weighs twelve ounces to the foot. This is laid along in the brook, from the dam to the Assabet River; then on the bed of the river to the opposite shore. I there dug a trench two and a half feet deep, to the barn and houses, where the water is carried. It was an interesting moment, I will confess, when I watched at last for the water at the end of the pipe a fifth of a mile from the ram, that, it was hoped, might force it there. I was engaged in this work of getting the ram in operation while the country was on tip-toe about the Atlantic cable. I had dragged my cable through a body of water (!) and felt, like Mr. Cyrus W. Field, some anxiety. The water came! It was, "All right—De Sauty!"

This advantage about the ram was soon manifest. Wherever I wanted the water, there I could have it. I was bound to no "level of the spring." I arranged to have an outlet in the barn-yard for the cows to drink as they came in at night;—one in front of the cattle in the barn, where are watered twenty-five head with pails, during the winter; and one in front of the horses.

I also laid a side pipe into a rented house, which supplied two tenants, who had previously pulled up all their water with an "old oaken bucket," without ever discovering the poetry about the thing either!

Then I attached another branch pipe which carries the stream into my own dwelling-house, where it keeps two barrels full in a closet adjoining the chambers. Although I have two good pumps at the sinks in the kitchens, it is less work to draw down the water from the barrels when a large quantity is required, as on wash-days.

I consider these barrels of water, with pails near, a great safeguard against fire.

Then, having the water in every place where it could be of use, I attached another pipe to the "main," which, with a suitable nozzle, afforded me a pretty fountain. To be sure, it was not much like the Croton, or Cochituate fountains, but I liked it far better. It was in *my door-yard!* The site of the fountain is about fifteen feet above the ram. The jet is thrown fifteen feet high.

Not long after I got the machine in operation, leaves and dirt got in and stopped its working. This annoyance I easily remedied by making the little enclosure at the dam, double, and packing the space between the double boarding, with sawdust; so that the water was strained before entering the driving pipe. I found out, too, that it was not well to have a small strainer immedi-

ately over the end of the pipe. It lessened the force of the water, which should fall into the driving pipe without the slightest hindrance.

I suppose some will like to know how I kept the ram from freezing. It works well under water, and I had only to settle it down until the moving part was covered. Great care must be taken that the ram be so boxed around that the dirt will not wash over it.

Your readers may remember that while the ground was almost bare, last January, we had a very cold time. My pipe froze up that supplied the barn. I dug down to it and found the ground, to my surprise, stiff with frost, below the pipe. The two and a half feet was not deep enough to bury it. It was with great regret that we were obliged to get along at the barn for weeks till milder weather, without this convenient stream of water. It was at once double the work to turn out the Brighton cattle, water them at the pump, and get them back to their places again, than what it had been to just set down before them some two to four buckets of water in the barn.

And, besides, I noticed that the change was not beneficial to the cattle. In the barn I had watered all twice a day, the cows three times. The store cattle now were "turned out" but once, and if they felt like capering or fighting, or, if the day were windy and cold, they went without water the whole day. When water was given them in the barn they ate more, and as the hay was of that quality that the more consumed the better, that was a gain.

On the whole the ram has already been of great value, and promises to continue to save much labor. I would not part with it for five times its cost, and can most sincerely recommend it to all who wish a cheap and abundant supply of water, and are in the vicinity of a fall.

I have connected with my "water works" a variety of contrivances to enable me to control the stream and direct it where desired. These consist of waste stop cocks, hose, couplings, &c., which are readily obtained at the Boston plumbers.

I shall be very happy to show any of your readers what I have, I fear, very imperfectly described, if they will favor me with a call.

Your friend, WM. D. BROWN.

Concord, Mass., Oct., 1859.

For the New England Farmer.

ORDER AND ECONOMY ON THE FARM.

MESSES. EDITORS:—I was glad to see the remarks of your correspondent, "W. C.," in your last issue, and I wish he had pursued the subject still further, and said something of idleness and economy on the farm. Where you see buildings in the plight spoken of by W. C., it may be inferred that the occupant is lazy, and not a "church-goer." Whenever you see a neat and well-filled wood-shed, the owner is, generally speaking, a patron of churches and schools. It is lamentable to see how few farmers are sufficiently careful to lay in a good supply of wood, that it may be at hand, dry, for use, while too many either burn their wood green or half rotten. A small wood-lot will afford an ample supply for a fire, without injury to the growth, if properly

attended, in clearing the broken off branches, and decaying trees. How much waste wood could be gathered about a farm and saved from becoming rotten, by giving a little care to the subject? Waste land, also, could be reclaimed, and if too stony for cultivation, made to bear a fine growth of oak, by giving a little care to collect and plant acorns.

Our friends in New Hampshire are improving in the science of farming, and are becoming more liberal in the general improvement of the land. Instead of skimming their farms, and looking for that which will supply their daily wants by selling all they can, they strive to enrich the ground, and many obtain four-fold more from farms, than was gathered ten or twenty years ago from the same. Less land is cultivated than there was twenty years since. Such is the fact, generally I think, throughout New England.

The tendency is to expensive buildings on a farm, and farmers, as well as mechanics, traders, and professional men, are not careful to live within their own means. A farmer is the last person who should buy more than he has the means to pay for.

J. D.

Boston, Oct. 22, 1859.

BIENNIALS AND PERENNIALS.

The following will answer several inquiries about the nature of biennials and perennials:

Biennials, speaking in a general sense, are sown one summer, and bloom and die the next, as soon as they have ripened their seeds. Most of them are hardy enough to stand our winters, for one summer is not long enough to complete their growth, even with the help of the hot-house, green-house or frame. Many stocks are biennial; the Canterbury bell is a biennial, and if sown about June, and planted out when large enough, will flower about the same time next year.

Perennials are plants which do not die at any given period, but would live on like an oak or vine, if the necessary conditions could be supplied, and the great family of plants comprises most of this kind.

Hardy perennials will grow many years in the same spot, and spread into large masses. Bulbs increase in number. Fibrous and tuberous rooted subjects spread out into many plants all round, and only want to be separated from the parent. Many of them separate themselves, and when they degenerate, it is from remaining too long in the same spot of soil, which they in time exhaust.

Stove perennials, cultivated in pots, are from time to time shifted from one sized pot to another, and new soil is filled up round the old ball of earth, and the plant continues to grow so long as this can be done.—*Artisan.*

TO MAKE PURE WINE OF APPLES.—Take pure cider made from sound ripe apples as it runs from the press; put sixty pounds of common brown sugar into fifteen gallons of the cider, and let it dissolve; then put the mixture into a clean barrel, and fill the barrel up to within two gallons of being full with clean cider; put the cask in a cool place, leaving the bung out three or four weeks.

HOW TO FATTEN CHICKENS.

We make the following extracts from an article on this subject in the London *Cottage Gardener*, and commend them to our readers :

"It is hopeless to attempt to fatten them while they are at liberty. They must be put in a proper coop; and this, like most other poultry aperturances, need not be expensive. To fatten twelve fowls, a coop may be three feet long, eighteen inches high, and eighteen inches deep, made entirely of bars. No part of it solid—neither top, sides, nor bottom. Discretion must be used according to the sizes of the chickens put up. They do not want room; indeed, the closer they are, the better,—provided they can all stand up at the same time. Care must be taken to put up such as have been accustomed to be together, or they may fight. If one is quarrelsome, it is better to remove it at once; as, like other bad examples, it soon finds imitators. A diseased chicken should not be put up.

"The food should be ground oats; and may either be put in a trough, or on a flat board running along the front of the coop. It may be mixed with water or milk; the latter is better. It should be well slaked, forming a pulp as loose as can be, provided it does not run off the board. They must be well fed three or four times per day—the first time as soon after day-break as may be possible or convenient, and then at intervals of four hours. Each meal should be as much and more than they can eat up clean. When they have done feeding, the board should be wiped, and some gravel may be spread. It causes them to feed and thrive.

"After a fortnight of this treatment you will have good fat fowls. If, however, there are but four or six to be fattened, they must not have as much room as though there were twelve. Nothing is easier than to allot them the proper space; as it is only necessary to have two or three pieces of wood to pass between the bars and form a partition. This may also serve when fowls are put up at different degrees of fatness. This requires attention, or fowls will not keep fat and healthy. As soon as the fowl is sufficiently fattened it must be killed; otherwise it will still get fat, but it will lose flesh. If fowls are intended for the market, of course they are, or may be, all fattened at once; but if for home consumption, it is better to put them up at such intervals as will suit the time when they will be required for the table. When the time arrives for killing, whether they are meant for market or otherwise, they should be fasted, without food or water, for fifteen hours. This enables them to be kept for some time after being killed, even in hot weather."

A NEW FRENCH WHEELBARROW.—The new wheelbarrow, which is worked by the men employed to repair the damages occasioned by the *fetes* in the gardens of the Tuilleries, is attracting much attention. The novelty of the machine consists in two legs of the barrow being replaced by two wheels, smaller than the one in front, which are fixed immediately under the body of the barrow. The handles are raised so as to be on a level with the hands of the workman; and thus, upon a level road, a slight push is all

that is necessary for the transport of the heaviest load. The three wheels being almost close together, the act of turning the barrow in the smallest space becomes as easy as possible. The workman has but to lean on one of the handles, and the front wheel is lifted from the ground leaving the barrow free to be manœuvred like a common hand-cart.

For the New England Farmer.

DISEASED APPLE TREES.

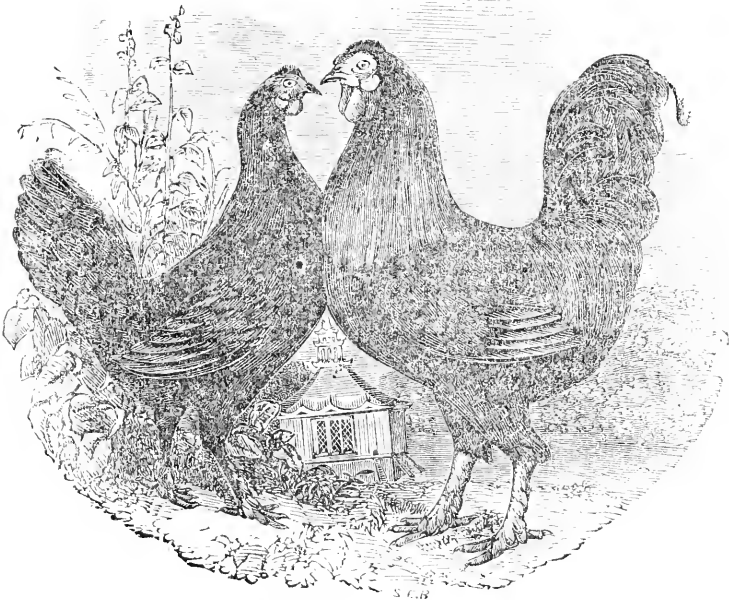
MR. EDITOR:—I am desirous of ascertaining from yourself, or some of your numerous subscribers, what ails my apple trees. I noticed last season on several of my trees, which are young, thrifty Baldwins, Hubbardston Nonsuch, &c., that the bark on the south side from the lower limbs to the roots had a black appearance, as though a fire had scorched them. I did not pay much attention to it then, as it was late in the season when I made the discovery, but the present season the same appearance has extended itself to quite a number of other trees, invariably on the south side of the trees, the bark turning black and assuming a charred look, and becoming loosened from the tree and falling off, leaving the wood bare for large spaces.

