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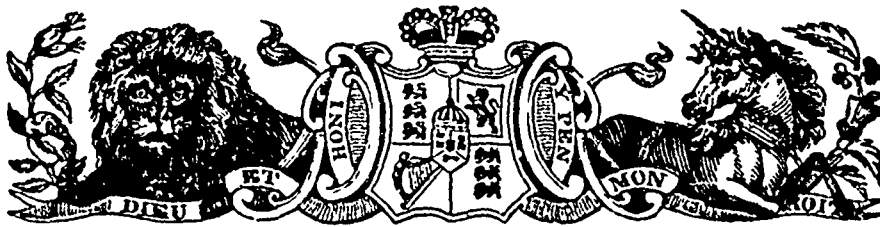
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THE CANADA FARMER



A MONTHLY JOURNAL OF AGRICULTURE & HORTICULTURE.

VOL. I.

HAMILTON, C. W., JANUARY, 1855.

No. 1.

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THE SCIENCE OF WINTERING LIVE STOCK.

Four and a half years ago, when the last census was taken, the Live Stock of the nation was estimated at \$543,822,711. Since that time domestic animals have greatly increased in value, from an augmented demand for all their products. In a few localities, the injury sustained by the almost unprecedented drouth of the past summer and autumn, operated to depress the price of cattle, sheep and swine temporarily, from the scarcity of forage and other stock food. These exceptional cases do not, however, materially affect the general truth of the statement, that live stock is now worth about twenty-five per cent. more, on a fair average, per head, than it was five years ago. In many places good horses and mules have advanced full fifty per cent. in price; while good cows for milk, and superior breeding animals, have risen still higher in the best markets. Estimating the advance at twenty-five per cent., and the present value of our live stock, allowing for no increase of numbers, is \$679,478,389. The inhabitants of the United States increase from two and a half to three per cent. per annum, and their domestic animals in a somewhat larger ratio. At three per cent. a year, the aggre-

gate increase in numbers is nearly fifteen per cent.; but call it only twelve and a half per cent. and the live stock now in the country is worth the very large sum of \$764,413,187.

No other interest of half the importance has been so little studied in all its aspects; and in no other kind of property does the daily consumption of food present so many points for the exercise of wise economy, or for serious losses in consequence of bad management. A moment's reflection will satisfy every reader that inasmuch as domestic animals are large consumers as well as liberal producers, under favorable circumstances, they naturally exaggerate and extend both losses and profits, according to the skill or want of it with which they are propagated, reared and kept. Most kinds of property may be wintered and summered with little or no expense; not so, however, is the fact in reference to live stock. Hence, the Science of Wintering Domestic Animals involves questions of vast pecuniary importance; and it is a department of knowledge that peculiarly commends itself to the best attention of every farmer. He should carefully investigate the return which he is to realize for all the food consumed by each animal during the six most expensive months of the year, in which it is fed mainly by the hand of man. Will the compensation in labor, in flesh, wool, or in milk equal the outlay? Is the gain in any of these, or in all, what it ought to be to render this kind of husbandry really profitable? In what way should animals be fed and housed to yield the best possible return to the stock-grower? It is easy to answer this question by saying that they should be *well* fed and *well* housed to attain this end. But such remarks fail entirely to point out what is good feeding and good shelter, in the proper acceptation of those terms among stock-breeders and keepers. Some believe that it will not pay to provide warm stables, or even

comfortable sheds for cattle; forgetful of the great physiological truth, that artificial warmth is the equivalent of costly food to a considerable extent, in the wintering of all domestic animals. In cold weather, the warm bodies of all animals radiate heat very rapidly, unless protected by fur, wool, or a covering of thick hair, like that found on deer, sheep and Polar bears. No fact in modern science is better established, than that all animal heat is the product of food consumed either a few hours before the heat is evolved, or some days or months previously, and converted into fat, which is stored up in the system to meet any contingency of defective nourishment. Animal fat is one of Nature's curious balance wheels to maintain the even course of vital functions when the ordinary supply of food is withheld from any cause whatever. Although a fat animal in the beginning of winter may be taken through with a less consumption of food than would suffice if it were poor, yet, to burn up the fat in his body to maintain the necessary degree of animal heat, instead of feeding hay, straw, cornstalks, roots or grain, is to pay full six times more for such heat than one need to pay. If we can succeed in making this fact clear to the masses who keep stock, it is to be hoped that not so many animals will be allowed to become so much poorer in the spring than they were in the fall. It is not simply their apparent surplus of fat which animals part with in cold weather when sparingly fed, but they lose also a part of their lean meat, by the daily absorption of their muscles. A lean animal has flattened, thin, impoverished muscles, as well as deficiency of fat, so that his skin and bones are nearly in close contact. It is, then, pre-eminently a practical question—What is the economical value of a pound of fat and of a pound of lean meat, sacrificed in wintering a cow or a steer, to sustain life, as compared with a pound of good hay, as ordinarily consumed for a similar purpose?

The elements in fat which are truly burnt up in the system of an animal to keep it warm, as it becomes poor from a lack of suitable food, are *carbon* and *hydrogen*. Now, let the plain farmer bear in mind this fact—that a pound of carbon in the fat of a living animal, consumed in the process of respiration, which supplies the blood with vital air for that purpose, yields no more heat to warm the body of said animal, than a pound of carbon taken into the circulation from hay, cornstalks or straw. If it were true that a pound of carbon derived from forage would replace that amount of carbon in the form of fat in the cells of a poor animal, then an animal

might subsist in part as cheaply on its own fat as on hay and straw, grain or roots. But all experience, not less than the deductions of true science, proves that a pound of common cattle food does not, and cannot possibly form over one or two ounces of fat, under the most favorable circumstances. To extract an ounce of clear fat or tallow from a pound of good hay, is more than most farmers achieve. If this statement be true, (and successful contradiction is respectfully invited, if it can be furnished,) why should any economical man allow his stock to subsist in part on their own fat and flesh, which is worth from five to fifteen cents a pound? If common forage is too expensive to give them all they really need, pray how much cheaper food for them is solid fat and lean meat? In the order of nature, life cannot be maintained without the expulsion of considerable carbon and hydrogen at every breath, derived either from food, or a part of the solids of the body. *Ema-ciation* has never been discussed, never studied as thoroughly as it ought to be. Rightly understood, it would be avoided with ten fold more care and profit than is now generally witnessed.

It is true that animals may regain their flesh after suffering much from want of food and exposure during the winter, if they do not die in the spring; but the stunt and shock given to the healthy development of every part of the system, are not so easily overcome as some suppose. Why is it that Short-horned cattle sell at such apparently extravagant prices? For no other substantial reason than the fact that this breed, by the superior keep and selections, applied to many generations, comes very early to maturity. Animals only 24 months old, give as much good flesh in the best Short-horns, as is commonly obtained from inferior stock when three, four or five years of age. Such precocious development presents many important advantages to one who breeds and fattens cattle for beef. This principle of never permitting stock to stop growing in winter no more than in summer, cannot be neglected without involving great loss. It is very much like drying off a cow when her milk is largely and healthily secreted, and then attempting to bring her lactiferous system at once back to its former condition. Nature revolts against such treatment, and the vital currents long persist in running in new channels. Physiological science teaches the necessity of *uniformity* in feeding animals the year round. They may endure through the wonderful plasticity of their various organisms and vital functions, repeated and protracted short allowance joined with an uncomfortable degree of

cold and wetness, but such ill treatment is never wise nor profitable. Man himself has the physical power to sustain great privations. This fact does not, however, justify the deliberate infliction of any sufferings upon him. During the storms of winter, poor brutes often suffer badly from cruel neglect.

Humanity and self-interest co-operate in prompting us to take excellent care of all live stock in cold weather. They should be regularly fed, if fed at all; for regularity in the daily consumption of food renders it twice as serviceable as it would be if consumed at very unequal intervals, and in unlike quantities. The colder the weather, or rather, the colder the atmosphere that surrounds animals, the more forage they need, and the richer it should be in soluble carbon and hydrogen in an excess of the combined oxygen. For if carbon already has so much oxygen combined with it that it will not burn, or if hydrogen be in a similar condition, then neither can add any warmth to the cooling body of a domestic animal. All such aliment is as worthless as a gallon of pure vinegar poured into the stomach of a poor, freezing ox to warm him, and make healthy blood. Oil cake and corn meal are the true types of the kind of aliment needed by stock in winter. The reason why carbon and hydrogen in the form of oil in seeds, as in maize, flaxseed, &c., is worth nearly two and a half times more as aliment than carbon and hydrogen in the form of starch or sugar, is because one is fitted to evolve heat in the animal economy, and the other is not. Hence, it is a great improvement to cooked potatoes or rice to be eaten by persons, both of which are exceedingly rich in starch, to add an ounce of butter to eight of this farinaceous aliment. Plants rich in sugar, like beets, and maize before its seeds are formed, and many other grasses, are highly nutritive and calorific, as winter feed for neat stock. To form healthy blood and a plenty of it in winter, the food of domestic animals should be at once sufficiently soluble in the organs of digestion, and abound in both heat-generating and muscle-forming constituents. Such food yields the best blood and the cheapest possible meat, milk and wool.

CHEMISTRY OF SOILS.

The chemistry of soils is a subject of great importance to the practical agriculturist, and which more than almost any other at the present time, demands a careful and laborious investigation.

Though there are many things in the phenomena of vegetation, the sources of the nutrition of plants,

and the dependence of all upon unknown atmospheric influences, which, as yet, are beyond our knowledge and clear comprehension, yet enough has already been discovered by science to afford the intelligent farmer material aid in his labor, and stimulate him to observe with care and attention the various phenomena presented to his view. It has been ascertained that certain ingredients are present in every fertile soil, the absence of any one of which, or its isomeric equivalent, diminishes the yield of harvest. When we analyse the ash of different species of plants, we find various elements present in various proportions, and the same elements are constant in the same plant. Without these elements the seed cannot be ripened or the plant attain its perfect development and growth. For example, we find in all cereal or grain crops that phosphorus or its compounds is present in the ash; and in every soil where these crops are grown in perfection, we also find that a compound of phosphorus is present.

How little of the elements of a fertile soil is sufficient for the complete growth of the different organs of a plant, we do not know, and upon this point we need exact experiments. We know what ingredients are present in fertile soils — in what proportion they must be combined, we know not.

Submitting the ashes of the most opposite kinds of plants to analysis, we present the following substances:

<i>Acids.</i>	<i>Metallic Oxides.</i>
Carbonic Acid,	Potassa,
Silicic Acid, (Silica),	Soda,
Phosphoric Acid,	Lime,
Sulphuric Acid,	Magnesia,
Nitric Acid.	Alumina,
	Ses-qui oxide of iron,
	Oxide Manganese.

Also, chloride of sodium or common salt, chloride of potassium; and in marine plants, iodide of sodium and iodide of magnesium. What office these various acids and oxides perform in the nutrition and growth of plants, we do not know, and perhaps may never know; but we do know that for any given crop, if the elements of its ashes are wanting in the soil, we need not hope for seed in harvest. With these elements present, every plant may be regarded as a laboratory or factory, engaged in the solution and suitable arrangement of materials from without. No one of these materials can be produced by the plant, consequently they come from without. If then these materials are not at hand, the plant withers and dies, precisely as a lamp goes out when the supply of oil is exhausted. An interesting illustration is afforded by the cultivation and growth of the sugar cane. From an analysis made by Dr. STENHOUSE, and published

in a supplementary number of the *London, Edin. & Dub. Phil. Magazine*, page 533, 1854, we find that in full grown canes there are present silica, phosphoric acid, sulphuric acid, lime, magnesia, potassa, soda, chloride of potassium and chloride of sodium. The sugar obtained from the juice is an organic substance, (*i. e.*, a substance not composed of minerals, its formula being $C_{24}H_{42}O_{22}$ —gases always present in the air or water); consequently, to produce the sugar only, does not exhaust the soil—to produce the cane does so exhaust the soil; then, if the ashes or canes be returned to the soil, we see no reason why sugar lands, so called, may not be cultivated indefinitely. Now, how does fact bear out these inferences? In many sections of the West Indies, owing to the scarcity of fuel, they are obliged to use the bagasse (dried refuse of stalks after the juice is pressed out) as fuel for evaporating the syrup. The silica and alkalis present are converted into a hard, insoluble glass, which, in this form, being useless, is thrown away. In Louisiana, on the contrary, hitherto, wood has been used as fuel, and the crushed cane being returned to the field, the yield of sugar from their fields is but little, even after years of cultivation. As another illustration, to what cause can be attributed the almost magical guano and similar manures on soils which, before their application, are hopelessly sterile and barren? Simply because that in those manures are these elements which have been carried away by a succession of cereal or grain crops, and after the land has been robbed of all its fertility, it is turned out to rest.—Similar, unfortunately, is the practice of too many at the present day. Intent upon present gain, too wise to profit from the experience of others, and regardless of their own permanent welfare, they pursue the same beaten track of exhaustion, and ultimate starvation.

But to return to our subject. A few soils formed by the debris, or pulverization of volcanic rocks, seem capable of the indefinite and successful cultivation of grain crops, a year's rest, when it seems to have become tired, so to speak, provides anew the elements of fertility. Such is not the case, however, with the vast majority of American farms. Our cities are the devourers of the fertile elements of their soils, and in too many cases it is but a beggarly pittance that is given back by them. In every carcass of an animal conveyed to the city shambles—in every pound of cheese, bushel of wheat, corn, oats, &c., the same loss is occurring; and how few there are who seem aware of the necessity of returning to

generous Mother Earth, what her prodigal children so thoughtlessly waste.

This restoration, or supply of fertile elements, must be made by every one who would preserve, unimpaired, the productive capacity of his land. How it can best be done, will be considered when we treat of manures and manuring.

BEE CULTURE.

THE great obstacle to successful bee culture, is the ravages of the bee moth. Wherever the bee can enter, the moth miller can do the same; and we believe that in every hive, patented or unpatented, the havoc made by the lodgement of worms in the hive still remains the most serious difficulty.

The bee-masters and apiarians of European countries do not speak so strongly, or so often allude to the insect in question, as is done by those of the United States.

There is no remedy, in fact, but a care and watchfulness removing all hiding places for the miller from about the hive and bee-house, and a constant inspection and cleansing of the bottom board of the hive.

Such being the case, those hives which do not allow of this cleansing and removal of the dirt and excrements of bees, fail wholly to answer the desired end.

Considering the nature and character of the honey bee—the order and system in which the different operations are carried on in a hive, their internal government and economy, their indefatigable industry in collecting their luscious store, and the wondrous skill displayed in the construction of the comb and the shape of their cells—we do not wonder that the attention of eminent philosophers should have been directed to them; and once engaged in the interesting work, a life time can be spent in the study and contemplation of their nature and mysteries.

The editor of the *American Agriculturist*, who is an experienced apiarian, gives it as his opinion, that a plain box hive, of the very simplest construction, is equal to any of the patented hives now before the public; and that the more simple the fixtures for a hive and apiary, the more likely to be successful in their culture.

Mr. QUIMBY states in the *Country Gentleman*, that he has "an interest in about 400 hives, and has sold this season about two tons of honey." He also states, as a fact, "that in all extensive apiaries that he has visited, the patent hives are not used—they are found in apiaries that seldom exceed twenty

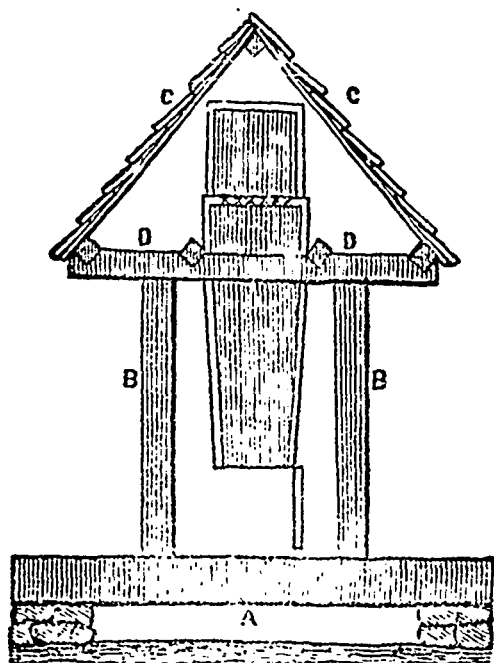
hives — that he could mention a great many where they are managed according to nature, that number from fifty to two hundred stocks."

Conversing with an experienced apiarian, of a neighboring county, respecting the habits of the bee moth, he stated as his opinion, that wherever opportunity was afforded, the moth miller would certainly enter — that they deposit their eggs in every crack and crevice they can find in and about the hive; and if facilities are not afforded by which, when hatched, the worm could be kept from crawling up to the comb, one might as well throw away his hive at once.

Having on one occasion elevated the front edge about half an inch above the bottom board, he was very much surprised, in the early part of the spring, to find the back part, between the bottom and the upright sides of the hive, full of the larvæ of the bee moth; and after that, daily or at least as often as three times a week, he carefully examined his hive and removed all the larvæ as they were deposited.

His reward in the fall was an abundance of honey, and a hive in which he could discover no signs of the moth.

We give below an engraving of the hive and stand described by Mr. E. STABLER, in a communication to the first annual Exhibition of the Maryland State Society, to whom was awarded the first premium for the best lot of honey. The cut we copy from the *American Farmer*



BEE HOUSE AND HIVE.