These trees have been standing in grass land, on an elevated situation, the soil of a clay loam, until two years since, when the ground was broke up and cultivated with potatoes, and manured from the barn-yard, for the benefit of the trees. In removing the bark from one of the trees with the point of a knife, something having the appearance of a white worm or grub, apparently about one inch long, fell to the ground, but could not be found afterwards. Is it probable, that so extensive and destructive an effect could have been produced by the operation of any kind of grub, worm, or borer? I greatly fear, that unless the cause can be discovered, and an effectual remedy applied, I shall lose my trees, which have cost me much time and care, and be disappointed in my long-cherished anticipations of having a good bearing orchard of choice fruit. Any information calculated to throw light on the subject, will be read with much interest by at least one subscriber to the monthly *New England Farmer*.

Still River, Oct. 21, 1859.

REMARKS.—We have seen no trees in the condition of those described, and cannot with any feeling of certainty tell either cause or remedy. We do not, however, think the injury is occasioned by an insect—it must be climatic. We have several hundred apple trees, but they have no "ails" such as you describe. We hope orchardists will be able to throw light upon the subject.

THERE are four millions of people in France who eat no bread. Some eat chestnuts, and some other kinds of vegetables. The people of Ireland, for a long time, subsisted mainly on potatoes. These facts prove not only that there are large numbers in civilized countries who do not raise their own bread, but an equally important fact,—they have not the means of buying it.



THE GUELDERLAND FOWL.

In placing some of the breeds of fowls, which we have occasionally introduced, before the reader, we do it to afford him an opportunity of learning something of the various kinds that have been brought among us within ten years, or that have been gained by crosses with the old stock of the country. We give their merits and defects, as we have observed them in the poultry yard, or as we find them described by others.

In Bennett's "Poultry Book" we find the following account of these fowls:—

I am indebted to Mr. H. L. DEVEREUX, of Boston, for the following account of the original importation of this breed, and a description of those in his possession.

"The Guelderland fowls were imported from the north of Holland, some years since, by Captain John Devereux, of Marblehead, in the ship *Dromo*; and since that time have been bred purely by him, at his place in that town. They are supposed to have originated in the north of Holland. They are clad in a beautiful blue-black plumage, but the flesh is white, tender and juicy. They have no comb, but a small, indented, hard, bony substance, instead, and large red wattles. They are of good size, great layers, seldom inclining to sit; bright, active birds, and are not surpassed, in point of beauty or utility, by any breed known in this country. Their weight is from five pounds for the pullets, to seven pounds for the cocks. The laying qualities of the hens

are very respectable, and in this respect they will prove profitable to their owners. It is safe to pronounce the Guelderlands to be a first-rate breed for profit, and especially for beauty."

SPAYING COWS.

We learn that a gentleman at Newburyport had two cows spayed last spring. They have done so well, and given him such satisfaction that he has recently had the operation performed on another. They are all fine milkers. One of the cows spayed last spring, a fine young Durham, gives as much milk now, in October, as she did last May, a few weeks after calving. The other, an old cow, is now in rather low flesh and has fallen off somewhat in her milk. Their milk has varied in quantity, according to the keeping they have had. But they have neither of them fallen off as much as cows in the ordinary condition. This gentleman keeps four cows, and he intends to have a fourth spayed soon, so that he may have his whole set in this condition. We shall watch the result of this experiment with much interest.

☞ "Commentators are folks that too often write on books as men with diamonds write on glass, obscuring light with scratches."

For the New England Farmer.

PROPAGATION OF BROOK TROUT.

MR. EDITOR:—I notice in the *Farmer* of Oct. 22d that a correspondent describes his facilities for fish culture, and inquires, "What kind would be most suitable, and in what manner would it be best to confine them?" In your reply you refer him to me for information. I am happy to respond to any question relating to the propagation of the common brook trout, (having never investigated the habits of any other species,) if I have any information which the public does not already possess. Before referring to my own personal experience and observation on the subject, I will reply to Mr. Howes, by saying, that if he has constructed a pond where he can maintain a living stream through it of the dimensions stated, it is perhaps the best natural arrangement that can be procured for the common brook trout, providing he can keep out other kinds of fish. If the stream running into the pond is provided with a gravelly bottom, it is perfectly in keeping with the habits of the brook trout to ascend the rivulet during the month of October, deposit their eggs, cover them up, and descend to the deepest part of the pond for their winter quarters about the last of November. If Mr. Howes can now add a fixture whereby he can prevent the "young fry" returning to the pond too soon, his arrangement will be nearly complete.

I have but one year's experience in my "trout dissipation," as it is sometimes called, but this little experience has proved a complete triumph in some respects, but in others a partial failure. I have proved (to myself, at least,) that the parent trout will readily domesticate and familiarize themselves to artificial arrangements, so as to deposit and cover up their eggs, and leave them to hatch out after the natural process, without limit or failure. To my mind, this is an interesting consideration, inasmuch as it relieves us from all the difficult and nice labor of artificial propagation.

Having discovered this, it only remains to secure the young fish from being destroyed by the older, who feed upon them. To do this effectually, several pools or ponds must be provided, so as to classify and preserve them; an object not often obtained without considerable expense. With such provisions as I have intimated, there is manifestly no limit to the natural production of the trout.

In my efforts to hatch them artificially, I did not succeed, and I think it was owing wholly to the fact that I did not follow the teachings of the female trout, and cover up the eggs with gravel. Following the directions of writers who have published on the subject, I found no difficulty in compressing both the male and female, and procuring thereby the materials necessary for the artificial propagation; and for about one month every appearance corresponded to results stated in published accounts. But eventually, they all turned white, which was evidence that they had lost vitality. This is one of the failures alluded to above. The other was this: The connection between the spawning ground and the home of the brood fish was not sufficiently secured by wire screening, so as to prevent the

young brood getting in with the parent fish, and before I was aware of it, schools of them were there, and becoming less every day, in consequence of the voracious habits of the older fish; under these circumstances, and having no facilities for separating them, the result was, that when I drew off the pond to transfer the brood trout to the spawning bed this fall, I found only about thirty of last winter's hatching. These varied from three to five inches in length, and when first discovered about the first of last April, they were from one-half to three-fourths inch. As I have watched the movements and propensities of the trout, I am convinced that the destruction of the younger by the older is immense, when not prevented by artificial arrangements.

As the result of close observation, I have come to the conclusion that the young associate with the old, indiscriminately, until they find that instead of natural protectors their parents are natural enemies. They then proceed forthwith to shallow water, or hiding places, where the older cannot follow, and thus a few, comparatively, are preserved.

CHARLES HUMPHREY.

Lancaster, Mass., Nov. 1, 1859.

For the New England Farmer.

HOW TO RECKON THE COST OF FARM PRODUCTS.

MR. EDITOR:—One of the great reasons why farmers do not succeed any better in their business, is that they do not stop to figure—they are negligent in this particular, and seldom, if ever, know the precise cost of a single article they produce. They work hard and long, taxing their physical powers to the utmost, and neglecting the mental, till they have been persuaded to believe that it is all right that they should produce for others to consume, without adequate recompense to themselves.

Now, what I want to see is this:—I want to see every farmer who produces any article to sell, know exactly what it costs—no guess-work about it; but to *know*, that's the point. I presume no one doubts but that everything we produce has a positive, definite cost, for whether we know it or not, such is the fact; then why deceive ourselves in the matter? I know it is thought to be very difficult to ascertain the precise cost of farm products; but if it is difficult it is not impossible. Then let us try to systematize the business to such a degree as to become familiar with it, and in time it will become so easy that we should be almost ashamed not to know all the facts in the matter. How long would a merchant or manufacturer stand if they did not know the cost of their goods. Take, for instance, a pair of fine gaiter boots. How is the cost of them to be reckoned? The material of which they are composed is taken from every quarter of the globe; many islands of the ocean are brought into requisition to produce them. The French, the English, the Italian and the shrewd Yankee, have all had a finger in the matter; also various machinery, as well as busy hands, have been brought into requisition by many different people, and yet any manufacturer would be ashamed not to know, within one cent, the cost of every pair he makes.

Let us reckon up the cost of cultivating an acre of corn in the same manner that a manufacturer reckons the cost of his goods, and see what we shall make of it. We will take an average acre of New England land, such as is usually put to corn in this section, and see what it *does* cost to raise a bushel. I will, in the first place, make the figures, and then give some reasons for reckoning as I do. The reader will understand that we are considering the matter as it actually is, and not as it is under some extraordinary circumstances made to appear. We will suppose this acre to be worth forty dollars in the market, and located one-fourth of a mile from the buildings, and we will cultivate it in the usual way.

ONE ACRE OF CORN.		DR.
May 10,	Two men, two yoke oxen and plow one day.....	\$4.25
" 15,	One man, four oxen and cart one day hauling manure.....	3.25
May 15,	Ten loads manure.....	10.00
" 16,	One man one day, and yoke oxen and harrow half day, spreading manure and harrowing.....	1.75
May 17,	Man, horse and boy 1 day furrowing.....	.75
" 18,	Man and boy one day planting, \$1.50, seed 25.....	1.75
" 19,	To putting up line, &c.....	.25
June 6,	Two men, horse and plow cultivating and hoeing 2.50	2.50
" 6,	To replanting and ashing.....	2.00
" 23,	To hoeing and cultivating.....	2.50
July 10,	To pulling weeds.....	.50
Sept. 10,	To two men cutting stalks and stooking do.....	2.00
" 23,	To carting stalks to barn, &c.....	.50
Oct. 12,	To harvesting.....	2.40
" 13,	To husking and taking care of butts.....	2.00
" 13,	To interest on land, capital and taxes.....	3.00
" 13,	To fencing and rents of barn and corn house.....	3.00
Dec. 15,	To shelling and marketing corn.....	5.00
		<u>\$47.00</u>
ACRE OF CORN.		CR.
Dec. 15,	By 30 bush. shelled corn sold.....	\$39.00
" 15,	By 6 bush. ears soft corn sold.....	2.00
" 15,	By stover and pumpkins.....	5.00
		<u>\$46.00</u>
Net loss on crop.....		\$10.00

Thus it will be seen that we have cultivated our crop in the most prudent and economical manner; we have charged nothing to the crop but what rightly belongs there, and have allowed a high average yield, and sold it for much more than farmers usually get, and yet have made a net loss of ten dollars!

I want to say here, that, in my opinion, there are but comparatively few acres of corn planted in this State but what run the owner in debt more than this has. And what is true in regard to this crop is true of most others; only much more so, for aside from the hay crop the corn is the most reliable, as it is the most important upon the farm. I do not wish the reader to understand by this that I suppose the farmers usually sell their corn. This is not so. Farmers in this section are generally buyers of this article, and consume upon their farms this and most other crops, and by this way of doing business do not generally realize more than one-half what we have allowed.

The farmers, I think, have a peculiar way of mystifying their business by running one thing into another, as by feeding out their hay, corn, &c., to make more manure at a loss of some fifty per cent.—to raise more corn at still another loss, and in this way go on, year after year, and do not find out their mistake till their physical energies are broken up, and, unless they have had some outside successes, a portion, at least, of their capital is exhausted.

It seems to me, that farmers, like all other classes of men, should call things by their right names, and if hay will bring a dollar a hundred, and corn a dollar a bushel, why not sell it, and not feed it out to stock, when we cannot possibly get more than one-third of it on the growth of our cattle, and oftentimes not anything. I very well know that stock makes manure, and manure, judiciously applied, makes hay and corn; but all these things have a dollar and cent value, and should not be purchased at too great a cost. What I want is this, (as we have it from the best authority, "that the laborer is worthy of his hire,") that the man who labors upon his farm, (if judiciously,) should so understand his business as to realize as much as other laborers get. I can see no reason why a man who owns a farm should throw his labor away, or any considerable portion of it, any more than the merchant or manufacturer, who, to save clerk-hire, do their own work. One of two things is evident, that the farmer gets no return or per cent. on his capital; or, reckoning six per cent. on his capital, he gets no pay for his labor. I mean, of course, by work on the farm.

I know very well that it will be considered unusual to reckon some things which I have put into this crop. But, what if it is unusual? Do they not rightly belong there? The old custom of half reckoning, or not reckoning at all, is what I want to see broken up, and let every crop and every animal upon the farm answer for itself. In this way, and in no other, can the farmer ever hope to stand on an equality with all other classes of men. I am perfectly aware that different localities, seasons and circumstances, will vary the figures somewhat, so that no positive rule can be given which will always be applicable; yet, this rule will always hold good,—never deceive yourself, nor cut your corners too close, for there will always be some waste or losses which no system can prevent. Our business is extremely hazardous. Crops are liable to be cut off or broke in upon, cattle to sicken and die, and being exposed to the extreme variability of the climate, we find, after the utmost care, that we are constantly running great risks to health and future enjoyment.

However, let us stick to our caption, and see what we can do to make up this loss on our corn crop, for we have made a positive loss there, and the shrewdest Yankee that ever was made, cannot figure it any other way. Suppose we go into the stock business, and see if that will extricate us from the dilemma? This is a very important part of agriculture, and most of our friends who are fond of good roast beef and good sweet butter and milk, (barring the naughty milk-man,) consider it very profitable. Let us see. When a calf is first dropt, his hide is worth one dollar, the meat will pay for taking it off for the pigs, and I presume that no farmer would make any other use of it. Then the account will stand thus:

	CALF.	DR.
To self.....		\$1.00
To 5 qts. milk per day one week, at 2 cts. per quart.....		.70
To 6 qts. skim milk per day seven weeks, at 1 cent.....		2.94
To 1½ bushels meal.....		1.50
To care and attention, 3 cents per day.....		2.94
To 18 weeks at grass, at 10 cts. per week.....		1.80
To 26 weeks barn, at 50 cts. per week.....		13.00
		<u>\$22.88</u>

Thus it will be seen that our calf has cost us at one year old, \$22.88. Now shall we sell it or grow it up into an ox or cow? If it is decided to sell it, a loss of more than one-half must be sustained. If to keep it, my word for it, the loss will be greater still. This is stock-raising. It will be seen that there are several small items that I have not put into the cost of this calf, such as rents, interest, &c., which legitimately belong there. Usually in reckoning the cost of cattle, we offset the labor account against the manure; but no one will suppose that a calf can be taken from the cow at one week old and cared for till it is eight weeks for any such pay.

I know that the question comes up here, how is it, then, that the farmers get along? I can very easily answer that question, but can do so, perhaps, in no better way than in the language I have used before, and say that no poor man can live by farming, unless he works for wages. I am perfectly aware that this view of the matter is directly antagonistical to the views of those who undertake to shape public opinion. But what if it is? If it is true, it will stand, if not, it will fall. To take a narrow view of the subject, I might say the popular one, it would seem to be for the interest of all other classes of men but the farmers to have farm products cheap. But, if the farmers were wise, they would at once dispel this popular clamor of glorifying them in order to fatten upon credulity. I freely admit that such arguments, in times past, seemed plausible and generous, but I begin to see through the film that has been placed upon my eyes, and rather reluctantly admit that it now looks a little foxy. Why is it that all farmers who have no outside help, find that it is with the greatest difficulty that they can meet their engagements, and are continually in debt to the merchant, the mechanic and the money-lender. It is, because they have to sell their products, almost universally, under the cost—many less than one-half what it costs to produce them. And I hesitate not to say that many farm products do not pay mechanics' wages, simply to harvest and market them. The amount of the loss to the farmers of New England this year, *on the corn crop alone*, is sufficient, if sustained by the traders and manufacturers, to close the tills of every bank in the State, and "*nary red*," would be the universal response. In all other kinds of business, as far as I know, some system or uniformity of prices prevails. What the mechanic charges for a certain job to-day will be the price all the year, always charging a small profit on the material used and a living price for his work. This is right, and with this arrangement we find no fault. We expect to pay the traders and mechanics a fair profit; but how is it when we have anything to sell!—is there ever a word said about profit or cost? Not at all! We can buy the article so and so, and that settles the matter. Now, what I want is, to have the farmer *know* what the article costs, and not *scab* the craft. T. J. PINKHAM.

Chelmsford, Oct., 1859.

KEEPING CIDER SWEET.—Take a barrel that will not leak in the sides, with bottom in and top out, bore enough holes in the bottom that there will be no trouble in the escapement of the ci-

der. Now take a doubled piece of flannel and lay on the bottom neatly, that no sand can run through. Place a layer of sand thereon, to about the depth of six inches, and pulverize charcoal and make a very thin layer, then another layer of sand of the same depth, again another layer of charcoal, the last, a heavier layer of sand. This barrel of sand and charcoal, is to set over a tub which the cider can run in. The process of cleansing now commences. Draw from your cider barrel and pour on the sand, &c., taking care not to stir up the sand much, rack the whole through, putting the rectified into another sweet barrel, in which, afterwards, put in a pint of mustard seed, and your cider is fit for any company. Too much charcoal is a damage, as it colors it.—*Rural New-Yorker*.

HOW TO KEEP CROPS GOOD.

"Let this be held the farmer's creed—
For stock, seek out the choicest breed;
In peace and plenty let them feed;
Your land, sow with the best of seed;
Let it nor dung nor dressing need;
Enclose, plow, reap, with care and speed,
And you will soon be rich indeed."

Never keep a poor or malformed animal to breed from, and in selecting seed, strive always to procure the best. If you have a good animal, reserve it, and sell your mean calves, lambs and pigs to the butcher; he can turn them to more advantage than you can, and your stock will escape contamination by having them taken away.

In the vegetable kingdom, the most healthy and vigorous plants are invariably those which spring from the most healthy and vigorous stocks. Corn, or indeed most other vegetables, may, by selecting inferior seed for several consecutive seasons, be so deteriorated in quality as to be comparatively worthless. In the same manner, and with almost the same facility, we may destroy the cow or ox. By selecting our most valuable and symmetrical animals for the shambles, and reserving to ourselves as breeders only those that are worthless or deformed, we are certain to perpetuate the deformities and diseases which have been the curse of the breed, and which, acting by obvious and irresistible laws over which we can exercise no efficient control, produce a distinctive or family configuration as thoroughly inwrought and inalienable as the principle of life itself.

Every person who understands the principles of vegetable physiology, knows that it is one of the great fundamental laws of nature, that "like produces like," and this law is equally as pervading a principle in animal, as in vegetable life, and presents us with an injunction for the regulation of our efforts at improvement; and this is eminently worthy of our regard.

In casting our eyes around us, we shall at least perceive that this law has not only been systematically developed by scientific breeders in for-

eign countries, but that it has every where received from the intelligent and reflecting portion of the community, the attention and encouragement it deserves.

Were we to go through our several field crops at the commencement of the season of maturation, and select the best and earliest ripe of the divers sorts, we should soon find the benefit of such a course, and our fields would present at harvest a very different appearance from that which now so frequently causes us to turn from them with dissatisfaction. It would cost but a mere trifle to select seed in this way, even in the case of the cereal grains.

For the New England Farmer.

REVIEW OF THE SEASON.

MR. EDITOR:—It may be instructive as well as useful to the public, to examine the records of the past, and define the peculiar characteristics of the season, which have a bearing on the prosperity of the farmer, and compare them with the records of former years. Although we have had a partial failure in some crops, yet others have yielded abundantly, so that kind nature, in dispensing her gifts to man, only changes her abundance from one crop to another. The growing season commenced under favorable circumstances in regard to crops. The weather was rather dry, and the earth moderately warm, which fitted it well for the reception of seed, which was committed to the soil in the proper season, with what effect a review of the months will now fully explain.

April had a mean temperature of 39.36 being 2.12 below the mean for the past seven years. The amount of rain was 2.26 inches—about the same quantity that fell in April, last year; it fell on eleven days. Two inches of snow fell during the month. Grass commenced growing about the 14th, but was backward during the month, and the forests were bare and leafless. The amount of cloudiness was about fifty per cent.

May had a mean temperature of 58.72, being 4.69 above the mean, and was the warmest May for the last seven years. We had 1.89 inches of rain, being an unusually small amount for May. The amount of rain in May, 1858, was 3.56 inches, and in 1857, 5.64 inches. Here was the commencement of a season much too dry for vegetation, for the ground had not yet been fully saturated with water. The first five days of the month were entirely free from clouds, which is a very unusual phenomenon in this region. The amount of cloudiness during the month was about forty-two per cent. There were frosts on the 3d, 11th, 23d and 31st days, besides others on low lands not noticed. The last was quite severe, killing corn and other vegetables in many places. The first thunder storm took place on the 7th, and another on the night of the 26th; these were the only thunder storms during the month. There was a beautiful halo around the sun on the 31st day, which lasted from ten A. M., to one P. M., and was extremely bright between eleven and twelve A. M.