"The engraving represents the end of the house, which is twelve feet long, affording ample room for eight hives. The house is a slight frame, resting on

the sills, six feet long; one at each end of the house, six inches square, laid upon stones or bricks, six (or more) inches from the ground.

"(A) The Sills — Into each of these are morticed (B B) two posts, four inches square and three feet four inches long, placed two feet apart, and standing upright. On the end of these is placed a plate (D), four inches square, and four feet four inches long. Upon this is framed the roof (C), as may best suit the builder. [Mine is simply rested in notches cut in the ends of the plates, so that four men can at any time lift it off or on if necessary.]

"The hive is fourteen inches square at the top, and ten inches square at the bottom, and three feet two inches long. The box on the top is twelve inches square in the clear. A glass window, covered with a sliding board. There are holes, one and a half inches in diameter, in the top of the hive, over which the box is placed. The bottom of the hive is fastened to the back part thereof, by a hinge. Upon the plates and near the middle are placed two pieces of scantling, three inches square and one foot apart, both let on cornerwise (so as to present the corners towards each other). The hive is suspended between these runners, leaving the bottom of it some two feet from the ground.

"It will be perceived that the conical form of the hive, enables us to slip it down between the runners, which hold it steadily in its proper position, and as the bees fill it with honey, its form operates as a wedge, effectually preventing the breaking off and falling of the honey-comb. The bottom of the hive is suffered to hang down, from early in the spring till late in the fall, permitting the wrens, sparrows, blue birds, &c., to search for the moth or miller, and also affording the bees a fair opportunity of dislodging from the hive any insect that may enter it.

"When the weather becomes cold, the bottom is raised by means of a cord, and made stationary at any height desired.

"The hives are placed in the house empty, having first been cleaned, and rubbed with a mixture of salt and sugar (a tea-spoonful of each, moistened with water).

"When a swarm of bees is to be hived, make a little scaffolding of boards under the hive; on this spread a clean cloth. Having cut off the bush or limb, on which the bees have settled, shake them off the bush, on to the cloth, and they will soon take possession of their new home.

"At any time, (a few weeks having elapsed after the box is filled) the box may be removed at night, and placed bottom upwards in the cellar, or some open out-house, and early the next morning every bee will leave it and return to the hive. Then take out the honey and replace the box the next evening.

"If it be thought best not to disturb the young swarm during the summer, the bees, when the weather becomes cool in the fall of the year, will all retire to the central part of the main hive, and the box of honey may be removed without disturbing them in the least.

"The box containing the honey, herewith exhibited, was removed in this manner about ten days ago, and was filled by a swarm hived last spring, leaving the bees a large supply for the winter."

season of 1854, with 1120 sheep, 510 of which were ewes, 275 lambs, 268 wethers and 67 bucks.

"The receipts of this year show:

100 fed wethers, sold in March last to the butcher.....	\$537.00
8 pelts.....	7.55
65 lambs sold B. K. H., at \$2.50.....	112.00
3084 lbs wool sold Wheeler, at 34.....	1381.50
153 grass wethers, sold butcher, including 3 bucks.....	479.00
120 store sheep for sale, say \$2.....	241.00
Add 463 lambs, unsold increase of 1854, at \$2.50.....	1007.00

Amounting to the sum of.....	\$3725.50
Deduct the expense of keeping on 1120 sheep, at \$1.15 per head, and extra \$50 for feeding wethers, less \$30 the expense of pasturage saved.....	1308.00

Showing a net, for 1854, of\$2417.50
Or a net of \$2.15 per head.

"The average weight of fleece this year being 3 lbs. 10 oz.

The net receipts for three years foot.....	\$5613.80
From which deduct capital invested.....	\$3301.90
And the amount credited for lambs.....	2062.79
And it will leave us a balance of.....	534.60
And 1094 select sheep on hand, paid for, (better than cash at \$3 per head,) amounting to.....	249.20
	3282.00

Showing the net gain in three years of.....\$3581.29
on the item of sheep alone."

[For the Genesee Farmer.]

FARMING IN EASTERN PENNSYLVANIA.

EASTERN Pennsylvania is perhaps richer in combined agricultural and mineral resources than any other section on the Atlantic Slope. The fertility of the southern portion has long been celebrated, while the coal and iron mines of the middle and northern portions are almost unequalled on the face of the globe. Agriculture, however, in Eastern Pennsylvania, constitutes the most important interest, although the tourist would come to a different conclusion from the many manufactories which he finds on every side as he passes through the country. In truth, nature seems to have afforded such facilities for manufactories as to cause the manufacturing interest sooner or later to transcend all others; but the fertility of the soil, and the more certain gains of agriculture, have thus far made the agricultural the predominating interest.

The soil is generally good, although varying in its adaptation to the raising of particular crops with its situation. The Blue Ridge, commencing near Belvidere, in New Jersey, and extending in a south-westerly direction, separates this section into two parts, whose geological features are quite different. South of the Ridge we find the limestone formation which traverses a large section of South-eastern Pennsylvania, while north of it lies slate, marl and sandstone formations; hence it will be seen that the former is better adapted to wheat and cereal crops generally, while grass, potatoes, oats and the hardier grains seem better adapted to the other section. The soil in both sections has been much improved by the per-

severing labor of its owners; especially in the south-eastern section the country resembles a garden. Farms are generally not large, but they are thoroughly tilled, and probably are as fruitful and profitable as any in the Union. Where there is access to large towns or cities, more attention is paid to the raising of poultry, vegetables, and floral and horticultural products; but in the interior the attention of farmers is principally turned to dairying—to the production of the ordinary grass and cereal crops. The vegetable and horticultural departments are too much neglected; one reason is, probably, that farmers are not generally aware that as much profit can be made from one as from the other. Let them learn this, and the cultivated tastes and scientific principles required for their successful cultivation will soon follow.

Their systems of rotation in crops vary with circumstances. A common system is to fallow successive crops of corn with oats, and after oats to seed wheat about the first of September. In February or March clover seed is sown, so that after the wheat is cut the field is seeded down; after this it is mown or pastured. Of course it is unimportant what system of rotation is adopted, provided the land is not exhausted by too frequent repetitions, or by working it too much without proper care in dressing and manuring.

Fruit, as is too common in other States, is too much neglected. To be sure, there is scarcely a farm without its apple orchard, and a few cherry, peach and plum trees; but too little attention is given to selecting the best fruit and to grafting and thorough cultivation. Apples—natural, not grafted fruit—are most extensively cultivated, on account of their use in household affairs: cider and apple butter are necessities of life, especially. Apple butter is made by boiling apples and cider together from 5 to 7 or 8 hours; in that time it begins to thicken, and when reduced to the required consistency is taken from the fire and placed in earthen pots for winter consumption. In former times, and perhaps now to some extent, boiling apple butter is, like our old Yankee apple-paring and husking bees, made the occasion of family gatherings among the young people of both sexes in a community.

Improved systems of farming are but lightly esteemed by Pennsylvania farmers generally, especially by the German class. Manual labor is their reliance, with but little aid from science. This is partially the result of old prejudices against innovation and radicalism of every sort, which is the marked character

istic of the Germans of Pennsylvania. They are slow and steady, honest conservators: and here let me say, that in this age of haste, bustle and excitement of fast men, fast traveling and bitter radicalism, they form a valuable component part of the body politic. Preferring to hold fast to the time-honored principles and examples of their ancestors, they plow, plant and reap as did their fathers before them. Year after year they follow the same unbroken round of duties, only striving that each year may leave them richer than it found them; and generally, by frugality, industry and close application to their affairs, they secure a competence, which in due time is left for their children, who will follow in the same path.

Improvements in agricultural tools are not known or regarded as much as they should be. However, there is certainly a vast improvement in this respect during the last ten years. The German population are slowly but surely advancing in the right direction.

The English language is slowly gaining, and must eventually be the medium through which all business will be done. Railroads now in process of construction to and through the mineral deposits, must quicken exchanges, give more energy and life to trade, raise the standard of education by calling out more mental labor in the transaction of increased business.

Till within the past four years, the middle and northern sections of Eastern Pennsylvania have been mainly dependent upon the canals and rivers for exchanges; in that time they have been connected with New York and Philadelphia by the New York Central and the Belvidere, Delaware, Railroad. Three others are now in process of construction, among which is the one which will be of the most permanent benefit to North-Eastern Pennsylvania, i. e., the Northern Pennsylvania Railroad. It commences at Philadelphia, passes through the coal mines, and extends to Waverley, on the N. Y. and Erie Railroad; and not only to this section of Pennsylvania, but to all that part of New York lying west of the longitude of Waverley; for it opens to them a new market, which is at least 30 miles nearer than New York city. An immense market will therefore be thrown open to Central New York; while if the reciprocity measures, now almost entered into between New York and Canada, produce half the benefits which their advocates claim, the benefit to accrue both to New York and Eastern Pennsylvania must be great.

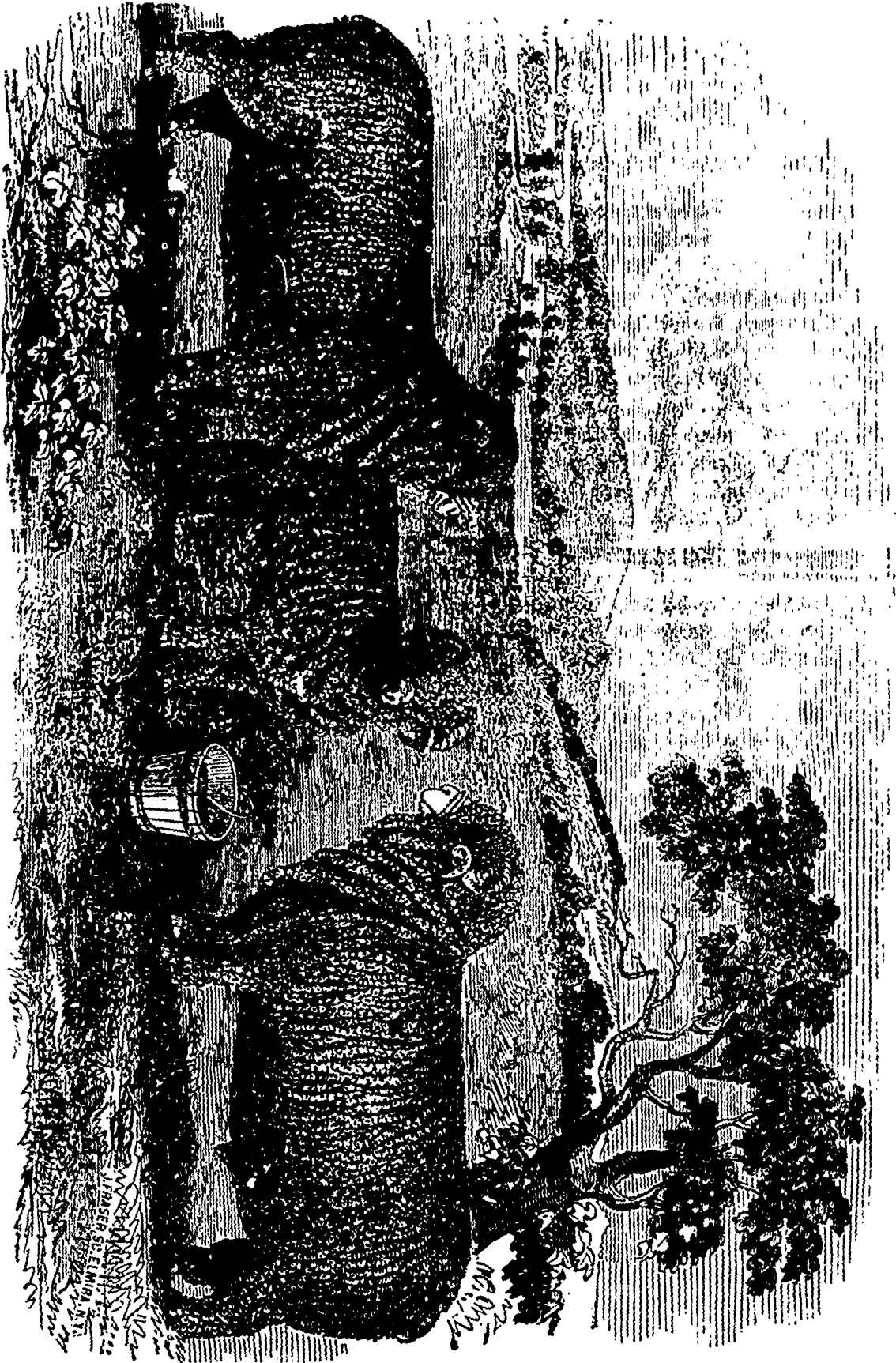
E. A.

EASTON, Pa. 1854.

[For the Gentle Farmer]
FRENCH MERINO SHEEP.

MR. EDITOR:—In connection with the plate of French Merino Sheep, accompanying this, I will (as you requested.) offer a few remarks. With regard to the fitness of this variety of Merino sheep for the general wants of the country at large, I think the great demand for them fully proves it. They have been tried by some of our most experienced breeders, and many prefer them to the Spanish Merino, and many again prefer the latter. Indeed, it seems now to be generally conceded that for the double purpose of raising wool and mutton, the French and Spanish Merino sheep are unequaled. The two families have their peculiar merits, and each their advocates. The Spanish Merino sheep are justly celebrated for their heavy fleeces, and their good constitution. In these respects I think they are equaled, if not surpassed, by the French. To me, one recommendation which the French sheep carry with them, is their size; and this seems to be a point which many sheep breeders greatly desire. I think the French sheep will supply this desideratum. I am well aware that many urge the greater amount of food required by the larger variety of sheep, as an objection to them. This is a point on which I can speak from my own experience alone, and that leads me to the conclusion that I reap greater profits from the greater amount of food fed to a large sheep, than from the lesser amount fed to a smaller sheep. Another peculiarity of this variety is their prolificness. I have had five lambs in seven months from one ewe; and it is no uncommon circumstance for my ewes to drop twins. As nurses, they are equal to any breed of sheep with which I am acquainted. I have now two ewes, imported by Mr. D. C. COLLINS, in 1840, and selected from the flock of RAMBOUILLET, which this year dropped four lambs. The lambs were strong and thrifty. This, I think, denotes a long-lived and prolific race of sheep. They possess as good constitutions and were as hardy and thrifty as any breed of sheep I ever owned; I have not lost one per cent. by disease since I have been keeping them, which has been for some six years past. I raise about one hundred and fifty per cent. of lambs, and find the lambs when dropped much hardier and stronger than any other breed I have ever owned. They are easily raised, requiring but little attention. The habits of French sheep, too, are such as must tend to fatten easily. They are quiet and docile, rarely moving rapidly, or traveling far, but seem rather to prefer remaining pretty much in one place. Indeed, after an experience of some

FRENCH MERINO SHEEP, IMPORTED BY J. D. PATTERSON, OF WESTFIELD, CHATTAUGUE CO., N. Y.



years and of some extent as to numbers and kinds, I am compelled to give the French sheep a preference to any other variety or breed with which I am acquainted.

J. D. PATTERSON.

WESTFIELD, Chautauque co., N. Y.

[For the Genesee Farmer.]

AN EFFECTUAL METHOD FOR DESTROYING RATS.

MR. EDITOR:—In a late number of your excellent Magazine, I noticed a communication from a farmer, bewailing the state of his building, with regard to those destructive animals, the rats.

Many years ago, the old mansion in which my father lived, was so dreadfully infested with rats, that the basement of the building was quite undermined; seventeen large rats were caught in one week in traps, in the wine cellar alone; many died from poisoned bait, but still they increased. The servants believed the house was haunted, and certainly if the spirit rappers had been in fashion in those days, we might have been justified in giving credence to such outward manifestations of the Powers of Darkness—for truly, such midnight racing, and knocking, and rapping, were enough to startle the least timid;—but, though poor, dear, old Mr. MARTIN EWEN got all the credit for the nocturnal disturbance, it was rats, rats, rats, and nothing but rats, that haunted the old hall. The rat-catcher was fairly beaten out; he had lost several of his best ferrets, and declared his belief that the house was bewitched, and that some one had charmed all the rats into the premises,—for neither ferrets, nux vomica, nor any other rats-bane had the least effect upon them.

One day a stranger came to the house to buy some barley, and hearing my father mention the difficulty he had in freeing the house of these disagreeable tenants, he said he could put him in the way of getting rid of them with very little trouble. His directions were simply these: mix a quantity of arsenic with any sort of grease, and plaster it pretty thick around all their holes. The rats, he said, if they did not eat the poison, would soil their coats in passing through the holes, and as, like all furred animals, they are very cleanly, and cannot endure any dirt upon their coats, to remove the offensive matter they would lick their fur, and thus destroy themselves. This plan was immediately put in practice, and in a month's time not a rat was to be seen about the house or barn.

Finely pounded glass mixed with grease has also acted effectually as a poison, I have heard, but I can vouch for the efficacy of the first named. C. P. T.

SMALL FARMS IN BELGIUM.

THE small farms of from five to ten acres which abound in many parts of Belgium, closely resemble the small holdings in Ireland; but the small Irish cultivator exists in a state of miserable privation of the common comforts and conveniences of civilized life, whilst the Belgian peasant farmer enjoys a large portion of those comforts.