June had a temperature of 62.44, being 2.24 colder than the mean, and is the coldest of the past seven years, with the exception of 1857. The first half of the month was extremely dry, and the last part moderately wet. The amount of rain was 4.12 inches, being more than in any other month except September, during the season. The amount of cloudiness was fifty-seven per cent. Rain fell on seventeen days. There were four thunder storms, and a high wind accompanying the last, on the 29th. On the same day, the mercury stood at 92, at one P. M., which was the highest during the summer. The extremes of temperature were 36 and 92. White frosts occurred on the mornings of the 6th and 12th days.

July had a mean temperature of 67.30 being 2.35 colder than the mean, it being the coldest July for the past seven years with the exception of 1853. The extremes of temperature were 41.50 and 90. This was the only month that escaped frost in this region, but report says there was frost in some places—probably on the morning of the 5th, which was the coldest, with a temperature of 41.50, bordering on frost. Rain fell on 11 days, and its amount was 1.315 inches, which was less than the mean of the three previous years by 1.48 inches, being less than half the usual quantity. Thunder was heard on four days. Amount of cloudiness, 44 per cent.

August had a mean temperature of 67.76, being 2.05 warmer than the mean, and was the warmest August for the past seven years. The extremes of temperature were 43 and 87.50. Rain fell on 11 days, and its amount was 2.845 inches, which was 3.09 inches less than the mean of the three preceding years. The earth was extremely dry during the month. Many wells and springs were dry, and all streams exceedingly low. There was a light frost on the morning of the 30th, sufficient to injure crops on low lands.

September had a mean temperature of 56.43, being 2.10 colder than the mean, and was the coldest of the past seven years. Rain fell on 17 days, and its amount was 4.615 inches, being a little more than the average fall, but was not sufficient to affect the lower springs, nor give the surface its usual amount of moisture in consequence of the protracted drought of summer. Since the frost on the 15th, the forests have put on their hues of "purple and gold," the fading beauties of their autumnal dress, and the precursor of early decay. Soon the deciduous forests will be striped of their foliage, which has been so beautiful in its green and sombre hues, showing nature beautiful even in decay.

This may be said to be a cold, dry summer, for the nights have been unusually chilly. There has been a large proportion of chilling south-east winds, consisting of nightly aspirations, when the wind has been at every other point during the day. This has had a bad effect on some crops, especially corn. The whole number of consecutive days free from frost, was 78, while last year we had 142 days. The last frost of spring occurred on the 12th of June, and the first of autumn on the 30th of August. The mean temperature of the past six months was 57.50, and the amount of rain 17 inches, being an average of 2.83 inches to each month.

The corn crop was the nearest a failure of any

crop, being light and late, and somewhat frost-bitten, so that the yield will be small and of poor quality. Grass was our next lightest crop, yet it was of excellent quality and well secured. Intervale meadows yielded nearly an average crop, but upland was unusually light. Wheat was good, yet there was but little sowed. Oats were a first rate crop—perhaps were never better. Potatoes are a full average crop, and entirely free from rot, and are tolerably plenty. Buckwheat was destroyed by the frost and was mostly lost. Apples are quite plenty, although of poor quality. Plums are an entire failure, as well as fruits of the drupe kind generally.

Shall we hear similar reports of the season and the crops from other parts of the country?

Brandon, N., Oct. 24, 1859. D. BUCKLAND.

NEW PUBLICATIONS.

WELLS' PRINCIPLES AND APPLICATIONS OF CHEMISTRY; for the use of Academies, High Schools, and Colleges. Introducing the latest results of Scientific Discovery and Research, and arranged with special reference to the Practical Application of Chemistry to the Arts and Employments of Common Life. With Two Hundred and Forty Illustrations. By David A. Wells, A. M. New York: Ivison & Phinney. 1859.

This book is especially prepared for the use of academies, seminaries and colleges, and will undoubtedly prove of great utility in that direction; but it is not there, after all, where its usefulness ought to be mainly felt. There are other places, vastly more numerous and none the less appropriate, where it would charm the mind, give it mental strength, and prepare it better to understand the principles which govern everything we do. For every employment, however simple and humble, requires something of the aid of art and science. In cooking the breakfast, both are indispensable, and so in sewing the patch upon the knee of the pantaloons, in cutting the dress, or any of the most common and ever-recurring employments of life. The moment the Indian begins to construct his wigwam of bark or boughs, or the Esquimaux to construct his snow-hut, he calls to his aid something of the arts and sciences, and civilizes and enlarges all his powers by the operation. And this is the effect upon us all in opening, as it were, and investigating natural laws.

The common mind needs more of this knowledge; a better understanding of what *gravity* is, for instance, or *cohesion*, *attraction* and *crystallization*. It knows that the sun is warm, and yet is told that it is nearer in the winter when the thermometer is at zero, than during the fervent heat of midsummer! How perplexing this must be, and how refreshing and gratifying to learn in an easy and familiar way, the reasons for these seemingly contradictory assertions.

Let this book, then, become the companion of the fireside, the quiet, unassuming and intelligent friend for every leisure hour; let it be remembered during the engagements of the day, and

perplexing questions that arise during working hours be noted, so that reference may be had to the work on precise points, and a store of invaluable knowledge may be acquired that shall give the labors of life a new value. The book is a library in itself. It contains the kind of information most needed by the young of both sexes.

WELLS' SCIENCE OF COMMON THINGS; a Familiar Explanation of the First Principles of Physical Science. For Schools, Families and young Students. Illustrated with numerous Engravings. By David A. Wells, A. M. New York: Ivison & Phinney. 1859.

What do we know of *matter*, and *how* do we know it? There may be a sensible, and in some degree, satisfactory answer to these questions—but who will give it? Can you, young man? We observe that you are studious and inquisitive, but these questions, and a thousand others, puzzle you daily. This book will help and interest you, and in seeking instruction from its pages your life will be a happier and more useful one. Let us illustrate it,—or, rather, let it illustrate itself, in an agricultural point of view.

Why does dew fall more abundantly on cultivated soils than on barren lands?

Because cultivated soils (being *loose* and *porous*) very freely radiate by night the heat which they absorb by day; in consequence of which they are *much cooled* down, and plentifully *condense* the vapor of the passing air *into dew*.

Pause, my brother laborer, a moment, and look at the wisdom and beauty of this arrangement, and it will nerve the arm which guides the plow and hoe, and cheer the heart that hopes for abundant harvests. We are all too ignorant of the common things of life,—the things we see, upon which we work and depend for comfort and subsistence. Let us devote more leisure hours to their investigation, so that we may better understand nature's laws, and thus shield ourselves against those losses which spring from a want of knowledge of nature's changes around us. But we will let the book give another familiar illustration of itself.

Is the air of our rooms always in motion?

Yes; there are always *two currents of air* in the room we occupy; one of *hot air* flowing *out* of the room, and another of *cold air* flowing *into* the room.

How do you know that there are these two currents of air in every occupied room?

If I hold a lighted candle near the crevice at the *top of the door*, the flame will be blown *outwards* (towards the hall;) but if I hold the candle at the *bottom of the door*, the flame will be blown *inwards* (into the room.)

This book contains *two thousand and fifteen* questions, of a character similar to the above. If a person is building a house, and does not understand how to construct chimneys so as to afford

a good draught, the perusal of this book may be worth ten dollars to him, or ten times ten. We knew a man build a house, who rather churlishly refused to listen to our suggestions about the construction of his chimneys, and after tormenting himself and family with smoke and flame for six months, expended \$400 to put them right! The verdict of most persons would be,—“served him right!”

EXTRACTS AND REPLIES.

IS MARL A FERTILIZER?

A neighbor of mine wishes an answer to the following inquiry: he says—“I wish to be informed whether leaves and other vegetable substances, falling into shallow water and sinking to the bottom, will, in process of time, turn to marl?”

J. L. C.

Ilaverhill, N. H., Oct. 20, 1859.

REMARKS.—No. Marl is an earthy, not a vegetable substance; and any earthy substance in which the proportion of calcareous—that is, *limy* matter is apparent, mixed with sand or clay, is styled in popular language, a marl. Of this there are three principal varieties, 1. Clay marl. 2. Sand marl; 3. Slate or stone marl; 4. Shell marl. If you find a substance which you suppose may be marl, pour a little vinegar upon it, and if it effervesces, it will probably be marl, and will contain fertilizing properties.

QUESTION ABOUT A CRANBERRY MEADOW.

I have, in the county of Norfolk, a piece of land which is valuable principally on account of its descent from my great grandfather, it having been in the name over one hundred and fifty years. There is upon the lot about two acres of swale which has been mowed yearly for seventy years, but is too strong to plow. There are many beds of cranberries upon the land, of a good quality. Contiguous to this swale are four or five acres of moist upland, where good crops of corn have been raised, also rye and potatoes; the land is very free from frost, as only one year, that of 1816, for a half century has the frost injured corn. The soil is rather shallow, with many small round stones. The question is, whether it would be advisable to try the cranberry culture upon this lot?

JESSE WHITING.

Groton Junction, Oct., 1859.

REMARKS.—We cannot tell, away from the meadow, but should think it would. Try a portion of it, and see how it succeeds.

“SAW-DUST AS A FERTILIZER.”

In answer to the inquiry contained in your journal of Oct. 29 as to the value of saw-dust as a fertilizer, I would say its virtue in the raising of beans, equals, if not surpasses, any enricher of soil I ever saw. As a fertilizer to other vegetable products I have never as yet seen it attempted, but purpose the coming year to test it further. It was found most productive by being

dampened when used, and applied rather generously, well incorporated with the soil receiving the deposite beans.

OAK HILL.

Nov. 4, 1859.

FINE OXEN.

I saw at the Essex House, in Salem, to-day, a pair of oxen, grown at Greenland, N. H., six years old, that weighed 7000 lbs.—varying only about 25 lbs. from each other. They were of a beautiful red color, bright eyes, and well formed. I have never seen any cattle superior to them. I have heard of individuals animal, nine years old, that weighed 4000 lbs., but I think these surpassed such an ox—all things considered. I hope the proprietor will be well rewarded for exhibiting them—their sight is more interesting than that of elephants or wild boars.

P.

Oct. 27, 1859.

CARROTS.

Mr. B. H., one of the most successful cultivators in this town, informed me that he had gathered six tons of as handsome carrots as he ever saw, from 27 square rods of land. This would be about one ton to six square rods, or 27 tons to an acre. The price of carrots at this time is \$8 per ton, consequently the produce of an acre would amount to 8 times 27, or \$216 per acre. Considering that carrots are not an exhausting crop, I look upon this as good doings. Few crops yield so well this season—cold as it has been.