The houses of the small cultivators in Belgium are generally substantially built, and in good repair; they have commonly a sleeping room in the attic, and closets for beds connected with the lower apartment, which is convenient in size; a small cellar for the dairy, and a store for the grain, as well as an oven, and an out-house for the potatoes, with a cattle stall, piggery, and poultry loft. The house generally contains decent furniture, the bedding is sufficient in quantity, and although the scrupulous cleanliness of the Dutch may not be everywhere observable, an air of comfort and propriety pervades the whole establishment. The cattle are supplied with straw for bedding; the dung and urine are carefully collected in the tank; the ditches are scoured to collect materials for manure; the dry leaves, potato tops, &c., are collected in a moist ditch to undergo the process of fermentation, and heaps of compost are in course of preparation. The premises are generally kept in neat and compact order, and a scrupulous attention to a most rigid economy is everywhere apparent. We observed that all the members of the family were decently clad, none of them were ragged or slovenly, even when their dress consists of the coarsest material. The men universally wear the blouse, and wooden shoes are in common use by both sexes. The diet consists, to a large extent, of rye bread and milk. The dinner is usually composed of a mess of potatoes and onions, with the occasional addition of some pounded ham or slices of bacon. The quantity of wheaten bread consumed did not appear to be considerable. I need not point out the striking contrast of the mode of living here described, with the state of the same class of persons in Ireland; and it is important to investigate the causes of this difference.

In the greater part of the flat country of Belgium, the soil is light and sandy, and easily worked; but its productive powers are certainly inferior to the general soil of Ireland, and the climate does not appear to be superior. To the soil and the climate, therefore, the Belgian does not owe his superiority in comfort and position over the Irish cultivator. The difference is rather to be found in the system of cultivation pursued by the small farmers of Belgium, and in the habits of industry, economy, and forethought of the people. The cultivation of the small Belgian farms differs from the Irish—first, in the quantity of stall fed stock which is kept, and by which a supply of manure is regularly secured; second in the strict attention paid to the collecting of manure, which is most skillfully managed; third, by the adoption of a system of rotation of five, six, or seven changes of crop, even on the smallest farms, which is in striking contrast with the plan of cropping and fallowing the land prevalent in Ireland, and by which so large a portion of its produce and powers are every year wasted.

In the farms of six acres, we found no plow, horse or cart; the only agricultural implement, besides the spade, fork and wheel barrow, which we observed, was a light wooden harrow, which might be dragged by hand. The farmer had no assistance, besides that of his wife and children, excepting sometimes in harvest, when we found he occasionally obtained the aid of a neighbor, or hired a laborer at a franc per day. The whole of the land is dug with the spade, and trenched very deep; but as the soil is light, the labor of digging is not great. The stock on the small farms which we examined, consisted of a couple of cows, a calf or two, one or two pigs, sometimes a goat or two and some poultry. The cows are altogether stall-fed, on straw, turnips, clover, rye, vetches, carrots, potatoes, and a kind of soup made by boiling up potatoes, peas, beans, bran, cut hay, &c., into one mess, and which being given warm is said to be very wholesome, and to promote the secretion of milk. In some districts, the grains of the breweries and distilleries are used for the cattle, and the failure of the Belgian distilleries has been reckoned a calamity to the agriculture of the country, on account of the loss of the supply of manure which was produced by the cattle fed in the stalls of these establishments.

The success of the Belgian farmer depends mainly upon the number of cattle which he can maintain by the produce of his land, the general lightness of the soil rendering the constant application of manure absolutely necessary to the production of a crop. The attention of the cultivator is always therefore especially directed to obtain a supply of manure. Some small farmers with this view, agree with the sheep dealer to find stall room and straw for his sheep, to attend to them, and to furnish fodder at the market price, on condition of retaining the dung. The small farmer collects in his stable, in a tank lined with brick, the dung and urine of his cattle. He buys sufficient lime to mingle with the scouring of his ditches, and with decayed leaves, potato tops, &c., which he is careful to collect, in order to enrich his compost, which is dug over two or three times in the course of the winter. No portion of the ground is allowed to lie fallow, but it is divided into six or seven small plots, on each of which a system of rotation is adopted; and thus, with the aid of manure, the powers of the soil are maintained unexhausted, in a state of constant activity.

The order of succession in the crops is various; but we observed on the six acre farms which we visited, plots appropriated to potatoes, wheat, barley, clover, (which had been sown with the preceding year's barley), flax, rye, carrots, turnips, or parsnips, vetches, and rye, for immediate use as green food for the cattle. The flax grown is heckled and spun by the farmer's wife, chiefly during the winter, and we are told that three weeks' labor at the loom towards the spring, enabled them to weave into cloth all the thread thus prepared. The weavers are generally a distinct class from the small farmers, though the laborers chiefly supported by the loom commonly occupy about an acre of land, sometimes more, their labor upon the land alternating with their work at the loom. In some districts, we were informed, every gradation in the extent of occupancy, from a quarter or half an acre, to the six acre farm, is to be found;

and in such cases more work is done in the loom by the smaller occupiers.

The labor of the field, the management of the cattle, the preparation of manure, the regulation of the crops, and the carrying a portion of the produce to market, call for the constant exercise of industry, skill and foresight among the Belgian peasant farmers; and to these qualities they add economy, sobriety, and a contented spirit, which finds its chief gratification beneath the domestic roof, from which the father of the family rarely wanders in search of excitement abroad. It was most gratifying to observe the comfort displayed in the whole economy of the households of these small cultivators, and the respectability in which they lived. As far as I could learn, there is no tendency to the subdivision of the small holdings. I heard of none under five acres, held by the class of peasant farmers, and six, seven, or eight acres, is the more common size. The provident habits of these small farmers, enable them to maintain a high standard of comfort, and they are therefore necessarily opposed to such subdivision. Their marriages are not contracted so early as in Ireland, and the consequent struggle for subsistence among their offspring does not exist. The proprietors of the soil retain the free and unrestricted disposal of their property, whether divided into smaller or larger holdings; but we were assured, that an industrious tenant was rarely, if ever, dispossessed. The common rent of land is about 20s. sterling, an acre, and the usual rate of wages for a day laborer is a franc (or 10d.) a day.—*M. S. in Ulster Gazette.*

RAPE CAKE FOR FEEDING.

PERHAPS no agricultural subject has excited more attention and discussion than the qualities and value of materials for food. BOUSSINGAULT and other celebrated writers have published tables of the theoretical values of different materials derived solely from their proportion of nitrogen, giving the highest value to such as contain the greatest percentage of this element. Consideration will, however, teach that highly nitrogenous food has a greater value for special or particular than for general purposes. If you examine the composition of milk, taken as dry material, it has the highest proportion, nearly 40 per cent. of nitrogenous compounds; yet as food for building up the frames of young animals, neither experience nor science has been able to devise any substitute of equal efficacy. I have shown, too, that food rich in albumen has a special value for the production of milk; it has likewise a special value in making good the deficiency of materials of food which do not contain a due proportion. We find that Swede turnips which contain about 16 per cent. of albumen in their material fatten satisfactorily; that the rich pasture grasses, which have a very similar proportion, have the like effect. We find that meadow hay, with its 6 or 8 per cent., maintains, but does not fatten, while on straw, with $1\frac{1}{2}$ per cent. of albuminous matter, cattle exist for a time but do not thrive. The deficiency in these can be supplied only by materials rich in albumen. In addition to my cattle, I maintain about 50 lam'ing ewes, which I purchase in October, and also earlings. To the former, which

drop their lambs in March, I likewise give rape-cake. I commence this practice during the winter, and continue it throughout the season. At the commencement I supply it in small quantities, with a sprinkling of oats; now and then an ewe is seen to nibble by degrees, and after a lapse of some weeks they also get accustomed to it, and eat to the extent of $\frac{1}{2}$ to $\frac{3}{4}$ of a pound per day each. As the composition of sheep's milk resembles that of the cow, I need not remark on its adaptation to the purpose.

Being engaged in the business of keeping cows for dairy purposes, and likewise for fattening, of which latter I send out 50 to 60 per year, the comparative effect of the two processes on the fertility of the land in my occupation has engaged much of my attention. On the rich feeding pastures of this district, cattle graze from year to year, and for a long series of years, without any perceptible diminution of their fertility. The cattle for this purpose being well-grown animals, their increase will be to flesh and fat; and, reckoning the same rate of increase as above noticed, each beast will carry off in flesh the nitrogen equal to what will be supplied by 3 cwt. of oil-cake or beans. This appears to be fully restored through the agency of the atmosphere. The effect of dairy produce is known to be very different. In Cheshire and other cheese-making and dairy districts it is found necessary, with a view of maintaining the fertility of the pastures, to apply a top-dressing of bones, rich in gelatine and phosphate of lime, every 6 or 7 years. It has been shown that, in a full yield of milk, more than three times the quantity of nitrogenous matter is contained than can be assimilated in the increase of beef; besides which, milk carries off a considerable quantity of phosphate of lime and other mineral matters. The amount of nitrogen removed by a cow giving $3\frac{1}{2}$ gallons per day carries off the nitrogen of 5.70 lbs., or for the half year 9 cwt. rape-cake; 2 gallons per day carries off the nitrogen of 3.25 lbs., or for the half year $5\frac{1}{2}$ cwt. rape-cake; while the nitrogen assimilated by a fattening beast requires only 1.76 lbs per day, or 3 cwt. per year to replace it. It is to be observed that a cow on rich pasture, giving only 4 quarts per day, will gain flesh likewise, and carry off nitrogen in addition. The analysis of rape-cake show about 4 per cent. of phosphate of lime and phosphoric acid. A full yield of milk will require 2 lbs per day, or 3 cwt. 36 lbs for the season, to restore this element of fertility. It will be remarked that no part of this is supplied by the atmosphere.

I have shown by the treatment of milch cows that I am able with a full yield of milk to maintain their condition. I hold it equally desirable to keep up the fertility of my pastures. Since I began the use of rape cake, I am effecting more than this—they are gaining from year to year in productiveness.

In the woolen manufacture, shoddy or refuse wool, which was formerly sent to Kent as manure, is now sorted over and a great proportion of it is retained for again working up into new materials. In the cotton trade, what was formerly looked upon, and termed waste, is now cleaned from its filth and manufactured into stout cloths for export, some of them probably to the very remote countries in which the cotton was produced. Agriculture is, in this respect,

far in arrear; a great waste, not only of material of food but likewise of material to produce that food, is daily occurring.—*Y., in the Lon. Ag. Gazette.*

GARGET CAN BE CURED.

It has been ascertained that hydriodate of potash will cure the worst cases of this disease. Twelve grains, dissolved in a table-spoonful of water, may be given at a dose, and three doses given each day till the cure is perfected. Three or four weeks are usually sufficient for the purpose. If it is inconvenient to give a dose at noon, let the morning and night doses contain eighteen grains each; though three of twelve grains each are probably better.

The matter is very easily managed. Get at an apothecary's store an ounce and a half of the medicine; which at 440 grains to the ounce will contain 660 grains. This will make fifty-five doses of twelve grains each. Put the whole into a glass bottle of sufficient capacity, with fifty-five table-spoonful of cold water. Shake briskly, and it will be thoroughly dissolved in a few moments; and every table-spoonful will contain the requisite quantity of twelve grains. Wet a little Indian meal or shorts with water enough to make a stiff paste, and stir in the dose.

The above remedy was substantially communicated, not long since, to the *New England Farmer*, by the gentleman who discovered it, and who had tried it in repeated instances with uniform success.

Hydriodate of potash is much used by physicians, and is well known to act *directly* upon the mammary vessels.

This remedy, for the odious disease of garget, ought to be universally known, as it might be the means of saving, annually, many valuable animals.

The best cows—those giving the richest milk, and the greatest quantity—are the ones oftenest attacked.

The Rev. DANIEL C. WESTON, of this city, to whom we are permitted to refer, has recently tried this method of cure with entire success. He has a valuable cow that was badly attacked with garget soon after calving last spring. One of the hinder quarters of the bag was so caked and inflamed, that, though ordinarily perfectly gentle, she would kick at the least motion to touch it. The milk was of a reddish color, and left in the pan a bloody sediment. No portion of the milk can be relied on, as the milk from those teats that gave no external marks of disease, left in the pan a bloody deposit.

Every remedy, known to the wiseacres hereabouts, was faithfully tried without effect. Garget root, salt-petre, glauber salts, sulphur, given in the most approved quantities, (to say nothing of various outward applications,) each and all absolutely failed to afford any relief. There was every probability that the cow was ruined, and Mr. Weston was strongly advised to give her up and fat her for the butcher.

At this point a copy of the *New England Farmer*, containing the above recipe, was put into his hands by a friend, and he immediately proceeded to test its qualities. When he began to give it, the bag was almost one solid cake. In three or four days the bag began to soften. In seven days there was a decided improvement. In two weeks there was no bloody sediment in the milk. In three weeks the

cake had entirely left the hinder quarter, and in the forward quarter was about the size of a pullet's egg. In this quarter the disease made its final stand, and showed some obstinacy. But it was fairly cornered, and in a week or two more evacuated the premises altogether, after having held villainous and undisputed sway for more than three months. The cow, at this present writing, Nov. 1, is in fine order and condition, and gives eight quarts per day of very rich and pure milk. The quantity of medicine used by Mr. WESTON in this case was two ounces and a half.

—*Maine Farmer.*

SUMMER AND WINTER FOOD FOR COWS.

THE editor of the *American Agriculturist* has recently visited the farm of S. B. HALIDAY, near Providence, R. I. His farm contains 130 acres, part of which is used as a market garden. Of course, land cultivated in this way needs thorough manuring, and a large number of cows are kept constantly manufacturing milk for the city, and fertilizers for the farm. The cows are soiled—in other words, fed with green food in the stables during the summer months. The following method is adopted:

Mr. H. feeds his cows, beginning in the spring with green rye till the stalks get quite hard, and even after this, if necessary, by cutting them up short. The rye is continued till clover is ready, which forms the next food. Clover is followed by green millet, which for this purpose, is sown as early as possible in the spring. Corn—sown in drills at intervals of 10 to 12 days—follows millet, and continues till frost, when millet is again resorted to, and used till the ground freezes up.

The winter food of his cows consists of cut corn stalks, roots, oil meal and shorts. The daily food of each cow is 2 quarts of oil meal, 4 quarts of shorts, half a bushel of turnips and carrots, and as much cut corn as she will eat. He says that from considerable experience and observation, he is satisfied that no root contributes so much to the quantity of milk as the turnips, while carrots do not add much to the quantity, but greatly enrich the quality. He is quite certain that oil cake is the best milk yielding food. He says that in feeding turnips, long continued practice has proved, beyond a doubt, that a little dry hay, or any dry food, given to a cow just before milking, will entirely prevent any turnip flavor from being communicated to the milk.

HOW TO FEED MILK COWS.

I see in the *Farmer* of the 7th October, an article on feeding milk cows, written by Mr. BARTLET of Munson, which I know to be correct so far as cornstalks and carrots are concerned. I have fed each of my cows night and morning, one peck of carrots, with hay, and get as much milk as I do on grass.—I take the cornstalks in the bundle as they come from the field, butts and all, and cut them up with a straw cutter. I put one bushel and a half into a tub, pour a pailful of boiling water over them, then take three quarts of bran and scatter over the top. To keep in the steam, I let them steam half an hour, then stir the bran and stalks up together, which

scalds the bran. I then throw in a pailful of cold water, and let one cow have it to eat. This I do morning and night. The result is, I get as much milk and butter as if the cows had the best pasture in summer.

I use MACOMBER'S straw cutter, that I bought two years ago at the State Fair in Cleveland, patented in 1850. It has two flange wheels like a large auger, which turn together, draw in the straw and crowd it against a straight stationary knife, and cut it off like shears. It splits the largest stalks, and so bruises them all that the most of them get eat up.

I feed them to my young cattle and horses dry, and think I save one-half by cutting, that is, one bundle cut is as good as two not cut.

Can you, Mr. Editor, or some of your readers, inform me where MACOMBER'S straw cutter can be had? as a number of my friends and neighbors wish to purchase. I think the man I bought of said they were got up in Lake county.

We had a people's fair at Fitchville on the 25th and 26th, where I showed my straw cutter, and it was pronounced by good judges the most perfect machine they ever saw for cutting straw, stalks and vegetables, as it is a self-sharpener, and has not been out of repair the two years I have used it.

N. B.—Please let me know at your earliest convenience where those straw cutters may be had.—*C. C. Crittenden, in the Ohio Farmer.*

TREATMENT OF THE HORSE DISTEMPER.

By request, and in consequence of having had an unusual number of horses under treatment during the last few weeks, suffering from influences (commonly called distemper,) which I believe to be, to a certain extent, contagious, I ask the liberty of communicating to gentlemen who own, or are interested in that noble animal, the horse, my opinion of what predisposes and makes them more susceptible of being affected by it, also what ought to be done to prevent it. The conditions inducing it may exist alone, for some exciting cause may be required for their full development; for instance, gunpowder wants a predisposition to dryness, and peculiar composition in order to take fire from a spark. The most prominent predisposing causes, are sudden and undue exposure to extremes of cold and heat, impure atmosphere in stables, arising from dampness, darkness and bad ventilation.