South Danvers, Oct. 27, 1859.

P.

BREMEN GEESSE.

Will you be good enough to inform your readers who has the pure blood Bremen Geese for sale, described in your paper of Sept. 24.

Hartland, Vt., Oct., 1859. W. S. GROW.

REMARKS.—We do not know. Will some one who has them reply by letter to the inquirer?

APPLE OR CIDER STAINS ON LINEN OR COTTON.

Will you permit an old subscriber and faithful reader of your valued journal to inquire, if any of our good mothers of New England can inform me of the best and most effective manner of removing stains of apple or cider from linen or cotton, after being fully dried in? If so, they will oblige their suffering friend,

“OAK HILL.”

THE CONCORD GRAPE.

The more we know of this grape, the better we like it; and this appears to be the case with nearly everybody. The exceptions are those who have long settled in their minds that the Fox grape, being a universally condemned variety, every seedling possessing any portion of its flavor, must necessarily be worthless. To us, and to ninety-nine in a hundred, the Fox grape aroma is agreeable, and constitutes one of the most attractive qualities. The *Southern Cultivator*, published at Richmond, Va., thus refers to it. “A fine bunch of grapes, of the variety called Concord, was brought to our office a few days ago, by Mr. E. G. Eggeling, florist and nurseryman, near this city. The bunch weighed four-

teen ounces; the fruit above an average size, being about as large as a Black Hamburg, in appearance very much like it, with a very thin skin, a perfect bag of juice, and of the most delicious flavor."—*German town Telegraph*.

AN EXTENSIVE PEAR ORCHARD.

The past week we visited a very extensive pear orchard in this country, perhaps the largest in Western New York, planted by Messrs. Starks & Mattison, embracing forty-five acres, on which are growing over 4,800 young standard pear trees, all healthy, and making a good growth, and many of them bearing good fruit. So well pleased were we with the appearance of this orchard, that we made a rather careful examination, and gained some facts, which may be of interest and profit to our readers. These trees were from three to five years old when planted, which was done during the winter of 1857-8. The winter being unusually mild, planting, which commenced in December, was continued through January, February, March and April. Occasionally, freezing weather would put a stop to the work for a few days. No difference is apparent in the growth of the trees between those which were planted in the fall, spring, or winter, and not a dozen out of the number died. The varieties are as follows:

Flemish Beauty.....	224	Dearborn's Seedling.....	58
Rostiezer.....	112	Gansel's Bergamot.....	50
Louise Bonne de Jersey.....	231	Columbia.....	58
Bartlett.....	1,060	Beurre Diep.....	294
Doyenne Gris d'Hiver.....	27	Winter Nells.....	58
Seckel.....	270	Lawrence.....	311
Virgalieu.....	1,346	Glout Moreau.....	116
Onondaga.....	58	Year Winkfield.....	373
Sheldon.....	151	Easter Beurre.....	70

The soil is a clay loam, or as the proprietor expressed it, a "limestone loam" for eight to ten inches or more, subsoil clay, though not very stiff, having an admixture of loam, with a little sand, the whole resting upon fossil lime rock. The ground was prepared by subsoiling, about eighteen inches deep, and the trees planted twenty feet apart each way. In setting them out the roots were covered with earth to the depth of about one inch, over which was spread something like two inches of stable manure. The remaining portion of the opening was then filled with earth to grade. The planting being completed, the upper portion of the roots were about one inch below the average grade of the soil. About one-half a bushel of earth was placed at the foot of each tree, in a conical form, immediately after planting, which was allowed to remain until the middle of May, and was then levelled and the earth spaded as deep as practicable without interrupting the roots, for a space of six feet in diameter. In the fall of 1858 a mulching of about two bushels of manure was given to each tree, over which was placed earth in pyramidal form to the depth of one foot, to protect from mice and severity of winter. This was allowed to remain until the first of May, last when all was made level, and spaded as before, over an area seven feet in diameter.

The trunk of every tree, from the ground to the branches, is covered with a bag made of cotton cloth, sufficiently large to admit of three or

four years' growth, the cloth being fastened to the lower branches, and hanging to the ground. This, the proprietors believe, protects the trunks from the sun, and from sudden changes of temperature, and in a great measure prevents blight and other evils, such as the hardening of the bark, the contraction of the pores, thus preventing the free flow of sap, necessary exhalation, &c. Two cedar stakes are driven by each tree, to which it is fastened, preventing swaying by the wind, in any direction.

The rows run east and west for about three-fourths of a mile, and are as true as it is possible to plant trees. At the western extremity is planted a belt of Norway spruce, across the entire orchard, consisting of two rows ten feet apart, and the trees in the rows twenty feet apart, those in one row being opposite the open space in the other, leaving the trees ten feet apart. Two similar belts are planted through the orchard, at about equal distances, though the highest points of land are selected for the purpose, and these it is thought will afford all necessary protection from the wind, as the trees are made to head low.

Now, for the result thus far. The trees are healthy and vigorous, and making a fine growth, many having already made shoots from three to four feet in length. Although having had but one season's growth since planting previous to the present, many of the trees are bearing fruit. On one Seckel we counted 131 specimens, and on the Bartlett, Flemish Beauty, &c., fully as many as the trees should be allowed to bear. On removing the cloth from the trees we found the bark glossy, smooth, and soft to the touch, yielding under the pressure of the finger. No blight has ever been seen in the orchard, and this exemption the proprietors think is mainly attributable to the protection afforded the trunks by the cloth.

The proprietors are entitled to great credit for their enterprise, and we hope to see them amply remunerated, as we have no doubt they will be before many years. Mr. Mattison is an experienced nurseryman, who knows how trees should be grown and cultivated, and practices himself the thorough course that he recommends to others, of which this orchard gives abundant proof. Nearly every tree he has grown from the seed; and here we may say that Mr. M. claims an improved method of cultivating pear seedlings, by root-pruning during growth, thereby securing a larger number of fibrous roots, which, to some extent, prevents leaf blight, and ensures greater safety in the removal of trees, even when large.

This orchard, if well cared for, for a few years longer, must yield a princely revenue. We hope these gentlemen will have many imitators in Western New York; and, indeed, in all parts of the country where fruit can be grown with profit.—*Moore's Rural New-Yorker*.

ACQUAINTANCE RESUMED.—We are happy to call the attention of readers to an article by "Norfolk," in another column, and to learn that New Hampshire air, and New Hampshire fare, have brought back to our correspondent health, energy and action once more.

CURE WANTED.

I have a three year old colt that settles back on his halter, brings his under lip up on the hitch strap and grunts or makes a noise like a horse cribbing. I don't know but it is the first stages of cribbing, but I have never seen him get hold of anything and grunt—nothing more than to bear down on the halter and grunt. What is the matter with him? J. WARREN.

Charleston, N. H., 1859.

REMARKS.—It is difficult, from such, or any description, to tell what the matter is with the colt. There is some morbid affection, or the animal would stand quietly in the stall when properly fed. There is actual disease, of some kind, or there remains some want unsupplied. It appears that the colt is stabled—is he there constantly? If so, let him run an hour or two, each day in the field where he can have access to plowed ground; add to this *regular*, and sufficient feeding, and try the plan. If this fails, some wiser head than ours must prescribe for him, from an investigation of the case.

PHOSPHATE OF LIME VS. ASHES.

MESSRS. EDITORS:—I have heretofore been slow to adopt the new notions in agricultural improvements, especially in the use of the so-called fertilizers. But within the last two years I have learnt of some good results from the application of superphosphate of lime, and this season I have for the first time used that fertilizer. I obtained some of Coe's superphosphate of lime, and on the 23d of May planted my potatoes, and about the same time planted my garden vegetables. I had spread and plowed in a small quantity of stablemanure. According to my usual custom, I planted in drills—tubers about 20 inches apart in the row, and cut so as to be not more than three or four sprouts in a hill. I planted two rows side by side. In one I put unleached ashes, as many as I could well hold in my hand at once, in each hill. In the other I put two-thirds of a gill of superphosphate of lime in each hill. Very early in the season there was a marked difference. Where the phosphate was put, the vines grew more rapidly, and when they had attained their growth, they were one-third to one-half larger than those where the ashes were put. I have now dug the potatoes, and will here state the result:

I dug ten hills where ashes were put, which contained 36 of good size—weight, 8½ lbs.; small size, weight, ¾ lb.=9½ lbs. Ten hills where the phosphate was put, 53 of good size—weight, 15¾ lbs.; small size, weight, 1¾ lbs.=17½ lbs.

I thought the difference was so great that this statement might not be believed, and my neighbor, Mr. William Reed, accepted my invitation to be present at another trial. Mr. R. made the figures:

I dug ten hills where ashes were put, 34 of good size—weight, 6 lbs. 5 ounces; small size, weight, 11 ounces=7 lbs. Ten hills where phosphate was put, 48 of good size—weight, 15 lbs. 3 ounces; small size, weight, 1 lb. 9 ounces=16 lbs. 12 ounces.

Mr. Reed thought there must be a difference in the condition of the land that made a part of the difference in quantity. I then dug five hills of each kind in another place.

Five hills where ashes were put, 16 of good size—weight, 3 lbs.; small size, weight, 2 ounces=3 lbs. 2 ounces. Five hills where phosphate was put, 28 of good size—weight 6 lbs. 11 ounces; small size, weight, 7 ounces=7 lbs. 2 ounces.

In the growth of my other vegetables, I think I have seen much benefit by the use of the phosphate of lime. A knowledge of these facts may be of some advantage to farmers and gardeners.—JOHN R. HOWARD, in *Boston Cultivator*.

THE SMALL STINGING NETTLE.



This nettle is the plant so common all over New England, and one which is well remembered through life by those who were brought up on a farm. The quaint old herbalist, CULPEPPER, remarks, "that they may be found by *feeling on the darkest night*." The small figures are the flowers of the plant enlarged.

NETTLE, *Urtica*, (from *uro*, to burn; in reference to the stinging properties of most of the species.) An extensive genus of herbaceous or shrubby plants of little beauty, and which are justly looked upon in the eyes of the agriculturist as mere weeds. The herbage in all the species is copiously armed with venomous perforated bristles, each of which has a bag of liquid poison at its base. This liquor, by the slight pressure required to pierce the skin, is transmitted into it, causing great irritation. Many of the numerous exotic species have not this stinging property; but the sting of common nettles is not to be compared with that of some of the

Indian species grown in the gardens of Europe. These are, however, all surpassed in virulence by one which in Timor is called *duour setan*, or devil's leaf, the effects of which are said by the natives in many cases to cause death. In England, the indigenous species of nettle are three; viz. 1. Roman nettle (*U. pilulifera*), an annual plant, growing in waste ground amongst rubbish, chiefly near the sea. The herb is armed all over with peculiarly venomous stings. The stem is branched, leafy, bluntly quadrangular, often purple, about two feet high. 2. The small nettle (*U. urens*) is found to be in all cultivated ground a troublesome weed, especially on a light soil. It is annual in habit, flowering from June till October, smaller than the last, and of a much brighter green; its copious stings hardly less virulent. The several parallel ribs of the leaves form its distinguishing character. The whole plant being refused by every kind of cattle, should be carefully extirpated from pastures. 3. The common or great nettle (*U. dioica*), which is a noxious perennial weed, growing almost everywhere, and flowering in July and August. The root is branching and creeping, with fleshy roots, and many fibrous radicles. The herb is of a duller green than the last, erect, three feet high, with less irritating stings. Leaves large, heart-shaped, spreading, pointed, strongly serrated, veiny. The leaves are employed for feeding poultry, especially in the winter; when boiled, they are said to promote the laying of eggs. Asses devour nettles eagerly, but all other live-stock refuse them unless they are dried. In the western islands of Scotland, a rennet is prepared by adding a quart of salt to three pints of a strong decoction of nettles; a tablespoonful of which is said to be sufficient to coagulate a bowl of milk. The young tops of the common and smaller nettles may be boiled as potherbs during spring, and eaten as a substitute for greens; being not only nourishing, but mildly aperient. The tough fibres of the stem may be manufactured like hemp, and are often found in winter naturally separated and bleached. The roots are astringent and diuretic.

For the New England Farmer.

LAYING DOWN THE ISABELLA VINE.

MR. BROWN:—At this season of the year, the open air grape vines that are trained up upon a wall or building should be taken down and laid upon the surface. I have thought that my former directions given some time since, may be repeated. Most cultivators are aware that the Isabella vine suffers more or less every winter. Long shoots of the previous year's wood, and occasionally the whole vine, is winter-killed, (so called.) Many attribute this to the extreme cold; I believe it to be caused by the warm days of winter. In our variable climate, where the thermometer sinks to zero, followed the next day by a bright sun with the warmth of spring, a plant so susceptible as the vine is generally affected by these sudden changes, particularly as the sap does not take lodgment in the roots, but, as Dr. Lymley says, "is always in motion at all seasons, except in the presence of intense cold." Can we wonder at these results? "If ever," says the same writer,

"sap settles to the roots in a visible form, that is owing to temporary causes, the removal of which causes its instant reascend." My method, for years, has been to take the vines and lay them along upon the ground, throwing over them a light covering of leaves, litter or the refuse of the garden. Should the vine be so situated that I cannot conveniently take it down. I tack up matting or any slight covering sufficient to keep off the sun's rays. That it is the warm days of winter that kill many of our half-hardy shrubs, as well as vines, is exemplified in the culture of the *Morus Multicaulis*. This plant was found to winter better on the north side of hills than upon the south.

J. M. I.

Salem, Oct., 1859.

For the New England Farmer.

SAW DUST AND SHAVINGS AS FERTILIZERS.

MR. EDITOR:—In your last issue I noticed a piece on Saw-Dust as a Fertilizer. I would say that whether it is a fertilizer or not, it depends very much upon how it is used and of what wood it is made. Dry saw-dust is one of the best of articles for bedding horses and cattle, to take up the urine and keep the cattle clean. But hard wood is the best, and rock maple the best without doubt for the land. Many of your readers, I presume, can recollect how well the grass used to grow on Rock Maple land, and where, especially, the trunks were left on the ground to rot, as they used to be fifty years ago, as I very well remember.

Saw-dust put on land, right from the saw, I think is not just the thing, unless on dry, cobbly land. I recollect of putting a load on a spot some two square rods, where, being on a side-hill, there was not soil enough to make it grass over for years before, but since, I have seen no signs of barrenness. I believe it to be a retainer of moisture, if nothing more.

Hard wood shavings are also good for bedding, such as come from planing machines in making wash-boards, &c., &c., they being very fine and soft. They cause the manure to heat much faster, and, of course, will need overhauling much sooner than usual. I think hard wood saw-dust and shavings should be used freely for bedding, even if you have to go miles after them, and they will answer every purpose of going to Peru for guano.

Meadow mud is not good for bedding, being very soft when wet, but good to put into the yard or barn cellar, and even to spread on ground when you sow down. I did this on a piece of ground I took up from pasture, and have noticed that my cattle graze on that part where I put the mud, two or three times as much as they do right by the side where I did not put any, and yet the land where I put it was the poorest.

Something is said in these days against barn cellars, because manure heats, and the stench arising injures the hay, and also the cattle, where they have to breathe the foul air. I have no doubt but that if cattle have to breathe this bad air, it must be injurious to them, as well as to the hay they eat. But why have it so? This heating and bad odor should not be suffered to accumulate. My father-in-law (who is about 90 years old,) said

to me this summer, that nothing is lost, and if it goes off in the air, it comes down in the dew. True, I said, but it might come down in some old swamp of my neighbor's, and I, as well as he, would not get much use of it. To save it, put in anything, even sand, that is worthless, apparently, if you can get nothing better, to take up the moisture, and that, by overhauling, will prevent heating, and double the quantity and value of manure will be made to what would be in the old way of cows in the yard in summer, and manure in winter thawed out under the eaves, and wind and water driving off all this bad odor people are so afraid of in cellars. There is no body so hard up but that they can find sand for this purpose, if nothing better. Keep the cattle in the barn at night and put one or two shovels-full of sand to each animal, together with straw, old meadow hay, saw-dust, or shavings that are fine, to make a good bed, and you will be astonished at the amount of manure you will make. By so doing, you will have it all, and ready for corn.

Some farmers not only put sand or loam on the floor, but have a pile on the barn cellar to throw upon the droppings every morning.

People lose much manure by being obliged to let their cattle out in winter, and perhaps summer, to some brooks or springs to obtain their drink. Some let them go as they please, (which is the best way to ensure the cattle to drink what and when they wish.) Others drive them, perhaps twice a day, and if they drink when they drive them, well; if not, they must go dry. If dry they will not eat their hay well, and cows will not give their expected quantity of milk, and then the boys are found fault with because they gave too much hay and have not milked clean.

To get water conveniently, dig a well near the yard or under the shed, which should join the cellar, and will not generally be more than some 20 or 30 feet, and many of them much less. Should you happen not to find as much water as desired, be sure and dig large, so as to stone up some five feet at bottom, so as to make a reservoir, put up an eves trough on barn, and conduct the water into the well, and then get one of "Ayer's Self-Acting Farm Wells," and use it. You will find your cattle do much better than they will to go dry, or have to go some 20 to 80 rods for their drinks in cold and blustering weather. Your cows will *water* their *milk* much better than their owners, and suit their customers *a vast deal better*, for the quality as well as quantity you will be able to let them have. I have used one of them three years past and know of a certainty the good of them. The cattle will go freely to drink as to an aqueduct, after a few times, and most horses, if dry, will go on the platform the first time without any trouble whatever. The freezing is not half so bad as in common pumps or aqueducts, as only occasionally any trouble occurs, and that easily corrected by a pitcher of warm water. ALVAN WARD.

Ashburnham, Oct. 31, 1859.

LICE ON CALVES.—A number of years ago I had a yearling that grew poor, and I could not help it. Its breathing became so loud that it could be heard several rods. I thought it would die. One of my neighbors told me that he had

heard that sour buttermilk was good. I procured some and washed it from head to foot, and in three days his breathing was very regular, and he was as smart as need be. I had no more trouble with him.—*Rural New-Yorker.*

DEEPENING THE SOIL.

The depth of a cultivated soil is always a matter of importance. Lands on which the vegetable stratum is thin, are deficient in permanent productive power, and require a much larger application of manure, and more thorough working, than those which have a greater depth. Digging two spits deep, as is practiced in Europe, or gradually going deeper with the plow, tends to obviate this difficulty, and will eventually render the soil productive, if the requisite care be exercised in cropping and manuring.

Where the vegetable stratum is thin, and reposing on a poor subsoil, a speedy change may be effected in the following manner, although from the great cost of labor in this country, it may not be advisable to adopt it except on a limited scale: Along the margin of the piece to be improved, be it more or less, throw the soil, subsoil, sods and all, into a winrow on one side, to the depth which is desired, say twelve or twenty-four inches. Then commence on the side in the direction the improvement is to proceed, and deposit all the mould and sods taken from the top in the bottom of the first trench, throwing that taken from the bottom of the second trench over on to the top of the first, and in this manner, proceed till the work is done. Then cart on old, well-decomposed compost, mixed with an equal volume of green, unfermented stable manure, and work the whole thoroughly into the yellow earth until the virgin soil is approached. A liberal allowance of manure is requisite in order to hasten the decomposition of the soluble silicates contained in the fresh earth, as well as to ensure the more ready absorption of the fertilizing gases from the atmosphere which are necessary to impart vigor and activity to its latent powers. A small quantity of fresh manure sprinkled in lightly as the filling goes on, will be of great service, and, indeed, any kind of vegetable matter, such as straw, forest leaves, or chip manure, will materially assist the process of enriching, and furnish food for the plants.

Lands treated in this manner stand the drought much more successfully than untrenched grounds, and are always found to be more productive, with the *same amount* of manure, than the deepest soils in their natural and unimproved state.

On gardens we have seen it tried repeatedly. It is well known that the sand and coarse gravel excavated from wells and cellars, will, when exposed to atmospheric influences, imbibe princi-

ples of fertility rapidly, where no manure is used, and become in a short time covered with verdure. We have known the common yellow sandy loam taken from the pit and spread upon upland mowing fields with the happiest results. This loam is full of fertilizing salts, which, upon being brought to the influence of the air and rains, impart them to the roots of the grass with surprising effect.

Plaster and charcoal each have a powerful tendency to absorb enriching principles from the air, and in all experiments like the one we have suggested, they can be profitably employed. The second year after digging, a very decided improvement will be apparent, and a single operation will have a decided influence for many years.

Those who have but little land should attend to this suggestion if they wish to make it highly productive. We have tried it on garden lands, accompanied with thorough draining, and think we have doubled the crop,—using no more manure than we did before the trenching.

For the New England Farmer.

THE FARMER AND HIS SURROUNDINGS.

I often think, while at work in the fields, that if I am thankful for one thing more than another—in temporal affairs—it is that I was born a *farmer*, and the *son of a farmer*; that I have been brought up among rural scenes and rural people, and have been taught to labor in agricultural pursuits, and thus brought into intimate connection with the wonderful and mysterious workings of Nature—the manifestations of the Divine Hand. For I believe it is the farmer's privilege to be the "most amiable, the most comfortable, and the most independent man in the world;" and that his occupation will admit of more opportunities for thought and reflection than others; and that it is his duty, as well as privilege, to rise, intellectually as well as morally, in his "heaven-appointed employment."