The skin of a horse at ordinary work is raised in temperature in order to maintain organic and animal activity; there is an unusual rapid passage of blood through the lungs and the whole system, and perspiration is excited; if, under such circumstances, he be suddenly exposed to the action of cold, by being put in a damp, cold stable, or any other way, this action of cold would greatly disturb the balance of circulation, particularly in spring, (when a horse changes his coat,) and produce a contracted state of the skin and its vessels, consequently blood collects round and within internal organs, by being repelled from the outward surface, which causes congestion of the internal organs, a condition only one stage short of inflammatory action; for instance, suppose we perspire from exercise, then to cool off, sit in a draught; in a

short time we shall shudder without and chill within, and probably in less than twenty-four hours suffer from sore throat and chest caused by it. I believe that a cold, northeast wind, (which ought to be guarded against,) in which there seems something especially irritating, blowing into a well-ventilated stable, would induce cold and cough, for which reason I should recommend gentlemen contemplating building stables, not to have doors or windows, or any other way exposed to the northeast. If the stable be warm and close, bronchitis and pneumonia will present themselves, and sometimes bad cases of influenza (if that disease be prevailing,) will follow the cold and cough contracted as above. A horse shuns offensiveness instinctively, because his lungs require such a quantity of good air; he avoids offensive smells probably more resolutely than any other animal.

The heart of a man averaging about eight ounces at each pulsation, propels about two ounces of blood into the system, say one hundred and forty to fifty ounces a minute, and about as much more is sent into the lungs in the same period; his lungs during ordinary breathing, contain one hundred and seventy to eighty cubic inches of air for the support of life.—To maintain this at the proper purifying standard, he breathes out (expires) all hurtful products continually collecting in the blood, and draws in (inspires) about twenty cubic inches of fresh air, some sixteen times every minute. The heart of a horse, at a low computation, is twelve times heavier than that of a man; it propels five times as much blood, viz: upwards of forty pounds are sent into the system, and as much more into the lungs every minute. This amount, great as it seems, is increased when in exercise, and so ample and so perfect is the apparatus for respiration, that the lungs are continually supplying adequate means for the purification of this enormous vital tide. This is not practically borne in mind, and those in immediate charge of horses (especially in this country,) are often most ignorant of the properties of air and the requirements of blood.

Consider for a moment the size of an ordinary room, with its windows for light, its fire and doors for ventilation, contrasted with many of the stables in this city, and you will find five, six and seven horses, (each requiring eight times as much air as a man,) are stabled in less space than this, with perhaps no window that admits light, no provision to remove dampness and gasses originating in the natural evacuations. Why, may I ask, are so many stables almost dark, even in the day time? A kind Providence, as if to show man his duty to the lower animals, brings forth the choicest natural productions of organic life where there is the best light and the purest air.

Where there is darkness in stables, there is almost always a dampness; where darkness, dampness and a close atmosphere combine, each and all recking with decomposing animal evacuations, (particularly where the manure is put under the stable floor, which is of too frequent occurrence,) there is the worst possible provision for sustaining life and health in a state of integrity. Small indeed is the spark here required to kindle a great amount of disease. When influenza or any other kind of epidemic disease prevails, each is most severely felt in dark, damp stables, the unnatural heat of which is caused by many horses being

crowded into a small compass. It has also a very serious effect upon the eyes, the details of which time and space will not at present allow.

Many horses bought by dealers of farmers in Connecticut, Vermont and other States, are brought here, and two-thirds of the number are more or less attacked with distemper soon after their arrival.—The reason is asked why. An observant man would require an answer. Visit the farmer; there you will find the horse surrounded with pure, healthy atmosphere; if in the spring, (when most are bought,) living upon grass, clover, &c., not overworked, probably never driven fast; if stabled, fed regularly, good wholesome water, &c. It may take four, five and sometimes eight or ten days, according to distance, to arrive here. One man is generally employed, (who often knows as much about a horse as a horse knows about him,) to bring a string of half a dozen, more or less, as the case may be. During the journey, (which is generally made as quick as possible, that no time may be lost, and more particularly to curtail expenses,) they are fed on cut feed, with probably a little extra quantity of meal, (no shorts,) and watered when conveniently met with. Upon arrival, they are at once ushered into the stable, (such an one as described above,) in some cases washed and showered all over with cold water, perspiring or not, immaterial; put in a stall to be dried by heat of the body and atmosphere combined, without even a thought of rubbing a hair dry. Such treatment, with diet changed from grass to hay and meal, with perhaps a great degree of difference in the atmosphere to what he had been accustomed, and crowded in a dark, close, ill ventilated stable, can any sensible man be surprised at the horse being sick? I should be much more so were he not, no matter what kind of a constitution he had previously.

If, instead of the above treatment, he traveled say about twenty miles a day, fed and watered regularly, the former to consist of shorts, principally, instead of meal, and upon arrival, (same feed continued a few days,) well cleaned, a good bed of straw, in a dry, well ventilated stable, and such treatment followed up a few days, not one in ten would be attacked with disease, (unless previously contracted,) the owner save the expense of medicine and medical advice, and I probably lose the chance of having to present my bill for services rendered.

If the public, individually or collectively, derive any benefit from any of the foregoing remarks, I shall consider myself well paid, from the fact that I have been able to prevent even one of God's noblest animals (the horse) from sickness, and probably from a premature death.—S. Marlbor, in the *Providence Journal*.

LEAVES FOR COMPOST.

MANY farmers regard leaves as utterly worthless for purposes of fertilization. A moment's candid reflection, however, would convince them, we think, of the fallacy of this opinion. How, if leaves are not indued with alimentary powers, do our forests retain their health and vigor for so long a time? or in other words, why do our woodlands, upon which we bestow no care whatever, continue to grow and flourish

in increasing vigor, while arable soils, from which the crops produced by manuring and cultivation are annually removed, "run out," and in time fail to remunerate the husbandman for the labor and expense of "carrying them on?" Is it not because the alimentary matter returned to the soil in the foliage is adequate to the demand made upon the resources of the soil by the crop?

The leaf is not merely a vegetable substance. It contains mineral matters, which are essential to the health of all plants; and these being derivable only from the earth, are returned to it, in part, by the decay of the foliage which rot upon the soil. Let us, for the sake of more fully illustrating the subject, present an analysis of the leaves of a well known tree — the early harvest apple — the foliage of which was collected Sept. 30th — the tree bearing fruit.

Silica.....	5.775
<i>Earthy Phosphates.</i>	
Phosphate of peroxide of iron.....	4.875
Phosphate of lime.....	1.416
Phosphate of magnesia.....	trace.
Silica.....	5.125
Phosphoric acid.....	5.359
	16.775
Lime.....	36.398
Magnesia.....	0.075
Potash.....	13.179
Soda.....	11.616
Chloride of sodium.....	0.060
Sulphuric acid.....	0.127
Carbonic acid.....	15.200
Organic matter.....	2.850
	101.005

<i>Proportions.</i>	
Water.....	54.341
Dry.....	45.059
Ash.....	4.194
Calculated dry.....	9.163

The leaf when analyzed in a mature state, is found to contain a much larger quantity of mineral matter than it affords when young, or newly formed. This is accounted for by the well-known physiological fact that the food of all vegetables — trees not excepted — is taken up in a state of solution. This food passes to the leaves, where it is exposed by aëriation to the action of atmospheric phenomena, and its aqueous parts evaporated, or given off, but not the substances which it held in solution. These are, in part, disseminated through the entire system, a certain amount remaining in the vascular structure of the leaf itself. These, it has also been ascertained, contain a larger proportion of mineral matter than the wood of the trunk. The dried leaves of the elm — (*Ulmus Americana*), — contain more than eleven per cent. of ashes, (earthy or mineral matter,) while the more perfectly lignified substance, or perfect wood, contains only two per cent.; those of the willow, more than eight per cent., while the wood has only 0.42; those of the beech, 6.69, the wood only 0.35; those of the European oak, 4.06, the wood only 0.21; those of the pitch pine, 3.14; the wood only 0.24 per cent.

A late American writer, in an article illustrating the value of leaves as a manurial agent, says: —

"It is very plain from these facts, that, in forests, the mineral ingredients of the soil perform a sort of circulation; entering the root, they are deposited in the leaf; then, with its fall to the earth, and by its decay, they are restored to the soil, again to travel their circuit. Forest soils, therefore, instead of being

impoverished by the growth of trees, receive back annually the greatest proportion of those mineral elements necessary to the tree, and besides, much organized matter received into the plant from the atmosphere; soils, therefore, are gaining instead of losing. If owners of parks or groves, for neatness' sake, or to obtain leaves for other purposes, gather the annual harvest of leaves, they will, in time, take away great quantities of mineral matter, by which the soil ultimately will be impoverished, unless it is restored by manure.

Whenever leaves can be obtained in sufficient quantities, the farmer has within his reach the most ample resources for sustaining and increasing *ad libitum*, the productive energy of the soil he cultivates. By accumulating them in autumn, depositing them in yards and other enclosures where they will be in a situation to become impregnated with the liquid voidings of his animals, and thus predisposed to ferment and decompose more rapidly when applied to his lands, he will secure an adjuvant, the beneficial and powerful effects of which will be obvious for years, both upon his soil and the crops it is required successively to sustain and perfect. — *N. E. Farmer.*

CONDENSED VIEW OF THE EXTENT AND RESOURCES OF THE UNITED STATES.

The *Boston Post* has the following on the extent and productiveness of the United States and Territories: —

The thirty-one States, nine Territories, and District of Columbia, comprising the United States of America, are situated within the parallels of 10 deg. east longitudes and 40 min. west of the Meridian of Washington, and extending on the Atlantic coast from 25 deg., and on the Pacific coast from 32 deg. to 40 deg. of north latitude, and contains a geographical area of 3,306,865 square miles, being one-tenth less than the entire continent of Europe.

They contain a population at the present time of 25,000,000, of whom 21,000,000 are whites. The extent of its sea coast, exclusive of islands and rivers to the head of the tide water, is 12,669 miles. The length of 10 of its principal rivers is 20,000 miles. The surface of its 5 great lakes is 90,000 square miles. The number of miles of railway in operation within its limits is 20,000, constructed at a cost of \$600,000,000. The length of its canals is 5,000 miles. It contains the longest railway upon the surface of the globe — the Illinois Central — which is 737 miles.

The annual value of its agricultural productions is \$2,000,000,000. Its most valuable product is Indian corn, which yields annually \$400,000,000; and in surveying the agricultural productions of our country, we are not only struck with their abundance but with their great variety. Our territory extends from the frigid region of the north to the genial climate of the tropics, affording almost every variety of temperature, and every kind of grain and vegetables. Her productions range from the cold ice and hard granite of the North, the golden corn of the West, to the cotton and sugar of the South; and nearly all in sufficient quantities to supply our domestic consumption and furnish large supplies for exporta-

tion, thus furnishing nearly all the value as well as the bulk of our foreign commerce; suggesting thereby the irresistible conclusion that agriculture is the great transcendent interest of our country, and upon which all other interests depend.

The amount of registered and enrolled tonnage is 4,407,010 tons. The amount of capital invested in manufactures is \$600,000,000. The amount of its foreign imports in 1853, was \$267,798,947; and of exports \$230,975,157. The annual amount of its internal trade is \$600,000,000. The annual value of the products of labor (other than agricultural,) is \$1,500,000,000,000. The annual value of the incomes of its inhabitants is \$1,000,000,000. The value of its farms and live stock is \$5,000,000,000. Its mines of gold, copper, lead and iron are among the richest in the world. The value of the gold produced is \$100,000,000 per annum. The surface of its coal fields is 133,131 square miles. Its receipts from customs, lands, &c., in 1853, was \$61,327,274, and its expenditures \$43,543,263. Its national domain consists of 2,174,188 square miles of land. Its national debt is but \$50,000,000. The number of its banks at the present time is about 1,100, with a capital of \$300,000,000. Within her borders are 81,000 schools, 6,060 academies, 230 colleges, and 3,800 churches. Only 1 in 22 of its white inhabitants is unable to read and write, and 19 of its 21,000,000 of white inhabitants are native born.

FARMERS' CREED.

I BELIEVE in small farms and thorough cultivation.

I believe that the soil loves to eat, as well as its owner, and ought, therefore, to be manured.

I believe in large crops, which leaves the land better than they found it, making both the farmer and the farm rich at once.

I believe in going to the bottom of things, and therefore, in deep plowing, and enough of it, all the better if with a subsoil plow.

I believe that every farmer should own a good farm.

I believe that the best fertilizer of any soil is a spirit of industry, enterprise and intelligence. Without this, lime and gypsum, bones and green manure, marl and guano, will be of little use.

I believe in good fences, good barns, good farm houses, good stock, good orchards, and children enough to gather the fruit.

I believe in a clean kitchen, a neat wife in it, a spinning piano, a clean cupboard, a clean dairy and a clear conscience.

I disbelieve in farmers that will not improve their farms that grow poorer every year, starving cattle, farmers' boys turned into clerks and merchants, and farmers' daughters unwilling to work; and in all, farmers that are ashamed of their vocation, or who drink whiskey till all honest men are ashamed of them.

I will also add — I believe in supporting our County and State Agricultural Societies.

I believe in having a well filled agricultural library.

I believe in supporting the agricultural papers of our State, paying for them, reading them, and circulating them among my neighbors.—*Ohio Cultivator.*

SULPHUR.

This mineral product is the key which opens the door to chemical manufactures. From it we make sulphuric acid (oil of vitrol), and without sulphuric acid many of the largest factories would cease to exist. By its aid we are enabled to produce so many substances, that the bare mention of them would fill the whole paper. Bleaching, dyeing, soda-making, metal-refining, electro-plating, electro-telegraphing, &c., are primarily indebted to this acid. Many of the most valued medicines could not be made without it — such as ether, calomel, &c. Sulphur being the chief ingredient in gunpowder, modern warfare could not go on *comfortably* with it. A people that does not possess lucifer-matches, stands beyond the pale of civilization; yet matches cannot be made without sulphur — not because matches are dipped into melted brimstone before they are 'tipped' with the phosphoric composition which ignites them, but because this very material could not be made without the indirect use of sulphur. In England, we consume 60,000 tons of sulphur annually, which is imported to this country from the volcanic regions of Sicily. For political reasons, the king of Naples has recently prohibited the export of sulphur to any of the kingdoms now at war. Reckoning the value of sulphur at £5 per ton, implies a loss of £300,000 — a pretty liberal "peace offering," from the king of the Sicilies! This loss of sulphur will be very severely felt for a short time in England; but eventually it will be of great service, as we have as much brimstone in this country as commerce requires — a fact that will soon be made manifest by the demand for it; and when it is seen that our resources are sufficient, the king of Naples must never expect us to go to his shop any more. It was thus during the last wars that we prevented the French people from eating Jamaica sugar; so they set too and made sugar from beet root, and we have lost so much trade ever since.—*Chambers' Journal.*

APPLE MOLASSES AND APPLE BUTTER.

THE juice of the sweet apple, it is probably well known to most of our readers, makes an excellent molasses. The article, when properly made, is pure, possessing a vinous or rather brandied flavor, which renders it greatly superior for mince, apple, or tart pies, to the best West India molasses. If it is made from sour apples, a small quantity of imported molasses may be added to modify the flavor. Beer made with it, possesses a brisk and highly vapid flavor which common molasses does not impart. Four and a half barrels of good cider will make one barrel of molasses, costing in ordinary seasons, about \$5.50.— One who has had considerable experience in manufacturing this article, says:—

"I make little cider; my apples are worth more fed to my hogs, than for cider: but I make a practice of selecting my sweet apples, those that furnish the richest, heaviest liquor, and make a cheese from them, using the cider thus obtained for making apple or quince preserves, boiling down for molasses, and keeping two or three barrels for drink or ultimate conversion into vinegar. When new from the press,

and before fermentation commences, that which I intend for boiling is brought to the house, and boiled in brass, to the proper consistence; taking care not to burn it, as that gives the molasses a disagreeable flavor, and taking off all the scum that rises during the process. The quantity to be boiled, or the number of barrels required to make one of molasses, will depend greatly on the kind of apples used, and the richness of the new liquor. Four or four and a half are generally sufficient, but when care is not used in making the selection of apples, five barrels may be necessary, but let it take more or less, enough must be used to make the molasses, when cold, as thick as the best West India. When boiled sufficiently, it should be turned into vessels to cool, and from thence to a new sweet barrel, put into a cool cellar, where it will keep without trouble, and be ready at all times."

But the making of molasses is not the only important use to which sweet apples may be applied as connected with culinary affairs. Apple butter, as it is made by the Germans in Pennsylvania, is a most excellent article. The *modus operandi* pursued by those who are most expert in the manufacture of it, is the following:—

Having selected six bushels of fine ripe fruit, and divested them of the rind, quarter and carefully core them. Boil down two barrels of sweet cider, to one, and deposit the apples in the boiled down cider.—Keep up a brisk fire under the kettles, and stir the contents continually to prevent burning. The boiling and stirring must continue uninterruptedly till the whole mass is reduced to a pap about the consistency of thick hasty-pudding. It is then allowed to cool, and may afterwards be deposited in jars for future use. When thoroughly made, it will be nearly as solid as first rate butter, and will keep many years; indeed it improves by age. The Pennsylvanians make it only once in seven years. It is so much superior to the ordinary apple sauce, that no one who has fairly tested its value will afterwards, we are confident, willingly be without it. The flavor is superior, and there is a neatness and solidity about it greatly superior to that of the ordinary apple sauce. Its price in the market is also higher.—*Repub. Journal.*

The total consumption of cotton by England, for the year 1853, was 3,042,000 bales. To this add 700,000 bales for the United States, which will make the total consumption for the 3,742,000 bales, being an increase of 14,283 bales over the previous year.