Do not understand me, however, to despise or disparage other vocations, so necessary to make up the harmonious whole, in the varied round of man's toils, and pleasures, and necessities. But that there is, in the work-shop or manufactory, amid the clink of hammers and din of machinery, in the counting-house, or in the routine of the merchant's duties, such an inducement to nealthy thought, and such a field for noble contemplation as is spread out constantly around the farmer, in his free, healthy, out-door employments, is hardly supposable. The silent workings of Nature's immutable laws, in the mysterious germination of seeds, magic unfolding of leaf and flower, and maturing of vegetation, and all the phenomena of attending circumstances, invite his investigation, and fill him with admiration at their exquisite harmony and beauty of adaptation. With them he has constantly to deal, and in his operations it is his study to assist Nature in bringing forth an abundance of things useful to the sustenance of his race, while she beautifies without instruction, and decks his fields with friendly,

out-of-the-way flowers, and sprinkles sparkling minerals over the hills.

A pleasing landscape always meets his eye, agreeable in the diversity of noble mountains, near or remote, undulating woods and open lands, and cultivated acres, and fields of "waving grain" in summer-time, or whatever aspect the changing seasons may present. No brick walls shut in his vision, or contract his horizon, but on the dewy morns of summer it is his privilege to enjoy the extended view spread before him in all its freshness and beauty, to drink in the pure, fresh morning air, often perfumed with the sweet odors of countless flowers, and in his every-day vocations to catch the thrilling music of birds, free as nature's air, in their hedge-rows, or rendering him essential service in the orchard and garden, besides ministering exquisite pleasure to his finer sensibilities, if he will but open his soul to their influences. A pure sky is spread above him, across which the white clouds serenely ride, or are suspended in picturesque forms, or in mountainous, silver-crested masses rest on the horizon like old snow-capped monarchs; and all the grandeur of the rising thunder-storm is his to enjoy, of which the city inhabitant knows but little.

Everywhere the tendency is to an ennobling influence, and if the farmer is not virtuous and high-souled, if his mind is not cultivated, and the taste for the beautiful, and an inclination to contemplation are not within him, the fault is chargeable to himself, not to his vocation or surroundings. Indeed, all those elevating influences that poets have sung of, and learned orators love to tell us of, are constantly surrounding the farmer.

It would take a long time to recount all the pleasures the farmer may enjoy if he will; yet, I fear that the mass of farmers are insensible to the *charms* of agriculture, and plod on like the ox they follow, as they walk behind the plow, wholly unmindful of the higher life they might enjoy, and which no one can do so much towards helping him into as himself. Perhaps I am telling you, fellow-farmers, an old story; but let it be harped in your ears till you leave the sluggish routine you have followed your life-time, acquire an appreciation of *progress* and *improvement*, throw off your narrow conservatism, and adopt liberal views of life, and you will see then that your occupation is a noble one, and that you may ever make it a delightful one.

The occupation of the farmer furnishes him with an ample field for practical and sound thought; a theme for intense study, if he wishes; for indeed the science of farming is little less than a combination of several of the most intensely interesting sciences in nature. The occupation of the farmer may, and should be, an intellectual pursuit; his leisure moments should be improved in study and reading, and thus he will be furnished with food for reflection, while engaged in the physical labor of the field. Farmers are, in too many instances, beneath their calling; if not morally or physically, at least intellectually. Let farmers cultivate the *mind*, as well as the soil. Here is a field productive of the highest pleasures, and conducive to pecuniary advancement.

And now, brother farmers, let us take pride in

our vocation; it is one there is nothing in to be ashamed of, but, on the contrary, much to appreciate and be proud of. With less temptation to viciousness than the city denizens, why may we not be more virtuous? With less temptations to prodigality, why may we not increase in this world's goods as well as they? With more leisure for study, why not be more intellectual?

Springfield, Nov. 7, 1859.

J. A. A.

Erratum.—In my article on "Tobacco versus Useful Crops," recently published in the *Farmer*, (Nov. number of monthly,) read in the statement of expenses, for "topping, mowing, &c.," topping, worming, &c.

THE CLOSING YEAR.

— "We take no note of *Time*
But from its loss; to give it then a tongue
Is wise in man."

The poet means the *passage* of Time. No time is *lost*, that is well spent. There is, we suppose, in reality, no such thing as the lapse of time:—It is all now, to the Eternal Mind. What passes, and decays, and disappears from our view, is the finite, that upon which the elements act and change from one form to another.

The object of life that is clearly indicated both by Nature and Revelation, is Progress; progress, not only in subduing and replenishing the earth, but Progress in the attributes of the soul. We are to

"Learn the mystery of *progression* duly:
Not to call each glorious change decay;
For we know we only hold our treasures truly,
When it seems as if they passed away.

Nor dare to blame God's gifts for incompleteness;
In that want their beauty lies; they roll
Towards some infinite depth of love and sweetness,
Bearing onward man's reluctant soul."

If there were no change, there would be no progress. We call it the work of Time,—it is as much the work of Eternity. All is tending to the great work of perfection—upward and onward towards the Infinite that has created and governs all. *Nothing retards and alloys but sin.* Nature is as active and more consistent in her progress, than man. She clothes the earth in the richest attire, and gives perfection to plant and animal, that they may re-appear in still more beautiful forms. The mighty forests fall, and in their progress come to us again greatly increased in value. Mountains and hills yield to the general law, by gradually finding their level, and unfolding the rich treasures which have for ages been hidden in their deep recesses. And so the "tooth of Time" will touch the proudest works of man.

— "I saw him grasp the oak,—
It fell; the tower, it crumbled; and the stone,
The sculptured monument that marked the grave
Of fallen greatness, ceased its pompous strain,
As *Time* came by."

Now that another year has passed,—while its last shifting sands are noiselessly gliding out, it becomes *us*, brother travellers, to review this period of Time, and see what *progress* we have made towards the divine life, the end and object of all. Has it been satisfactory? Does the balance sheet stand fair, and the soul serenely wait the verdict of the Great Judge! Then all is well,—for there has been progress in the very heart of life, and the celestial streams lovingly down into the terrene world.

The year that has passed! It has brought to most the checkered scenes which it never has, and never will, fail to bring. Sickness, and death, and separation; poverty, and want, and disappointment; sad and touching words, stinging realities! They mark the progress of existence everywhere,—but they come all too often, and mainly through our own want of wisdom. Cannot we profit by the past? Let us lay this inquiry upon our hearts, and see that every future thought, and word, and deed, is prompted by that wisdom which is better than rubies, and that shall be our stay and comfort in every time of trial.

Farewell! then, *Old Year!* It has been rich in blessings, and among the best of them have been the pleasant associations with those who habitually read these columns, and for whose prosperity and happiness our frequent communings have excited a sympathy almost as lively as for those that gather around our own hearth-stone. Then let the Old Year go,—let others come and go, and give us no anxious thought, while we strive to *progress* in virtue and heavenly wisdom as well as in material things.

For the New England Farmer.

SEED-EATING BIRDS.

MR. EDITOR:—In your issue of Oct. 15th, Mr. "Aquila" has attempted to read me a homily. He says that all seed-eating birds, such as the yellow bird, deserve a full share of the denunciation for scattering the seeds of injurious weeds. It is an incontrovertible fact that seeds having their flinty coverings broken, will never germinate. Mr. Aquila, nor any other equally scientific man, ever saw any seed-eating bird swallow a seed without first breaking its coating, for it is the kernel required for sustenance, which is not obtainable with its indigestible covering. So much for seed-eating birds, which I protect, having erected several houses on high poles for their encouragement.

"*Videre est credere.*" Fruit, or pulp-eating birds never eat the seed of fruit, if it is avoidable; the seed of the pear or apple they never eat; but their stupidity, or greediness, never discards the seed of small fruits, and that every seed has its germ perfect, after having passed the bird, is a fact not disputable. He says, "many times have I seen robins follow the plow, picking

up every worm and bug that came in their sight. How did he know that they did not discriminate picking up only such as suited their fancy?

"Aquila" asserts that he has seen, this very season, a robin fly from a fence, pick up worms and swallow them, when a cherry tree was quite as near. Was it a Tartarian, an Oxheart, a Reine Hortense, or some Canadian cherry, a robin proof fruit? if so, it ought to be disseminated; a cherry, in reference to which robins will play the Hottentot, and eat worms in preference, would be a godsend to fruit-growers.

Let us, in moulding the character of the rising generation, inculcate a spirit of justice, aid and protect each other, and the time will come when every man can sit under his own vine and tree, and enjoy the fruit of his labor, lawfully protected from freebooters and poachers.

South Danvers, Mass. J. S. NEEDHAM.

HOLBROOK'S UNIVERSAL PLOW.

We have several times spoken of this plow in terms of commendation. The opinions formed of it were gained by actual field trial, on several occasions, and were in accordance with those of some of the best plowmen in Middlesex county. Quite recently we spent half a day in the field, where several plowmen whom we had never seen use it before, held it and used it with several of its different mould-boards and cutters.

The first experiment was with the interval mould-board, which laid the furrows over flat in a very handsome manner. The next was the mould-board used for stubble plowing, with a common cutter. This gave a furrow ten inches deep and twelve inches wide, and when the team was kept exact, the plow would pass along for several rods together without any guiding. The cutter being taken off, the skim plow was attached to the beam, making what is called *the double plow*: by this arrangement the skim plow cut the sward about two inches deep and laid it handsomely away on the bottom of preceding furrows, while the stubble mould-board that followed, rolled up the soil from below, breaking it into thousands of pieces, and laying it into a seed-bed, only needing the passage of a harrow to prepare it for the reception of seeds as fine as onion or carrot. We are confident that this mode of plowing will save a very considerable amount of labor in the after cultivation of the crop. The next trial was in the use of the stubble mould-board on stony land. This was a place in which we had never seen the plow used before, and it certainly accomplished what we had not expected of it. The ground had not been plowed for twenty years, was nearly as thick with stones as they could lay, and flanked occasionally with the roots of bushes. Yet we never saw a plow work steadier or better. In passing over a large stone it would catch in more readily, and work up to

and away from the stone, with more ease and certainty than any *short* plow we ever saw.

The last trial which we witnessed that day was in a meadow. The plow was rigged with a wheel cutter and a very long, tapering mould-board. Six stout oxen were attached to it, but the off-ox of each pair was enabled to travel on the sward—instead of the bottom of the furrow—by having an iron rod start from about the centre of the beam to the forward end of the same, and standing off from it about six inches in front. The furrow slice was cut ten inches deep and sixteen inches wide, and the meadow—three-quarters of an acre—was completed without a baulk or bad place in it, and a harrow passed over it twice would have fitted it admirably for being laid down to grass!