The supply of 1853 was, stock in Great Britain 65,520 bales, stock on the Continent 89,461 bales, stock in the United States ports 91,176 bales. Crop in the United States 3,262,882 bales. Imports from Brazil 13,443 bales. Imports from the West Indies 9,236 bales. Imports from Egypt 105,398 bales.—Imports from the East Indies 485,587 bales. Being a total supply for the year 1853 of 4,733,646 bales, being an increase of 534,208 bales over the previous year, more than half of which increase was in the crop of the United States.

Without contentment, there is no joy of aught, there is no profit, no pleasure in anything.

LARGE AND SMALL SEED POTATOES.

By an experiment carefully concluded at the North American Phalanx, the following results were obtained:—

1. Large whole seed, 29 lb 13 oz., produced 174 lb.
2. Large potatoes cut in halves, 15 lb 15 oz., produced 124 lb.
3. Large potatoes cut in quarters, 7 lb., produced 98 lb.
4. Medium potatoes, whole, 19 lb 3 oz., produced 146 lb.
5. Medium potatoes cut in halves, 9 lb 6 oz., produced 88½ lb.
6. Medium potatoes cut in quarters, 4 lb., produced 67 lb.
7. Small potatoes, whole, 9½ lb., produced 117 lb.
8. Small potatoes cut in halves, 6 lb., produced 81 lb.

Repetitions of the experiment have all been in favor of large uncut potatoes for seed.—*N. Y. Trib.*

FATTENING TURKEYS, &c.—Much has been published of late in our agricultural journals in relation to the alimentary properties of charcoal. It has been repeatedly asserted, that domestic fowls may be fattened on it without any other food, and that too, in a shorter time than on the most nutritive grains. I have recently made an experiment, and must say the result surprised me, as I had always been rather skeptical. Four turkeys were confined in a pen, and fed on meal, boiled potatoes and oats. Four others of the same brood, were also at the same time confined in another pen, and fed daily on the same articles, but with one pint of very finely pulverized charcoal mixed with their meal and potatoes. They had also a plentiful supply of broken charcoal in their pen. The eight were killed on the same day, and there was a difference of one and a half pounds each in favor of the fowls which had been supplied with the charcoal, they being much the fattest, and the meat greatly superior in point of tenderness and flavor.—*German town Telegraph.*

AGRICULTURAL STATISTICS.—We are indebted to F. R. GARDEN for the following interesting statistics: It is, I believe, authentic (coming from one of the oldest, best, and most respectable farmers in Delaware, and one whose word can be relied on,) that the first timothy and clover seed sown in the United States, was sown in Delaware on the banks of the Brandywine, in the year 1790, and that in the year 1775, a field of some 20 acres was sown with garlic, for hay and pasture, the seed being imported from Germany and sold in this country for \$17 per bushel, and that all grass hay made (at that date.) was from a natural blue or green grass, grown on the marshes, or on upland meadows, which were fertilized by irrigation. Also, (to show the different value of land.) a lot of marsh was bought at that early date, for which \$150 was paid per acre, the same lot was, a short time ago, sold for \$40 per acre. The butchers of that date would not buy a bullock that was not fed on the marshes, so great was the prejudices for artificial feeding.—*Register & Examiner.*

SALE OF KENTUCKY STOCK.

The recent importation of Short-horn cattle, hogs, horses and sheep, was sold on the 19th, at the farm of CHARLES INNES, near Lexington, Ky.—The prices and names of the purchasers have been kindly sent to us by our friend Dr. TARBLOX, but we are so crowded this week that we cannot publish them at length at present.

Thirteen cows sold at prices ranging from \$205 to \$650.

Six bulls, from \$167 to \$3,500. ROBERT ALEXANDER paid the latter price for "Sirius," calved October 11th, 1852.

"Hopeful," a seven year old Cleveland Bay stallion, sold to ROBERT INNES, for \$1050.

Six Cotswold, and one Lincolnshire buck sold at prices ranging from \$50, to \$287; while 46 ewes of the Cotswold breed, sold for from \$35 to \$70 each.

Ten pure Liverpool white hogs, and seven improved Yorkshires sold at \$70, \$50, \$25 and so on down to \$11.

Kentucky breeders are determined not to let their reputation suffer, if liberal importations and prices will prevent it.—*Ohio Farmer.*

THE HOP TRADE IN WISCONSIN.

THE cultivation of hops for home consumption and eastern market is becoming or rather has become an extensive and important branch of agricultural industry in this portion of the State. It is an article easily grown, exhausts the soil far less than many other crops, commands good prices and a ready sale. Last Thursday no fewer than fifty bales of closely packed hops passed through this city on their way to Milwaukee, to be sent to New York city.—Joseph E. Spaulding raised 4,600 pounds of this quantity on two acres of ground, in the town of Oak Grove, Dodge county. Last year he informs us he raised 1,849 pounds on one single acre. The remainder of the lot spoken of above, was raised by Messrs. POWERS & FLETCHER, of Maysville, in the same county. They had 3,000 pounds and took them all from an acre and a half of land. At the figures at which this lot of over four tons is sold, producing hops must be a very profitable business—holding out strong inducements to engage in their cultivation. They require comparatively but little time or labor, and will be found a safe, paying and reliable crop, as well as a valuable addition to our domestic exports.—*Watertown Democrat.*

A SCHOOL INCIDENT.

IN my early years, I attended the public schools in Roxbury, Mass. DR. NATHANIEL PRENTICE was our respected teacher; but his patience, at times, would get nearly exhausted by the infractions of the school-rules of the scholars. On one occasion, in rather a wretched way, he threatened to punish, with six blows of a heavy ferule, the first boy detected in whispering, and appointed some as detectors. Shortly after, one of these detectors shouted—

"Master, JOHN ZEIGLER is a whispering."

JOHN was called up, and asked if it was a fact—

(JOHN, by the way, was a favorite, both of the teacher and his school-mates.)

"Yes," answered JOHN, "I was not aware what I was about. I was intent in working out a sum, and requested the one who sat next, to reach me the arithmetic that contained the rule, which I wished to see."

The doctor regretted his hasty threat, but told JOHN he could not suffer him to escape the punishment, and continued—

"I wish I could avoid it, but I can not, without a forfeiture of my word, and the consequent loss of my authority. I will," continued he, "leave it to any three scholars you may choose, to say whether or not I omit the punishment."

JOHN said he was agreed to that, and immediately called out G. S., T. D., and D. P. D. The doctor told them to return a verdict, which they soon did, after consultation, as follows—

"The master's word must be kept inviolate—JOHN must receive the threatened punishment of six blows of the ferule; but it must be inflicted on volunteer proxies; and we, the arbitrators, will share the punishment by receiving two blows each."

JOHN, who had listened to the verdict, stepped up to the doctor, and, with out-stretched hand, exclaimed—

"Master, here is my hand; they shan't be struck a blow; I will receive the punishment."

The doctor, under pretence of wiping his face, shielded his eyes, and telling the boys to go to their seats, said he would think of it. I believe he did think of it to his dying day, but the punishment was never inflicted.—*Cin. Times.*

A NEW AGRICULTURAL ENTERPRISE.—We learn that a most total failure of the hemp seed crop—a crop of exceeding importance to a considerable portion of the richest lands of Kentucky and Missouri—has suggested the policy of importing hemp seed direct from Europe, thus supplying a want that would be most seriously felt, and at the same time doing a valuable service to the cause of agriculture by improving the *quality* of the article, and perhaps dispelling altogether the prejudice that so generally exists in favor of Russia over our Western hemp.

A company of enterprising farmers and merchants, MR. MICHAEL RYAN, of this city, at the head of it, has been organized, with ample capital, for the express purpose of importing European hemp seed.—MR. ANTHONY KILGORE, of this county, who has the experience and knowledge to enable him to select a *superior* article of seed, and to take the most abundant care of it in packing and transportation, to insure its arrival in prime order, goes out this week, to make the purchase and attend in person to the shipment of the seed. MR. RYAN is to be the sole agent of the company for the sale of the seed, and expects to have an ample supply by the 1st of January.—*Maysville Eagle.*

The intellect was created not to receive passively a few words, dates and facts, but to be active for the acquisition of truth. Accordingly, education should labor to inspire a profound love of truth, and to teach the processes of investigation.

Horticultural Department.

CONDUCTED BY JOSEPH FROST.

ILLINOIS AND WISCONSIN.

DURING a short tour, in November last, through the most fertile of the flourishing States of Illinois and Wisconsin, we had an opportunity to make some notes, which may not be uninteresting to some of our readers.

The last month of autumn could not be expected to display those vast fields of corn, wheat, oats, grass, etc., growing in the greatest luxuriance, for which these States are noted; but we could witness the extensive prairies, with their rolling and gently-undulating surface, embracing the richest and most productive soil in the world.

The garnered crops, with here and there extensive fields of unhusked corn, showed that the season had been most propitious for the cultivators of the soil. Railroads, which have been built with wonderful rapidity, branching out from their common center, Chicago, are now extending their arms, furnishing a good market for all the productions of the farmer near home. Consequently he feels rich — very one that we met seemed to be well contented with his condition, and was surprised that more of our New England farmers, as well as those in the Middle States, did not try their fortunes at the West, where they will be so bountifully rewarded for their labors; particularly new beginners and others who have only a small or moderate capital.

Considering the recent settlement of the country, whose farmers are considered *old* if they have been in it ten years, the increasing attention which is being given to the cultivation of fruit, and the anxiety to obtain none but choice kinds, are remarkable. It is very evident that all varieties of fruit will thrive finely, excepting peaches and such like tender fruits, which will not succeed in the northern part of Illinois and Wisconsin, where the thermometer in the winter months will often indicate fifteen and twenty degrees below zero. In Southern Illinois, however, they flourish with the greatest luxuriance.

Fruit trees of all sorts grow with wonderful rapidity, and we think that apple, pear, plum trees, &c., will make as much wood upon their generous soil in three years, as they will with us in four and five.

We noticed many apple orchards that had been planted from four to eight years, and, during our experience, we have never seen trees that were as

handsome or as thrifty; the smooth and clean bark upon their trunks and branches was particularly observed. All hardy ornamental trees, shrubs, roses, &c., grow with equal comparative vigor.

Owing to the ease and facility with which trees are produced, and the great and increasing demand, large numbers of nurseries have sprung into existence within five years, conducted by farmers, lawyers, doctors, ex-governors, and other distinguished individuals. Their stock is yet small, and the variety limited; but they purpose to extend as their means and experience warrant.

All kinds of fruit are very scarce, and none are to be had but apples, large quantities of which have been forwarded from the eastern interior and southern parts of Michigan, by railroad, for the Chicago market.

On the plank road extending from Milwaukee north-west, we saw numbers of teams, loaded with barrels of apples, from Michigan, which were destined for places one hundred and fifty miles in the interior. This shows that they are compelled to import largely to supply the wants of home consumption; but we believe many years will not elapse when apples will be a large article of export.

Dr. PENNINGTON, a pioneer orchardist in the north-western part of Illinois, was awarded two prizes, at the New York State Fair, in October last, upon apples. He was a competitor in the list of *Foreign Fruit*, being fruit contributed by parties living out of the State, and received a silver cup for the greatest number of good varieties and best specimens — three of each — and another prize of \$10 for the best twenty varieties.

We are fully convinced that in the more Western States, all kinds of fruit trees should be grown in the half-standard or pyramid form, with stems of not more than three feet — and two feet would be ample for most; — they would then withstand the strong winds which prevail upon the prairies, and the branches would protect and shade the ground and stem of the plant or tree from the hot sun during summer.

Cherry trees budded upon the common Mazzard stock, do not seem to succeed, particularly the *Heart* and *Bigarreau* varieties; the *Duke* and *Morrello* cherries, however, succeed better. The difficulty seems to be that they make such strong growth in the autumn, the wood is but imperfectly ripened; then the sudden changes of temperature during the winter affects the sap of the tree to such an extent that the body bursts the following spring;

the tree being diseased, lingers along two or three years and dies.

We were able in Central Michigan to compare cherry trees cultivated upon the Mazzard stock with those budded upon the Mahaleb stock, a variety of cherry which is imported from Europe, and on which cherries when budded or grafted, thrive well. There we saw cherry trees growing side by side for the last four years upon both kinds of stocks. Those budded on the Mazzard had so badly cracked that they were nearly dead and worthless, while those on the Mahaleb were in the finest possible health and vigor. The owner, a very intelligent cultivator, said that he would not plant a cherry tree in his locality upon the Mazzard stock, as he considered it utterly worthless; and the only stock fit to use was the Mahaleb—thus insuring healthy, vigorous and productive trees. This soil was similar to the prairie soils of the West, being rich, deep, and very productive. This corresponds with our heretofore expressed belief, that those who possess rich alluvial soils, which make a rapid, succulent growth in the fall, cannot grow cherries successfully on the common Mazzard, but could do it upon the Mahaleb stock. We would esteem it as a favor if any one who may have experience with cherries upon both stocks at the West, would advise us of his views.

In regard to sorts of the respective kinds of fruit, experience has yet to prove what kind will succeed best. Among apples, enough is already known to decide upon the merits of many of our leading varieties; some maintain their high eastern character, while others prove to be second, and some only third rate. It is also noticed that some which are quite inferior with us, promise to be among the most valuable.

[For the Genesee Farmer.]

CULTURE OF APPLES AT THE WEST.

MR. EDITOR: To give the "modus operandi" of the culture of apples, and the varieties grown at the West, would require more time than I now have to devote to it, or you inclination to publish. Suffice it to say, that the proper mode of cultivation is very different from the one usually adopted in Western New York. Our climate is more varied and changeable. At times, during December and February, the mercury indicates 45° and 50°, and in six hours we are not surprised to find it below zero, very often proving fatal to young nursery trees, and frequently killing orchards that have been some years set out. Orchards where low heads have been formed, are

found to be more hardy, less liable to injury, and bearing earlier and more uniform crops. Three-fourths of the orchards first set out in this region, were from trees worked as high up as a man could reach on seedling stocks. Most of these trees have been blown over by our strong south-west winds to an angle of 15 to 20 degrees, causing the sun to strike them, the effect of which is, that all such trees, with hardly an exception, are dead from the limbs to the ground. Low-topped trees are never affected in this way, unless very upright growers, the limbs not forming a shade for the trunk. I believe there is no locality east or west where the culture of the apple can be made as profitable as on the St. Joseph Valley, extending from Lake Michigan back a distance of 60 miles through Northern Indiana and Southern Michigan. Every year favors us with a bountiful supply of apples, so much so, that last year 4,500 barrels were shipped from our place alone to the Chicago market, at prices ranging from 37½ cents to \$1 per bushel, and fine fruit they were—better cannot be grown—large, well colored, fine flavored, and better samples than we have ever seen in New York. Our apples (in fact, all fruits) grow larger and finer here than those grown east, but will not keep as well. The *Rhode Island Greening* is an autumn apple, here seldom seen later than December, and the *Esopus Spitzenburgh* is now in prime eating order. We attribute this to the exceedingly hot sun during summer, and the late, warm falls. Our late or store apples are the *Rawles' Janet*, *Prior's Red*, *American Golden Russett*, *Cannon Pearmain* and others, (not grown in Western New York,) of which I shall speak hereafter.

The taste in horticulture is rapidly increasing. More trees have been planted within one year than for three years previously. Large orchards have been set out for the purpose of supplying the Chicago market, which, by the way, is second in this respect to no city in the Union of double its age. We last fall saw fine *Virgalieu* (White Doyenne) pears selling for one shilling each; also *Brantford's Late Bach* at the same price, and *Fall Pippins* at 3 to 5 cents each. There can be no question but an orchard of a few thousand well selected apple trees would pay a better profit than any other investment. Our locality renders it an important fruit growing region. There are at the north of us, in the lumber and mining districts, large sections of country that are dependent on other localities for their fruits, vegetables, &c., and in all probability the next twenty years cannot half supply the market.

Our variety of apples is very extensive, including most of the eastern varieties and a host of southern apples, besides the varieties originated here, which are somewhat extensive. The *Rhode Island Greening*, *Suwar*, *Baldwin*, *Yellow Bellflower*, and that grade of apples is A No. 1 in all collections.

The *Newtown Pippin* is with us a valuable apple, a slim, poor grower, but finally makes a good orchard tree, bears well, and the fruit is more generally fair than any we have seen grown in Western New York. In fact it is our most valuable long-keeper. It succeeds best on openings—soil that is well supplied with lime.

Suwar.—This truly valuable apple maintains its original character, but as far as we have been able to learn, succeeds better on clayey soils than on sandy or more porous and dry localities. Its season of maturity is from January to March.

Ortly, (*White Bellflower*.) a large, oblong apple, skin smooth, pale yellowish white, becoming fine yellow at maturity, core large, flesh white, fine grained, brisk, mild, sub-acid, very sprightly, a better grower than *Yellow Bellflower*, has more admirers, and is a very fine fruit.

Yellow Bellflower is very popular and fine; a yellow fleshed, rich fruit, not as juicy and sprightly as the *Ortly*.

Baldwin.—This old and valuable apple can be found in nearly every good orchard. An elegant grower, bears early, and very large crops; one of our most valuable market fruits, but usually does not succeed as well on the prairies.

The *Fall Pippin* seems well adapted to our soil and climate; is large and fair, and always outsells any other apple in its season. What the *Hawley* and *Gravenstein* may do we are not able to state, as they are not sufficiently tested, but they promise well.

Summer Queen is much grown for market; bears large and uniform good crops; not regarded as a dessert fruit; it cooks well and should be in every orchard.

Early Harvest (*Princess*).—Our best early tart apple. Grows and bears well and is a hardy tree; much grown for market, and always commands the highest price.

Carolina Red June.—This of all our apples is the most valuable as an early market fruit. Size, medium to large, form, oblong, yellow ground, clouded and splashed with dark red, almost black in exposed specimens; upright, rather slender grower, profuse bearer, and from its fine appearance and fair uniform size, commands the first price in the market.

A peculiarity of the tree is, it retains its foliage nearly all winter. Distinct from *Early Red Margaret*.

Sweet Bough.—This old and well esteemed fruit also finds a comfortable home in our Western soil. It is universally esteemed and grown extensively.

Pryor's Red.—Size, medium: regular, mostly covered with russet and stripes of dull red. The flavor of this fruit much resembles that of the *Westfield Seek-no further*; keeps well to April and May.—The tree grows slowly, but bears regular and large crops of fair, fine fruit. Succeeds best on rich, deep soil.

Cannon Pearmain.—Medium size, yellowish, with pale red stripes; grows well and bears regular crops; keeps well to midsummer, and is profitable for market culture.

Michael Henry Pippin.—One of our most popular fruits, succeeding well throughout the West, medium size, conical, yellowish green, flesh fine, tender, juicy and sweet. Valuable for cooking—bakee finely. In use from November to April. This is often confounded with *White Winter Pearmain*, but we think them distinct, though very much alike. The latter is more regular in form, and often flushed on one side. Both valuable varieties.

Pomme Grise.—This little favorite revels in all our Western soils, universally esteemed. Bears large and regular crops, keeps very well, and is decidedly one of the best dessert fruits—the only real good one of all the Russets, except the *American Golden*.

I see I have spun quite a yarn, and I fear I have been too lengthy. There are many other valuable varieties of apples grown in our locality, of which I have now no time to speak. It may not be out of place to state that the culture of the pear, cherry, peach, plum, and the smaller fruits is here claiming much attention, to which I may refer hereafter.

Yours truly,

SOUTH BEND, Indiana.

WM. H. LEONTE.

[Mr. L. will accept our thanks for his valuable article on Western fruits, and we solicit a continuance of his favors.—Ed.]

[For the Genesee Farmer.]

IMPORTANT TO FRUIT GROWERS.

MR. EDITOR:—In the November number of the *FARMER*, page 356, a statement is made by P. R., Mt. Sterling, Ind., in reference to a new kind of depredator on his apple trees, in the shape of a worm, whose warfare is between the bark and the wood, on the body or stem of the tree, &c Now, we have the same

kind of intruder in this town, and they not only work on our fruit trees, but on the locust trees; and as an inducement for others to try the plan, I will relate a little experiment I made on one of my locust trees. Last spring one of my trees, I discovered, did not leave out when the rest did, and on examination I found it was dead; and another one, a beautiful little tree, about four inches through at the ground, I found was full of bunches running around the tree. I took off the bark with a knife from a number of these bunches, and found creases cut in the wood round the tree, some two inches long, some three and four; but none that went entirely around it—some on one side and some on another—perhaps a dozen such places in three or four feet in length from the ground. The tree leaved out, but some of the limbs leaved three or four days before others, and all looked sickly. I expected the tree would die, of course, and I thought there would be no harm in trying an experiment on it. So I bored a hole with a half inch auger, as near the ground as I could, at least two-thirds through the tree, and filled it full of pulverized brimstone, and plugged it up with a pine plug, as tight as I could drive it in with a hammer without splitting the tree. This was done about the middle of May, and the tree appeared to be doing well until the 10th of June, when the leaves all wilted and dried entirely up, and I, with all my neighbors that knew anything about it, supposed the tree was certainly dead; but, behold! about the 10th of July it began to show signs of leaving out again; and sure enough, it did, and grew and looked as flourishing through the rest part of the season as any of the other trees. Now, whether the brimstone saved it, or what was the cause of its losing its foliage and regaining it again, I cannot say, but my own and my neighbors' opinions are, that the brimstone saved the tree.

The facts above stated can all be substantiated by more than a dozen persons; and if it should induce others to try the experiment, it will have the desired effect.

JOHN REYNOLDS.

BELLEVILLE, Jefferson Co., N. Y.

[For the Genesee Farmer.]

MILDEW ON GOOSEBERRIES.

MR. EDITOR:—I have been a reader of the GENESSEE FARMERS, and have found much valuable information in them. I am always glad to hear the experience of others upon various subjects, so I will venture to tell about some experiments which I have tried and found successful, hoping that if some of the readers

of the GENESSEE FARMER have been similarly afflicted they may take the hint and do likewise.

My father had some nice gooseberry bushes; every year they would blow and shew a fair prospect of fruit, until they would be about half grown, when they would all mildew, and not one be fit to eat. This state of things continued for several years, when we happened to hear that to pour strong soap suds over the bushes, once or twice a week, when the fruit was setting, would prevent the mildew. Last summer we tried it, and the bushes fairly bent with fruit, which would fairly make one's mouth water, instead of their eyes as before. A neighbor of ours had gooseberries which mildewed in the same way. Last spring, while cleaning out his stove pipe, the idea was suggested of putting the soot upon the gooseberry bushes. It was accordingly done, and the result was he had gooseberries without mildew. H. B. S.

ROCKPORT, Pike co., Ill.

[H. B. S. will accept our thanks for the information contained in the communication. Facts are what must be known, for without them there can be no correct practice. We hope he will continue to favor us with the results of his observations.—Ed.]

EASTER BEURRE PEAR.

SYNONYM: *Doyenne d'hiver*, the popular French name.

THE culture of winter pears has hitherto been much neglected. We are surprised that some enterprising cultivators do not plant extensively. Our large cities would consume immense quantities, and they would command greater prices than any other fruit. One reason why they are not more cultivated is, we presume, that they require more care and labor to prepare them for market. The autumn pears, such as the *Virgalieu*, (*White Doyenne*), can be picked from the trees and carried directly to market, while the winter varieties would require to be stored away for a length of time, and house-ripened. And then the supply of autumn pears is still small, and prices as high as cultivators can reasonably desire. We suppose that we shall not witness any extensive culture of the winter sorts until pear culture in general has become much more extensive and better understood. There are intelligent amateur cultivators, not a few, who even at this day express a disbelief in the existence of really fine, melting, winter dessert pears. Not one in five hundred, or, we may safely say, five thousand, of those even who have gardens, has yet tasted a fine *Winter Nelis*, a *Lawrence*, a *Beurre d'Areberg*, a *Glout Morceau*, or an *Easter Beurre*; yet these are all delicious, melting pears, that will ripen in a good dry cellar without any extra care or attention whatever.

The *Easter Beurre* is a noble fruit—by far the finest, as we think, of all long-keeping varieties. That it has attracted so little attention among amateur cultivators is really surprising; for it succeeds

well here—quite as well as in France or Belgium, as far as we know of its being tested. The Pomological Society has not recommended it in any way, while they have placed on their lists other varieties of incomparably less value. For a few years past, however, it has been pretty well disseminated by the nurseries, and we shall very soon have some results from different parts of the country. We think it a fruit peculiarly adapted to the South; for it seems to endure dry and warm weather exceedingly well here, neither shedding its leaves or fruit prematurely; and when it would keep up a supply for the table for months after the autumn pears are gone, even if it were not to keep till April or May, as it does here in

but improving every year, and finally makes a large, vigorous tree on the quince; and if kept under high culture, it will produce annually very heavy crops. It has all the characteristics of a profitable variety.

Fruit—very large, roundish-obovate, often inclining to oval.

Stalk—rather short, stout, and deeply inserted.

Calyx—closed, slightly sunk in an irregular, plaited cavity.

Skin—greenish-yellow, becoming quite yellow in good specimens, with numerous brown dots, and a brownish red cheek when exposed freely to the sun.

Flesh—melting, juicy, with a sprightly, vinous flavor.

Tree—vigorous and erect, with bright reddish-brown shoots, sprinkled with russet dots.

Leaves—large and folded.

The wood of yearling shoots usually shows prominent buds or spurs on the lower parts the first season, and have a forked appearance by making a second growth, as the *Beurre d'Arenberg* and some others do—*Horticulturist*.

ORCHARD CULTURE.

THE following report by Prof. NORTH, of Hamilton College, on the management of orchards, read before the Oneida County Agricultural Society, we copy from the *Country Gentleman*:—

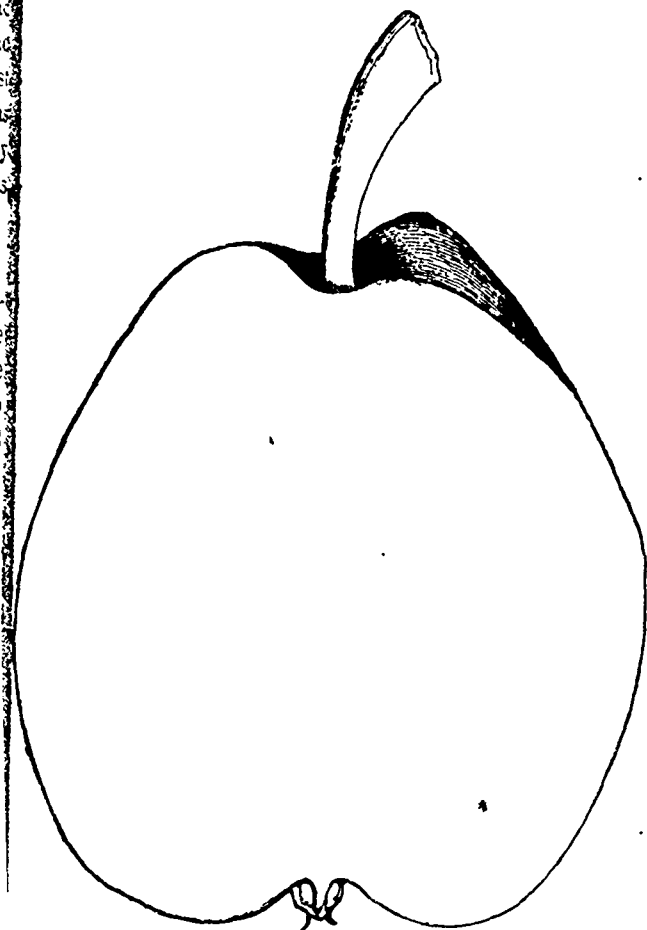
"The first premium of \$15, they award to JONATHAN TALCOTT, of Rome, whose orchard contains 385 thrifty trees, most of which have already fruited. The largest of them were planted in 1849, and will now measure sixteen inches in girth.

"The land on which Mr. TALCOTT'S orchard is, is mostly a sandy or gravelly loam with a clayey subsoil. Previous to planting, it was plowed in back furrows, and the holes were dug along the ridges, thirty feet apart, three feet in width, and eighteen inches deep. In each hole was put a large wheel-barrow load of compost, made of stable-manure, lime, ashes and muck, under cover the year before. In planting the trees, surface soil was placed about the roots. The orchard ground has been cultivated

to hoed crops. Once a year the trees have been pruned, and washed with strong soap-suds, a woolen cloth being used for this purpose. This washing has given the stems a clean, healthy look, and has tended to keep away the insects. At the approach of winter the soil has been heaped up about a foot around the trees. This has kept away the mice.

"In Mr. TALCOTT'S collection, the *Ribston Pippin* fruited the first year after planting. This tree is a prolific bearer, and promises to be equal to the *Baldwin* and the *Suaar*. Among the varieties that fruited the second or third year, were the *Jonathan*, *Early Harvest*, *Rhode Island Greening*, *Fall Orange*, *Hawley*, *Golden Sweet*, *Ladies' Sweeting*, *Peck's Pleasant*, *Yellow Bellflower*.

"The second premium of \$10, is awarded to MORRIS CASE, whose orchard stands near Washington Mills, in the town of New Hartford. During



EASTER BEURRE PEAR.

the North. We must say, however, that according to our experience, it is larger, of finer quality, and ripens better, when grown on the quince than on the pear stock; and this is the case in Europe, too. On the pear stock the fruits seem not to receive a sufficiently liberal supply of nutriment to bring them up to the most perfect state; they are comparatively small, with large, gritty core, and instead of ripening off freely, and becoming buttery and melting, many of them shrivel and dry up, as pears do that have been prematurely gathered. The *Duchesse d'Angouleme* is similar, to some extent; it is, according to our opinion, infinitely superior to the quince. We therefore recommend its culture on the quince stock, and that, whether for market or for private use. The tree is a good grower, moderate at first,

the winter the snow has been trodden down about the trees to keep the mice from gnawing off the bark. When planted, the trees were three years from the grafting. Some of them fruited in 1852. The *Baldwin*, *Greening* and *Roxbury Russet*, were among the first to bear. The *Northern Spy* and *Spitzenburgh* have not yet fruited.

"The third premium of \$5 is awarded to ALFRED L. WELLS, whose orchard of 210 trees, planted in 1849, stands near the Clinton Cotton Mills. In winter the snow has been trodden down about the roots. The varieties first in bearing were the *Greening*, *Baldwin* and *Roxbury Russet*. The *Spitzenburgh* and *Northern Spy* have not yet fruited.

"It is to be wondered ever that the land-owners of Oneida are not more zealous in planting orchards. — Nature has given them a soil and a climate most propitious for the raising of superior apples; inviting markets are near at hand, or are easily reached. — Ample inducements are held out in the direction of profit, of pleasantness, and of sentiment, yet many are still slow to enter into the full possession of their peculiar advantages as owners of Oneida soil. Who plants an apple tree in the soil of Oneida, makes a permanent investment that may be expected to increase from year to year, until its original value is hundred-folded. Who plants an apple tree makes a prudent provision against life's rainy days, against loss of health, misfortune in business, old age. Who plants a tree, extracts something of bitterness from the original curse — it was a part of Adam's punishment to be expelled from the society of cultivated trees. To surround one's self with them is to take some steps towards regaining the Paradise that was lost to man by his first transgression.

"The planted fruit tree will be a faithful minister to its owner's profit, improvement, health and happiness. It will stand sentinel over his dwelling through winters of adversity, when summer friends have fled. While its master is sleeping, the tree will be growing. While he is traveling, the tree will stay at home and keep on growing. It will be industrious for him through all seasons, converting air, and earth, and water, into shadow for his footsteps, perfume for his parlor, food for his table, fuel for his hearth, timber for his use. It will serve him contentedly through its life, and minister to his wants when its life is ended. A tree has moral and social uses. It is an orthodox, wholesome preacher. It will discourse daily homilies on faith, hope, patience and good will to men, with a gentle eloquence that steals into the heart, making it more roomy and open, and filling all its chambers with sunshine. A tree sets an example of self-denying benevolence. It embroiders its foliage and ripens its fruit by tedious processes; then gives them all away, dropping its last leaf to keep warm the tender plant that has taken root in its shade."

SAVE your fruit seeds; and let it be known that you have them on hand. You can easily dispose of them.

A BAD man has no more common way of keeping at peace with himself, than that of ascribing to others similar or even greater faults than his own.

TREE PLANTING.

WE notice among the munificent bequests of ELLIOT CRESSON, a legacy of \$5,000 to be employed in planting trees in Philadelphia. There is something touching in this gift. It is fragrant of good taste and friendly feeling. It seems to express gratitude for the comforting shade of some old tree under which the weary philanthropist had meditated his schemes of usefulness; and of considerate interest for the health and pleasure of future generations who are to people the city of his birth. And when monuments of marble and of bronze shall crumble, the broad arms of the elm and the oak shall stand out against the sky as the befitting memento of the liberality and the last of the tree-loving Philadelphian.

Every one should plant trees. No object is more beautiful than a spreading elm, or a lively evergreen, none more productive than the apple or the luscious pear. Half the labor bestowed on a single crop of potatoes would originate an orchard, the products of which in a few years would be equal in value annually to the potato crop, yet with but little labor beyond the harvesting. A fortnight's toil in the spring or autumn in transplanting choice fruit trees to the road side, or tastefully grouping them on the lawn, will ultimately add more to the value of the place than twice the time employed in building or fencing. For their own comfort, for the sake of their descendants, for the taste and improvement of the country, plant trees — let every body plant trees.

That bald, naked church, tasteless, treeless! Who will have compassion on the worshippers, and surround it with trees? That district school house, bare and unsightly; who will interest the boys in planting and protecting shrubs and trees that it will make it an attractive and beautiful spot? Those verdureless villages, with their houses thrust upon the street — who will distribute honey-suckles, and Virginia creepers and prairie roses, that they may be turned into civilized habitations?

There is a softening, humanizing influence in horticulture and tree-planting, that we could wish were more general. There is too much danger of the gross and sensual and selfish in our national character; and while our reliance must be on religious and educational influences to correct this tendency, we believe that good and only good would come of the love for trees and flowers, and the cultivation of both. It may be blessed in leading the heart up to the love of the Rose of Sharon and the garden of Gou. — *American Messenger*.

CRANBERRIES. — The Minnesota papers account for the scarcity and high price of this fruit by the absence of the Indians who usually pick them. — Most of the tribe supplying St. Paul and that vicinity have been removed, hence a falling off in their trade. One Indian, it is said, will pick more berries than half a dozen white men, and he will go into a morass after them where it would be impossible to get a pale face. The current rate in this market is \$12 per barrel, or \$4 per bushel. — *St. Louis Intelligencer*.