The furrows in all these trials were not laid over by guess work, but were as scientifically moved as is the locomotive, or printing press, or power-loom. The most indifferent beholder could see beauty, as well as utility, in the operation. We hope our plowing readers will look at this new plow for themselves.

For the New England Farmer.

GARDEN AND FIELD WORK.

TRANSPLANTING TREES.

Is the fall or spring the best season to transplant trees? In replying to this question, I would say that it depends upon the weather and state of the ground. If, during the fall, we have warm days accompanied with rain, extending the growth to a late period, the wood being unripe and succulent, I should rather hesitate in commending the fall; on the other hand, if the ground is dry, and the early frosts being sufficient to take off the leaves, the wood of the last year is well ripened, I should commend, in this latitude, to set the pear, apple, cherry, currant and gooseberry in the fall. The peach, apricot and nectarine, I should invariably set in spring.

CURRENTS AND GOOSEBERRIES.

Currants, (the White Dutch is the finest variety for general culture,) gooseberry, (Houghton's Seedling,) blackberry, (Dorchester Seedling,) raspberry, (Franconia Red,) can be cultivated with profit, and under circumstances as described above, the fall is a good time to set them.

SEEDLING TREES.

Trees that have been grown from seed the past summer, such as the peach, pear, apple and quince, that have not attained to a greater growth than six or eight inches, had better be taken up and laid in, as it is called, in a shady place, covering them slightly with litter, sufficient to keep them frozen through the winter, as they are apt to be thrown out by the frost if suffered to remain in the seed bed.

HARDY GRAPES.

Grape vines trained upon a building or wall in a warm exposure are exceedingly apt to be

killed, particularly the wood of the previous year, by the warm days in winter. These should, after the fall of the leaves, be taken down and laid along upon the ground, that they may not be exposed to the alternate freezing and thawing of that season.

GUANO.

In our hot and dry climate, the Peruvian guano, when applied to the land in spring, often fails of producing any marked effect; on the contrary, if applied in the fall, spreading it over the soil of our gardens, and turning it in by the spade, we shall find it a good fertilizer, as well as more lasting in its effect than when applied in April or May. The usual rate of manuring is about three hundred pounds to the acre.

INSECTS—CHERMES.

The currant is subject to a curl or thickening of the leaf in spring, produced by a minute insect called *chermes*. I have found that by applying air-slaked lime around the bushes early in the spring, I have entirely succeeded in keeping off this pest. I have also for some years applied spent tan around the gooseberry, (Houghton's Seedling,) with marked effect, in staying the ravages of the gooseberry worm. J. M. IVES.
Salem, Nov., 1859.

EXTRACTS AND REPLIES.

ABOUT FATTENING TURKEYS.

Will you, or some of your correspondents, inform me of the best mode to fatten turkeys? Whether to shut them up, or to let them run at large, and what kind of food to give them?

A SUBSCRIBER.

Oakham, Mass., Nov. 1, 1859.

REMARKS.—Turkeys are sometimes placed on a comfortable roost in a dark cellar, and will fatten rapidly; but it is a cruel process to deprive the birds of the cheerful light. A better way is to feed them liberally for two months before their flesh is wanted. Give them a variety of food, such as corn, oats, wheat or barley, and once a day a mess of boiled potatoes mashed while hot with Indian meal, mingled with scraps, bits of fresh meat, or in the want of them, a little lard or tallow, just enough to season the whole. If they are fed regularly on such food, and have a supply early in the morning, they will not ramble much, and will continue to grow as well as fatten freely. There may be a better way than this, but if there is, we have not learned it.

CULTIVATION OF NATIVE GRAPES.

I have noticed in many of the distributions of premiums for specimens of grapes, that, to judge by their relative amounts, the greatest importance is attached to the cultivation of the foreign varieties. It seems to be worth considering, whether, if the general interests of the fruit-growing and fruit-consuming community are considered, a different principle might not be adopted with advantage. It would seem to be of

more importance to discover and introduce varieties which are capable of general and out-of-door cultivation, than of such as require the aid of expensive buildings and artificial heat. The modes of artificial culture are already sufficiently understood, and the kinds which require it, are not likely to be improved or increased in number. It is far different with our native grapes. It is very desirable to find or produce those which will ripen early, and which are of more excellent flavor and texture than the common varieties; and also that the mode of managing them should be more generally understood.

No doubt the noble bunches of hot house grapes which we see at horticultural exhibitions present a more engaging outside to visitors than any of the native varieties either do, or probably will. But if the object of their exhibitions be, as it is presumed to be, to encourage a taste for gardening, and also for that kind of gardening which will be more useful, then it would seem that the latter should claim the greatest share of attention. Artificial cultivation is within the reach of but few. Out-of-door cultivation is open to every one, both in city and country, who has a house to live in. The former must be confined mainly to the rich, and those who cultivate for the market; while there are none so poor that they cannot, with a little pains and at almost no expense, raise fruit enough for their own use by the latter method, if they only knew the kinds they should select, and the principles on which they should be managed.

The success which has attended the recent attempts at the improved cultivation of our native varieties gives good ground for expectation that by continued attention a still greater improvement may be attained. What is needed is appreciation and encouragement. The foreign culture will take care of itself, and is not likely to become any better than it is. The native is yet in its infancy, and needs all the aid which emulation or reward can give it. Z. N.

REMARKS.—Excellent suggestions—they lead us in the precise direction which ought to be pursued.

WITCH GRASS.

In your monthly *Farmer* for November, Mr. George Morrison asks, "If you, or any of your correspondents, can tell him where he can get witch grass seed, and at what price, per bushel?" For my part, I think he will not be able to find much of the seed that will germinate; but if he will just take the trouble, he can buy up any quantity of roots, and I will risk their growing anywhere. I guess there will be no fear of their not taking, even if he takes very little trouble with them. If he would apply to me, I would sell him a lot pretty cheap.

ANTI-WITCH GRASS.

HOW TO MAKE HARD SOAP.

Seeing in the monthly *Farmer* an inquiry as to the way of making hard soap, I will, in reply, give my experience. Some twenty years ago, being about to change my place of residence, and having on hand a quantity of excellent soft soap which it was not convenient to remove, I re-

marked that I wished it was hard soap. My husband, who was something of a chemist, said, it could easily be done, by heating it and adding common salt. I did so, adding the salt a little at a time, and trying it, by cooling a little of it. When I found a thick scum rise to the surface, it was dipped into tubs and allowed to stand until next day. The hard crust was then taken off, melted and poured into moulds, and when cold, cut in bars and dried. It proved very good—the older and drier, the better.

MEG.

Nov., 1859.

BARK BORERS.

I think the disease in the trees of your "Still River" correspondent is evidently caused by a species of bark borer.

I have, within a few years, had one tree destroyed, and two others seriously damaged by this insect. It usually attacks the tree on the south side, although this is not invariably the case. I know of no remedy except digging them out with a knife. I have seen a description of this borer in some of my agricultural periodicals recently—think it was the *Country Gentleman*—but cannot now refer to it. I believe, however, it takes some two or more years to complete its growth, which would give time to destroy it before serious mischief was done, if the trees were closely watched.

WM. F. BASSETT.

Ashfield, Mass., Nov., 1859.

ARTIFICIAL GUANO.

I saw in the November *Farmer* a formula for artificial guano; would night soil be better as a substitute in place of garden mould? I see you have referred to Dr. Reynolds—will he please answer the question?

A. L.

For the New England Farmer.

THE LARGE BRONZE TURKEY.

MR. EDITOR:—Having been requested to furnish for the *N. E. Farmer* a description and history of these noble birds, with my method of raising, I would say, as to their history, the first I heard of them was at Point Judith some years since; from there they were brought into this county, and by judicious crossing with other families of the same breed, their size has been increased until I was able to show a male bird last April, which weighed 39 pounds. The hens are much smaller, yet I have one weighing over 20 pounds, and a friend of mine has one weighing 22 pounds. I knew a one-year-old cock, after it was dressed, weigh 32 pounds, and have known 10 young ones dressed in winter, to weigh 200 weight. These were, of course, extra birds, but a cock well cared for seldom weighs less than from 25 to 27 pounds, when dressed, at one year old. For tame and quiet habits, beautiful plumage, and fine, delicate, juicy flesh, I think they have no equal among domestic turkeys. The plumage of the cocks is thick and glossy, with metallic reflections, rendering them exceedingly beautiful; that of the hens has less bronze, yet is strongly marked with it. I will give you my method of raising them in another article.

H. S. RAMSDALL.

West Thompson, Conn., Nov. 1, 1859.

For the New England Farmer.

OPINIONS OF THE AMERICAN GUANO.

[Letter from Dr. Holmes, Editor of the *Maine Farmer*.]

Winthrop, Me., Oct. 19, 1859.

JOHN MEANS, Esq., Augusta, Me.

DEAR SIR:—I have made use of the American Guano that I purchased of you last spring, and am well pleased with it as a fertilizer. I tried a comparative experiment with it in the following manner. A portion of a cornfield was marked off. The American guano was used in the hill, say a gill to each hill; beside this I applied the Peruvian guano in the same way and quantity, and beside this the fish guano in the same manner and quantity. All the rows of corn did well, and I could perceive no particular difference between them. This proves your American guano to be equally as good as other kinds, or, in other words, equally as good as what has hitherto been considered the best.

I have not had opportunity to give it a fair trial as a top-dressing to grass land, but intend to do it next spring. There does not appear to be so much free ammonia escaping from the American guano as from the Peruvian, but it seems to contain enough of it, and as far as I can judge from its action on crops, and not by actual chemical analysis, it contains as much of the other fertilizing ingredients, such as phosphates and other salts, if not more than the Peruvian. With much respect, yours truly,

E. HOLMES.

REMARKS.—In confirmation of the opinion which Dr. Holmes has formed of the value of the American guano, we will state that we have used it for two seasons with the happiest results. The first trial of it was on corn where its effects were distinct through the season; the corn coming on earlier in the spring, growing faster, with a dark green color, and producing abundantly in the ear. This last season we tried it through the centre of a field of corn with similar results. It also produced carrots and potatoes, without other manure, of most excellent quality, and liberal in quantity. On beets and parsnips the result was equally marked. But the point to which we attach the most importance is, that it may be used on any crops as a stimulant and fertilizer in the hill, without endangering the germination of the seed, and thus give corn, or other plants requiring a long season, an early start, and secure their perfection before the time of frosts. In our short, cold and wet springs, it is essential to give the corn crop an early growth, and this we have secured by the use of the American guano, better than in any other way.

We hope our farmers will generally try it, and that the price will be kept within moderate limits, so that all may avail themselves of its advantages. We shall continue to use it freely, if the price does not exceed \$40,00 per ton.





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