Ladies' Department.

THOUGHTS AND FEELINGS.

In the trials and perplexities incident to every vocation in life, how much do we not owe to the influence of woman! Eden was not complete without Eve as a companion to the head gardener, ADAM,—and as it has been, so it always will be. The care and proper mental and moral training of children, if considered in its ultimate influence on community and the world, is her noblest employment. NAPOLEON, (not Louis N.), when asked by Madame DE STAEL what the children of France most needed, answered, MOTHERS. Often, as we have seen the little child caressed by its mother, giving the kiss, "good night," and kneeling at his tiny couch to repeat the hallowed prayer—"Our Father who art in Heaven," how our heart yearned for some token of remembrance of her who left us to another's care in early youth!

In wanderings far away from the paternal home, when other scenes and customs have nearly effaced all impressions of childhood, yet a mother's love and a mother's yearning tenderness are not forgotten. How many who have tasted of forbidden pleasures—who have wandered far from the paths of rectitude and virtue—have felt a mother's parting blessing hovering around them, and calling them with a still small voice to repentance and peace! Seed planted by a mother's love, and watered, it may be, by a mother's tears, though buried long in dust, and hidden from the world, will one day yield its precious harvest.

Without entering upon the question of woman's rights—either for or against—we may say the mother makes the man. Show us an intelligent, high-minded, conscientious woman as a mother, and it is a reversal of the universal law of cause and effect, if the impress of her teachings is not stamped deeply on the youthful minds entrusted to her charge. Without mixing in the wrangles of the court room, or addressing a congregation from the pulpit, it is her high privilege on matters of feeling and impulse to reach the heart. She can persuade where reason fails to force obedience, even when the pride of youth spurns the idea of woman's government. How important, then, to fit her for the task, and develop to the utmost every faculty of the soul.

LADIES who have heretofore perused the columns of the FARMER, we design to have a corner in your especial charge. Will you kindly occupy its pages yourselves, in communicating the results of your ob-

servations, practice and experience? Articles adapted to the great object of fitting your daughters and yourselves for the duties of life, will always be welcome to our columns.

[For the Genesee Farmer.]

CURRANT JELLY,

AS MADE BY THE LONDON CONFECTIONERS.

As much waste of sugar is prevented by adopting the following method of preparing red or black currant jelly, I think it may prove a valuable addition to the housewife's knowledge. The recipe was communicated to me last summer by my sister, Miss J. M. STRICKLAND. She says:—Last year I made my currant and raspberry jelly after a recipe furnished by a confectioner. I placed my currants, stripped from the stalk, in a stone jar, and placed the jar in a water bath till the fruit was soft. I then run off the juice through a hair seive. I made the juice boil for a few minutes. I rolled good loaf sugar very fine (allowing the usual quantity of a pound of sugar to a pint of juice). My sugar was then placed in the oven in a tin plate till it was hot but not melted—poured the currant juice boiling hot into a jug, stirred in the rolled and heated sugar, stirring carefully till it was thoroughly melted. I put the jelly, when cooled, into glasses and jars—thick glass vessels are best for jelly—and when cooled, fastened down with oiled paper, having first laid fair paper soaked in brandy or rum over the jelly, to prevent mold. In this process, the jellying commences slowly from the bottom, and continues till the whole mass is solidified.

I succeeded so well, that in future I shall make all my preserves in the same way—only the jams will, I think, require longer boiling in the water bath. The color of the fruit is much superior to that boiled in the usual way. I recommend you to try my plan.

Will any of the lady readers of the GENESSEE FARMER try the above method of making currant jelly?

OAKLANDS, Rice Lake, C. W.

C. P. T.

ECONOMY IN THE KITCHEN.—Never waste anything, but have places and purposes for all articles in your keeping. Habits of economy are easily acquired, and the cookmaid would do well to consider how much more valuable she must be to her employers, and how much more she will be respected, if she be careful, and make the most of the property that is intrusted to her charge, than if she uses it wastefully.

With love, the heart becomes a fair and fertile garden, glowing with sunshine and warm hues, and exhaling sweet odors; but without it, it is a bleak desert covered with ashes.

Editor's Table.

A WORD TO THE FRIENDS OF AGRICULTURE.—Every reader into whose hands this paper may fall is invited to consider the importance of maintaining a Cheap Agricultural Journal in Canada, that the advancement of the most important public interest may command the sympathies of the masses, who will not pay, as experience has shown, much over two shillings a year for a work of this character. In the States, fifty cent agricultural papers meet with more encouragement than any which are sold at a higher price; and it is by cheap publications of this kind alone that we can reach the millions who most need enlightenment. If the friends of the great farming interest will second our humble but earnest efforts to collect and diffuse useful knowledge relating to rural affairs in the most economical and practical way, the CANADA FARMER will achieve at once a permanent position. The proprietor has many advantages for making it as distinguished for the excellence and the variety of its information, as for its cheapness and peculiar adaptedness to the wants of the cultivators of the soil. Co-operation, where the yearly investment is so small, can not impoverish any one, while the benefits conferred upon the community will bless all that subsist on the fruits of agriculture and horticulture. Improvement in these is emphatically a public matter, although the work of improvement is commenced and carried forward by a few only of the numbers who reap the rewards of such labors. Let no one wait for others to subscribe for the FARMER, but send in his name at once, and ask his friends and neighbors to do likewise.

FARMING IN CANADA.—The opening of the ports of the United States, which now contain over twenty-six millions of inhabitants, to all the products of Canadian agriculture, marks a new era in the rural industry of the Provinces. It gives us a large and valuable market at our doors for whatever our soil, climate and agricultural skill may call into existence, either to feed or clothe mankind; while it does not take from us one customer in any country whom we before had to consume our surplus staples. The cultivation of cotton, and other tropical and semi-tropical plants, constitutes so large a part of the agriculture of the United States, that our tillage and husbandry will not affect injuriously the business interests of farmers there, for consumption keeps up with production in all parts of the republic. Commerce equalizes the markets of the world; and our land and capital will hereafter enjoy the full benefit of this equalization. Encouraged by this auspicious change in our condition, every cultivator should promptly avail himself of the new advantages placed within his reach, and strive to add to his wealth by carefully studying both the capabilities of his farm and the wants of the community. Profits best reward those who, by a wise foresight, meet the growing necessities of the human family. Bread and meat are articles of prime necessity, and of universal consumption; and under a proper system of farm economy, Canada can grow wheat and other

cereals, and also the flesh of domestic animals, at such prices as will render this one of the richest countries in the world. It is true our summers are not long, and our winters are pretty severe; yet where the earth is skillfully cultivated, it rarely fails to yield remunerating harvests. Corn grows to full maturity in this Province in half the time required to ripen it in Mississippi and Texas. With us, vegetation is exceedingly rapid while it lasts; and we should so manure and otherwise prepare our lands that every crop may develop all its natural powers in the shortest possible interval between the seeding and gathering of the same. At the so-called "sunny South," crops grow the year round, and delays are less injurious. In Canada, much depends on the due preparation before hand, that one may have a plenty of hay to make "when the sun shines."

Fencing is one of the most expensive operations of the farm, and one that should be duly considered at this season of the year. If timber for rails is to be cut and split, and the latter hauled any distance, so manage the business as to use snow to facilitate the heavy transportation of them to the places required. Saw-logs and firewood may now be hauled (if the snow be not too deep) at the least expense to the thrifty farmer.

Timber and lumber of all kinds are becoming very scarce in the neighboring States; and it is respectfully suggested to our readers that they husband their timber until it will bring them a good price for exportation. Railways and other means will be provided for sending it to distant markets much sooner than many now expect; for in districts denuded of their native forests, few will attempt to grow timber so long as Canada shall have a surplus, however distant from her navigable waters. The time consumed in the growth of a tree serves to render a crop of timber immensely valuable, when it comes to be needed by the rapid increase of population, and the wants of inland and foreign commerce. Civilization is making sad havoc of the natural forests of this continent, and wise men will know how to profit by the popular folly.

DRAINAGE, AND DRAINAGE COMPANIES.—When we reflect upon the gradual advance in the value of land, and of cleared farms more particularly, which has been going on for some time past, and, coupled with this fact, take into account the rapid increase of population, and the consequent probability, in conjunction with other causes, that the prices of produce in this country are likely to continue remunerative, it can excite no surprise that the all-important operation of drainage is attracting the attention it so well merits. Long-established habits and prejudices are, we know, hard to break through; but necessity on the one hand, and a handsome profit on the other, are inducements which will take no refusal; and the time has come when, even in Canada, the farmer will find it impossible to maintain his position if he persist in attempting, with the knowledge and practice of the last century, to supply the wants of this.

It has been rightly said that "what is worth doing at all is worth doing well;" and in agriculture there is no operation in which this maxim is more true than in drainage, for under the most favorable circumstances the cost is con-

derable, and hence durability and completeness are essential to the full realization of its benefits. It is well known that in England, since the repeal of the corn laws, and the giving of facilities by public grants and incorporated companies with suitable powers by the Legislature for drainage, the average yield of wheat (to say nothing of other crops) has been increased by at least ten bushels per acre; and that not only in this additional produce obtained, but that other and no less important advantages have been sensibly realized, such as the decreased expense of working the land, an improved climate, earlier maturity of crops, less dependence upon the variations of seasons, and a better quality of grain, and several other benefits.

With these prefatory remarks, it is our desire to call the attention of our agricultural friends to the prospectus of the "General Drainage and Land Improvement Company of Upper Canada," by a careful perusal of which they will see that the same means which have effected so great an advance in the agriculture of the mother country will now be placed within the reach of the Canadian farmers. We have authority for saying that the government has expressed its unqualified approval of the undertaking, as one calculated to develop the agricultural resources of the country; and that all the necessary powers will be given in the act of incorporation, for which application is intended to be made during the present session of the Provincial Parliament. It is the intention of the Company, we understand, to commence operations next spring by establishing tileries in a few well-selected situations, in districts from whence applications have already been made to them for their services, and where they will, of course, have opportunities of showing the superiority of the modern system of drainage. From the high standing of the Directors, and the professional ability of the officers, we have every reliance that the powers entrusted to them will be carried out with a view to the permanent prosperity of the Province, and at the same time the establishment of the Company on such a basis as shall secure for it both the confidence of the agricultural interest, and the support of the public.

It is our intention in subsequent numbers to dilate more at large on the subject of drainage, in all its branches and bearings; and to press the claims of this Company upon the serious consideration of the land-owners of Canada. Meanwhile we say to them, "every mickle makes a muckle,"—give a helping hand—take a share, or as many more as you can, the money will not be called for all at once—your interest is identical with that of the Company, and in becoming shareholders in it you may be securing for yourselves a fitting preference in their operations.

THE managers of the Salisbury Iron Works say that from an experience of sixty years, they had ascertained the most profitable period for cutting timber for fuel was to cut once in about sixteen years, when every thing was removed of a proper size, and the wood left entirely to itself for renewed growth.

CORRESPONDENTS are requested to be particular in writing plainly the name, post-office, &c., of subscribers.

THE POWER OF DIFFERENT SOILS TO RETAIN WATER.—An experiment which any one may try for himself, will show much plainer than words the relative power possessed by different kinds of soils to retain water and its dissolved contents. Put on a paper filter (strainer) half an ounce of dry pulverized clay, and on another half an ounce of sand. Pour water over each, and weigh them as soon as the filtration has ceased. The clay will weigh three-eighths of an ounce, and the sand only one-eighth of an ounce, more than before. With very coarse sand, the increase in weight will be still less. Clay is insoluble in water, but, sponge-like, it can retain a large quantity of it. Hence the importance of underdraining cold, wet soils, in order to render them warmer and dryer.

Again: expose an ounce of thoroughly dried clay to the air for some weeks, when it will be found to have gained in weight. This increase in weight results from the absorption of water, carbonic acid and ammonia. The smell will convince you of the presence of ammonia. Or more satisfactory still, mix it thoroughly with quick lime and a few drops of water, when the smell of ammonia (or hartshorn) will be distinctly perceived. By this experiment is seen the utility of exposing clayey soils to the action of the frosts of winter, by throwing it up in ridges and letting it remain till spring; but the full benefit of that, or any other mode of tillage and pulverization, cannot be realized without systematic and efficient drainage.

PULVERIZATION OF SOILS.—A writer in the *London Agricultural Gazette* says that "you may talk to a boy by the hour on the advantage of stirring the soil and of deep cultivation, inasmuch as it admits the air more perfectly throughout the substance of the soil, and thereby facilitates the chemical processes by which the soil and its contents are fitted as the food of plants; but no quantity of verbal instruction will equal in its force, either upon the understanding or memory, the lesson on that subject which that same boy would receive, if, after having dug a hole in the hardened ground, he were told to put into it again all the earth he had just taken out of it. The heap remaining over, which he could not return to its place, would represent more distinctly to him the bulk of additional air thus introduced into the soil by its disturbance, than any argument unsupported by this simple experiment could do."

OLD HORSES.—At the New Hampshire State Fair, Gen. W. P. RIDDLE, of Manchester, entered the lists with a pair of white horses, one of which was twenty-six and the other twenty-eight years old. The way in which these *old chaps* came to the right about face at the end of the furrows without long rein or driver, evidently showed that they had been well *drilled* under the discipline of the General during the past quarter of a century, as they finished their task in nineteen minutes, with Doe's No. 5 plow, with a sharp-edged revolving cutter.

WE can furnish bound copies of the *GENESSEE FARMER* for 1851 by the first of January, 1855. Those who wish them should send in their orders at once.

SHEEP FROM VERMONT TO VIRGINIA.—The *Frederick (Md.) Examiner* states that a flock of 1800 sheep were driven past its office on their way from Vermont to Fauquier county, Va. From the fact that several other large flocks have recently been driven to Fauquier county, the conclusion is that the farmers of that region are entering largely into the wool business. And we would add that in no other way can they improve their lands and realize a fair profit, than by attention to sheep and wool-growing. Nearly one-third of the wool used by our manufacturers is imported from foreign countries; and the money thus paid out, if kept at home, would add largely to our own ability to purchase as well as consume.

A COMPANY of capitalists have purchased thirty thousand acres of land in Atlantic county, New Jersey, to be divided into shares of twenty acre farms. The land is situated upon the Camden and Atlantic Railroad.

We would refer applicants for orange watermelon seeds to Mr. BRUCE's advertisement in the present number. From trial we know that its quality and flavor can hardly be excelled.

We have been favored with a copy of an address delivered before the Montgomery County Agricultural Society, Md., at its annual exhibition, by CHAUNCEY P. HOLCOMB, Esq. It is one of the best that has fallen under our notice, and abounds in useful hints and details of practice.

Our thanks are due Hon. KENNETH RAYNER for a copy of his able and interesting address before the North Carolina State Agricultural Society, at their Second Annual Fair, extracts from which we have marked for future publication.

Notices of New Books, Periodicals, &c.

TRANSACTIONS OF THE NEW HAMPSHIRE STATE AGRICULTURAL SOCIETY FOR THE YEAR 1853. Compiled by JAS. ADAMS, Sec'y.

The above document, for which we are indebted to the Secretary, is one of the most valuable compilations that has come under our notice during the past year. In size, form and general arrangement it is admirably got up, and is a credit to the Granite State.

THE EDINBURGH REVIEW FOR OCTOBER, 1854. For sale by D. M. DEWEY, No. 4 Arcade Hall, Rochester.

This number contains a series of articles on various topics, a knowledge of which is very desirable to all who would keep pace with the times. We have often commended the above, and we find it to maintain its time-honored reputation.

THE LONDON QUARTERLY REVIEW FOR OCTOBER, 1854. New York: LEONARD SCOTT & Co. D. M. DEWEY, Agent, Rochester.

The above contains a very interesting statistical article, entitled "The Commissariat." From reliable data furnished from different sources, the amount of produce required to supply the population of London for one year seems almost incredible, yet the data furnished challenge one's belief and credence.

ADVERTISEMENTS,

To secure insertion in the *FARMER*, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. TERMS—Two Dollars for every hundred words, each insertion, PAID IN ADVANCE.

CATALOGUE OF AGRICULTURAL AND HORTICULTURAL BOOKS,

FOR SALE AT THE OFFICE OF THE CANADA FARMER.

	Price,	Co.
The Fruit Garden, by P. Barry,	6s.	6d.
American Fruit Culturist, by J. J. Thomas,	6s.	6d.
Culture of the Grape, by J. Fisk Allen,	3s.	6d.
Culture of the Grape, by Bachman,	2s.	6d.
The Horticulturist, for 1851, 1852, 1853, and 1854, per volume,	12s.	6d.
Johnsten's Lectures on Chemistry and Geology,	6s.	0d.
Norton's Elements of Scientific Agriculture,	3s.	6d.
American Farm Book, by R. L. Allen,	2s.	6d.
American Poultry Yard, by D. T. Brown,	2s.	6d.
Domestic Animals, by Allen,	2s.	6d.
Modern Horse Doctor, by Dr. Dadd,	7s.	6d.
Reformed Cattle Doctor, by Dr. Dadd,	7s.	6d.
Family Kitchen Garden, by Buist,	2s.	6d.
Saxton's Rural Hand Book,	2s.	0d.
Saxton's American Rose Culturist,	2s.	0d.
Treatise on Milch Cows, by J. S. Skinner,	2s.	0d.
Farmer's Land Measure,	1s.	0d.

Additions will be made to the above every month; and any of our friends who may want any work not named in the above list can be furnished with it on short notice.

JOHN E. FORCE,

Hamilton, C. W., January, 1855. Publisher and Proprietor.

DRAINAGE AND SEWERAGE PIPE MACHINE CHARNOCK'S PATENT.

BY this Machine, Drainage and Sewerage Pipes of all descriptions, as well as perforated and other Bricks, Flooring Tiles, &c., are molded with the greatest facility and precision.

A man and three boys can turn out from 5,000 to 10,000 feet of pipes per day, according to sizes; and if worked by horse, steam or water power, a proportionate increase will be obtained.

This Machine is in extensive operation in England, where, in addition to the testimony of numerous Tile Makers, as well as that of some of the first Mechanists of the day, the following Prizes have been awarded to it:

By the Yorkshire Agricultural Society, at its annual meeting, 1843, as the first Tile Machine with a continuous motion,	£5 0 0
By the same Society, the following year, as the best Machine of the day,	10 0 0
By the Lancashire Agricultural Society, at its annual meeting, 1845,	Silver Medal.
By the Highland Agricultural Society, at its annual meeting in 1846, as the best Machine,	5 0 0

At the meeting of the New York State Agricultural Society, at Saratoga (1853), a Working Model of this Machine was awarded the SILVER MEDAL AND DIPLOMA; and at the Fall Exhibitions the same year of Lower and Upper Canada, held respectively at Montreal and Hamilton, the same Model was awarded a DIPLOMA FROM EACH SOCIETY. It was awarded the FIRST PRIZE AND DIPLOMA at the recent Exhibition in London, C. W.

The price of the Machine is £50 (half cash and remainder at six months), with five Dies for Pipes. Brick and other Dies at a moderate charge.

THE PATENTEE GUARANTEES THE EFFECTIVE WORKING OF THE MACHINE.

ALL orders to be addressed to

JOHN H. CHARNOCK,

Drainage Engineer, Hamilton, C. W., the Patentee. January 1, 1855.—if

BULKLEY'S STEAM DRY KILNS.

GREEN LUMBER can be kiln-dried in 24 hours by Bulkley's patent plan by superheated steam. Cost of Kiln, \$20 for small size. Also, 50 to 500 barrels of flour or meal, or 100 to 5,000 bushels of grain per day. Cost of kiln from \$150 up, varying with size. Warranted superior to any other mode. Single Rights or Territories sold low, and circulars sent gratis on application to the patentee, at Kalamazoo, Michigan. H. G. BULKLEY.

"FINE STOCK"

PREMIUM AT OHIO AND INDIANA STATE FAIRS.

PURELY bred FANCY FOWLS, fifteen varieties. Also, LOP-EARED RABBITS, and SUFFOLK and ESSEX FIGS, bred from the best importations.

W. S. LUNT, Findlay, Hancock Co., Ohio.

PROSPECTUS OF THE
**GENERAL DRAINAGE AND LAND IMPROVEMENT
 COMPANY OF UPPER CANADA.**

CAPITAL, £100,000, IN 10,000 SHARES OF £10 EACH.

With power to increase the Capital to £250,000.

DEPOSIT, 5s. PER SHARE.

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- Sir Edward Poore, Bart., Cobourg.
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- Charles P. Treadwell, Esq., L'Orignal, President of the Provincial Agricultural Society.
- Geo. Buckland, Esq., Toronto, Secretary of the Board of Agriculture.
- E. W. Thomson, Esq., Toronto, President of the Board of Agriculture.
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- E. M. Simons, Esq., Hamilton.
- J. S. Wetenhall, Esq., Hamilton, Secretary of the County Agricultural Association.
- J. B. Askin, Esq., President of Agricultural Society, Middlesex.
- John Harland, Esq., Guelph.
- H. Ruttan, Esq., Cobourg.
- David Christie, Esq., Brantford.
- W. L. Distin, Esq., Hamilton.

With power to add to their number.

BANKERS.

The Gore Bank and Branches.

ENGINEER IN CHIEF.

Mr. John H. Charnock—Hydraulic and Agricultural Engineer—Patentee of the first Drain and Sewerage Pipe Machine established in Canada—a Member of the R.A. Society of England, and late Assistant Commissioner under the English Drainage Acts—assisted by such local Engineers and Provincial Surveyors as from time to time it may be necessary to engage.

SOLICITORS.

Messrs. Burton and Sadlier, Hamilton.

SECRETARY PRO TEM.

Stephen Robert Cattley, Esq., Hamilton. Temporary Offices, James street.

PROSPECTUS.

This Company is established for the purpose of executing Works of Drainage, Sewerage, Water Supply, Sewage Application, Irrigation, and General Land Improvement, in accordance with the most approved systems of the day.

The eminent success which has attended the operation of the English Drainage Companies, not only as a profitable investment for capital, but as a means of enabling the owners of land to carry out those more extended and systematic improvements of their property which were so essential to their interests, must convince all who are cognizant of the benefits to result from such works, that equal if not greater advantages may be secured by adopting similar means in this Province, where in almost every other branch of industry joint stock capital is already effectively applied.

The great proportion of the population of Canada direct their attention to the acquirement and cultivation of land, and as most farms would be benefited by a judicious course of Drainage, and other works of a permanent character, the instrumentality of the Company now proposed having all appliances at command for speedily and effectually putting lands into a state for profitable occupation, would assuredly be greatly to the advantage of the owners of property, and at the same time to afford a fair remuneration for the capital embarked.

To illustrate the manner in which the Company will conduct the business:—The owner of the land makes an application for certain Drainage to be effected, upon which an inspection of the property will ensue; upon the application being passed, an estimate of the entire work, with detailed plans, will be prepared, which, receiving the approval of the owner, a contract will be entered into, the Company engaging to do the work, and the owner binding himself to grant a mortgage for the payment of the sum agreed upon, the instalments to be at such dates as may be convenient, in no case to exceed twenty years. The preliminary expenses in the first place to be paid by the proprietor.

In undertaking Works of Sewerage, Water Supply, Sewage Application, and other sanitary operations with city and town authorities, much the same course would be pursued; and since the undertakings of this nature, which are now in progress, are all being done on the principle of gradual extinction of the cost, there would be a community of action between the Company and corporations which would afford to the public not only an assurance of the work being executed in the most effectual manner, but of their being earlier placed in possession of the benefits to result from it, for the best interests of the Company would be involved in executing all their contracts with as little delay as possible.

With regard to the profit which may be anticipated from the operations of the Company, it must be borne in mind that its objects are two fold—to serve the interests of the community by the introduction and extension of modern approved practices throughout the Province, and in so doing to realize for its shareholders such an equitable return for the capital embarked as shall satisfy their just expectations and give stability to the undertaking in the minds of all.

In the first place, the Company will be able to command the services of an efficient staff of officers, superintendents and workmen; in the next place, they will be in a position to avail themselves of all the mechanical appliances of the day for their operations, such as portable Steam Engines, Drain and Sewer Pipe Machines, Drain Cutting Tools, &c. &c., to say nothing of having all their operations conducted in strict unison, with a well-considered and organized system.

That the Company may the more effectually carry out their design, and occupy a position befitting the high destiny which the right execution of their great task of national amelioration will accord them, it is intended to apply to the Legislature for a special Act of Incorporation, with suitable powers and provisions. Among these may be mentioned, not only the power to execute all ordinary works for the improvement of land, such as draining and road-making, but also the laying out and erection of suitable houses and farm homesteads, the irrigation of water meadows, and the power to improve old, or make new out-falls and water-courses; also the power to execute all works for the sanitary improvement of cities, towns and villages, such as Sewerage, Water Supply, Sewage Application, &c.

It is also intended to obtain powers to hold, improve and re-sell land, and to establish tileries and other works that may be needed for the improvement thereof; and further, the power to issue debentures bearing interest, and payable at such periods respectively as may correspond with the periods over which their mortgage charges for executed works may extend.

Looking at the present prosperous condition of the Province, and the encouraging prospect of remunerative prices which the events of the day hold out, it may be safely affirmed that at no former period of its history was there so opportune a moment for the formation of such a Company as that now about to be established. The facilities of railroad communication, already partially secured, will their further development afford to the Company a ready and expeditious opening for their operations, which must in their turn bring increased traffic to the railways of the Province.

The Company have also had the opportunity of securing the services of an Engineer whose great experience in such works, and intimate acquaintance with all the approved systems of the day as practiced in England, warrant them in believing that their works will be conducted in a way to insure general satisfaction. The Company have also by this appointment secured the advantage of using his patented machines for mulling all descriptions of Drainage and Sewerage Pipes throughout the Province on reasonable terms, and which will at once place the Company in a position to commence profitable operations.

The calls upon the shareholders will be made with due regard to general convenience, and in such installments as the progressive applications for the services of the Company may warrant; no call to exceed ten shillings per share, and none to be made with a shorter notice for payment than two months.

January 1, 1855.—if

CATALOGUE OF RARE AND VALUABLE SEEDS.

RAISED AND PUT UP BY I. W. BRIGGS, MACEDON, WAVEREN COUNTY, N. Y.

Orange Watermelon, from China, per paper,.....	25 cents.
Ice Cream, or White Sugar do., of Alabama,.....	25
Citron Nutmeg Muskmelon,.....	12½
The Celebrated Japan Pea,.....	12½
California Muskmelon,.....	12½
Watermelons—Mountain Sprout, Mountain Sweet, Mexican and Sandwich Island, 2 varieties each,.....	06
Squashes—Winter—Sweet Potato, Vegetable Marrow and Polk: Summer—Apple, Crookneck and Scallop,.....	06
Mammoth Red and Grape Tomatoes, each,.....	06
White Vegetable Egg—looks like an egg,.....	06
Double Sunflower—the "Floral King,".....	06
Victoria Rhubarb—the best pie plant,.....	06
Flat Dutch Cabbage—the best winter,.....	06
Pop Corn (3 varieties), Adams' Early (a field corn), very early Sweet Corn, and late, large do., each,.....	06
Potato Out, per bushel of 49 pounds,.....	\$1.00
Mexican Wild Potatoes, per bushel,.....	1.00

PROSPECTUS FOR 1855.

THE SATURDAY EVENING POST,

Established August 4th, 1821.

WEEKLY EDITION BETWEEN 80,000 AND 90,000.

THE long period of over THIRTY THREE YEARS, during which the SATURDAY EVENING POST has been established, and its present immense circulation, are guarantees to all who may see or do to it that they will receive a full return for their money. Our arrangements so far for the coming year are such as we trust will be thought worthy of the high reputation of the Post. POSITIVE ARRANGEMENTS already have been made for contributions from the gifted pens of:

Mrs. SOUTHWORTH, GRACE GREENWOOD, Mrs. DENISON, MARY IRVING, Mrs. CARLEN, FANNY FERN, And A NEW CONTRIBUTOR (whose name is withheld).

In the first paper of January next we design commencing the following Novels:

Six Weeks of Courtship.

By Mrs. EMILIE F. CARLEN, Author of "One Year of Wedlock," &c. &c.

We propose following this with an Original Novelt—designed to illustrate, incidentally, the great EVILS OF INTEMPERANCE—entitled

The Falls of the Wyalusing.

By a New and Distinguished Contributor.

We have also made arrangements for TWO STORIES, to be entitled

The Oneida Sisters,

AND

The Nabob's Will.

By GRACE GREENWOOD, Author of "Greenwood Leaves," "Haps and Mishaps," &c.

Also, the following additional contributions:

New Series of Sketches,

By FANNY FERN, Author of "Fern Leaves," &c.

Mark, the Sexton,

A Novelt, by Mrs. DENISON, Author of "The Step-Mother," "Home Pictures," &c.

Nancy Selwyn, or the Cloud with a Silver Lining,

A Novelt, by MARY IRVING.

And last, but by no means least—from the fascinating and powerful pen of the Post's own exclusive contributor—

VIVIA, a Story of Life's Mystery.

By Mrs. EMMA D. E. N. SOUTHWORTH, Author of "Miriam," "The Lost Heiress," &c. &c. &c.

In addition to the above proud array of contributions, we shall endeavor to keep up our usual variety of ORIGINAL SKETCHES AND LETTERS, PICTURES OF LIFE in our own and Foreign Lands, CHOICE SELECTIONS from all sources, AGRICULTURAL ARTICLES, GENERAL NEWS, HUMOROUS ANECDOTES, View of the PRODUCE AND STOCK MARKETS, BANK NOTE LIST, EDITORIALS, &c. &c.—our object being to give a Complete Record, as far as our limits will admit, of the Great World.

ENGRAVINGS.—In the way of Engravings we generally present at least two weekly—one of an instructive and the other of a humorous character.

The Postage on the Post to any part of the United States, paid quarterly or yearly in advance, at the office where it is received, is only 26 cents a year.

TERMS.

The terms of the POST are Two Dollars a year, payable in advance. For Five Dollars, in advance, one copy is sent three years. We continue the following low terms for Clubs, to be sent, in the city, to one address, and, in the country, to one Post Office:

4 Copies,	\$5.00 per annum.
8 " and one to the getter up of the Club,	10.00	"
13 " and one to the getter up of the Club,	15.00	"
20 " and one to the getter up of the Club,	20.00	"

The money for Clubs always must be sent in advance. Subscriptions may be sent at our risk. When the sum is large, a draft should be procured, if possible—the cost of which may be deducted from the amount. Address, *always post-paid.*

DEACON & PETERSON,

No. 65 South Third Street, Philadelphia.

N. B.—Any person desirous of receiving a copy of the POST, as a sample, can be accommodated by notifying the publishers by letter (post-paid).

TO EDITORS.—Editors who give the above one insertion, or condense the material portions of it (the notices of new contributions and our terms) for their editorial columns, shall be entitled to an exchange, by sending us a marked copy of the paper containing the advertisement or notice.

Complimentary notices omitted for want of room.
December 1, 1854.—2t

GODEY'S LADY'S BOOK

FOR 1855.

TWENTY-FIFTH YEAR OF PUBLICATION BY THE SAME PUBLISHER.

The only Lady's Book acknowledged by the Ladies of this country as worthy of its name.

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It contains 100 pages of reading in every month's number—not beginning with a large number of pages in January, and decreasing throughout the year.

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KNITTING, NETTING AND EMBROIDERING—printed in colors. EASY LESSONS IN DRAWING are given monthly.

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GODEY'S INVALUABLE RECEIPTS, worth alone THREE Dollars a year—for Cooking, the Toilet, Sick Room, Nursery, and Miscellaneous House-keeping Receipts.

DIAGRAMS AND PLANS—with full directions for Ladies to cut their own Dresses.

PATTERNS FOR CHILDREN'S DRESSES—both Male and Female.

EMBROIDERY AND BRODERIE ANGLAISE PATTERNS—every month—a great variety.

THE NURSERY.—This Department is invaluable to every Mother.

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Great attention paid to this Department.

A TREATISE ON THE HAIR.

A most excellent article for the preservation and beautifying of this most valuable ornament to both sexes.

Undoubted Receipts, Model Cottages, Model Cottage Furniture, Patterns for Window Curtains, Music, Crochet Work, Knitting, Netting, Patchwork, Crochet Flower Work, Hair Braiding, Ribbon Work, Chenille Work, Lace Collar Work, Children's and Infant's Clothes, Caps, Chemisettes, Bonnets, Cloaks, Evening Dresses, Fancy Articles, Head Dresses, Hair Dressing, Bridal Dresses, Mantillas, Riding Habits, Morning and Evening Dresses, Cloaks, Talmas, Robes du Chambre, Capes and Cloaks of fur in season—in fine, everything that can interest a Lady, will find its appropriate place in her own Book.

REMEMBER that the Lady's Book has always given Steel Engravings, and throughout the year, not publishing them in January and February numbers, and then omitting them. In the Lady's Book alone you receive what no other three Magazines can furnish you with.

EVERYDAY ACTUALITIES.

This is another series of articles peculiar to this Magazine. Every one of these articles is illustrated with at least eight or ten of the finest Wood Engravings. This Department is very interesting, conveying information in an agreeable form, suitable for Ladies and Gentlemen, that cannot be obtained elsewhere.

The expense of one number of the Lady's Book, including Steel Engravings and Literary Matter, paid for, not taken from English Magazines, far exceeds that of any other Magazine published in this country. We make no exception, and are willing to have the fact tested.

TERMS.

1 Copy one year,	\$3.00
2 Copies one year, or 1 Copy two years,	5.00
5 Copies one year, and an extra Copy to the person sending the Club,	10.00
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Godey's Lady's Book and Arthur's Home Magazine will both be sent one year for \$3.50. To insure what you order being certainly sent, address
L. A. GODEY,
Dec. 1, 1854.—2t No. 113 Chestnut street, Philadelphia.

SUBSCRIBE FOR THE TIPPECANOE FARMER,

A NEW Monthly Journal of AGRICULTURE, HORTICULTURE and RURAL AFFAIRS. Sixteen large octavo pages at FIFTY CENTS A YEAR, in advance. Published by

A. J. WEAVER,
Lafayette, Indiana.

December 1, 1854.—1t

100,000 SEEDLING APPLE TREES,

LARGE enough to graft, one year's growth. Also, 15,000 Seedling Cherry Trees. Address
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