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# THE ONTARIO FARMER,

A MONTHLY JOURNAL OF

Agriculture, Horticulture, Country Life, Emigration, and the Mechanic Arts.

VOL. III.

HAMILTON, MARCH, 1871.

No. 3.

## The Farm.

### HINTS FOR THE MONTH.

The present month is rather an uncertain one in this climate. Usually Winter loosens his hold very sensibly by the middle of the month, and yet he often gives us rather unpleasant reminders that his reign is by no means over. Last year the whole of March was wintry, and in the greater part of Canada sleighing lasted until the first week in April. This year the indications are for a somewhat earlier Spring, and at the date of writing this article (March 7), the season is to all appearances well nigh a month in advance of last year. Still, some sudden change in the weather may yet put us back as far as we were last Spring.

Preparations should now be made in thorough earnest for Spring work. Tools should be in perfect order; vehicles in good repair and well greased; ploughs ready to start; harrows in right trim, no teeth missing, and all sharp; harness oiled and if necessary repaired; cultivators, whippetrees, ox-yokes, dung-forks, hoes etc., all fit for use. As this month is noted for high winds, fasten everything likely to receive damage from this cause. Look after barn and stable doors, gates, loose fence boards, and the like. Working horses and oxen should be well cared for as the trying time of hard work approaches. If they can be moderately used, as well as properly looked after, they will become gradually prepared for the severe tasks before them. March is rather early for lambs in this country, especially from fine wool flocks; but it is desirable to get mutton lambs as early as possible, that they may attain a better size and be sooner ready for the butcher. Breeding ewes should be well housed, either in closed sheds or in the barn, with litter enough to preserve the fleeces clean. It is possible to keep them too close, they are the better of some ventilation. Toward the end of this month the banking may usually be removed from cellar windows, when cabbage leaves and other decaying rubbish should be cleared out; sprouts rubbed off from growing potatoes, and the interior cellar-walls whitewashed. If not done already, apples, potatoes and other roots should be carefully picked over, and

every sign of rot removed. Breeding cows ought to have regular feeds of roots: raw potatoes, carrots, mangolds, or even turnips, will do. Winter grain may be rolled if the ground becomes dry enough. This is especially necessary where the ground has been heaved by frost. It is not often that much ploughing can be done in this country during March. But on porous or well-drained land it is sometimes feasible; and our Spring is so short, that the sooner the plough starts the better. On sandy soils ploughing may begin so soon as the frost is out of the ground. But in the case of clayey or rich soils, the action of the sun is needed for a time before the ground is stirred. It will not do to plough clayey land while it is saturated with moisture. Clover seed should be sown early. It may be done best on a light snow some still morning. The seed and footsteps are then visible, helping the sower to do his work evenly, while the moisture of the melting snow hastens germination.

This is the month for making maple sugar. Our space does not admit of giving full directions concerning this process. Provide, if possible, pails instead of troughs. Do not gash the trees with an axe, but bore them over again, while gashes rarely or never heal. The flow of sap is as copious from a small hole as from a great cut. Keep everything connected with sugar-making scrupulously clean, if you desire a nice quality of sugar. Cows that come in early should be carefully attended, and their calves kept warm, especially those intended to be reared. If exposed to cold, their growth will be seriously retarded. Poultry should be allowed to get picking at the first grass, pickweed, &c., that starts. Hens inclined to sit may have eggs put under them this month, but it must be in a warm place, and the early chicks must be well looked after, or they will not live long. Bees should be set out the first warm day, that they may have a flight after their long winter confinement, and be stimulated to early breeding. Success in bee-keeping very much depends on getting hives populous by the time the honey season begins. The orchard should be inspected, and if trees have been injured by mice, or rabbits, let them be treated to a plaster of cow-dung and clayey loam, well beaten together and fastened on with an old cloth. Stable manure

may be scattered liberally over the roots of fruit trees. A sharp look-out should also be kept for insect enemies to the orchard. Now is the time to destroy them.

### ROTATION OF CROPS.

The following is the substance of a paper read before the Ancaster Farmers' Club, by Mr. C. E. Whitecombe:—

In no art are the prejudices of habit so strongly rooted or so difficult to surmount as in that of agriculture; and although I consider it far from expedient to oppose such too suddenly, or to eradicate them, except by the progressive and enlightening effect of practical experience, yet it behoves each one of us to discontinue customs that we have good reason to believe should be abandoned, or that are radically bad in themselves.

In the introduction of a proper system of cropping of rotation we strike a blow at the very root of bad farming.

It is possible to drive in any direction in this our fair Dominion, without being struck by the appearance of an utter want of system among too many of our brother farmers.

We see fields so run out by continuous cropping as to show plain indications of deterioration in the very colour and consistency of the soil, while others, which have been pampered, petted, and crowded with manure (because perchance they are handy to the barnyard), are so strong and rich that no grain crop can stand upright upon them.

It has been well observed that no branch of agriculture requires more sagacity and skill than a proper rotation of crops, so as to draw from it the greatest amount possible of profit.

The reason which renders it imperative upon our part to consider and weigh well the benefits which will most assuredly accrue from the adoption of some regular system of rotation in our crops, is that no two plants of different kinds require for their nourishment the same substances of the same proportion.

For instance, the grains draw largely from the silica contained in a soil, and will therefore soon exhaust the supply of this ingredient in ordinary land. I say ordinary land, for in the virgin soils so great is the proportion of the humus or putrescent animal and vegetable matter, the most fertile portion of land, that wheat, or indeed, almost any crop may be and has frequently been grown with unvarying success for many succeeding years. Under the old system of farming this repeated cropping with wheat was adopted, and with apparent success. But it has been found that, even to the virgin soil made rich with their decaying vegetable matter, which has been deepened with each successive shedding from forest leaves, a time will come when the land, under an everlasting course of wheat, will begin to show signs of exhaustion.

The important principles which should rule the farmer in the adoption of a regular rotation of crops are:—

1. That, though a soil may contain all the mineral substances necessary for the nourishment of every variety of cultivable plant, yet there is only

a limited supply of mineral food necessary for such particular species of plant.

2. That some plants, as for example the grains, draw their chief nourishment from near the surface of the land, while others, like carrots or beets, seek for food at a greater depth.

3. Clover and all plants that put forth a luxuriant foliage absorb much of their food from the atmosphere, while cereals depend almost entirely upon the earth for their sustenance.

4. Certain insects live upon certain plants, and as long as their peculiar variety of food is furnished them, so long will they grow and multiply (instance the midge in the white wheats); but if a crop should intervene which is not the natural food of these our enemies, their larvae will perish for want of nourishment.

Variety is then one of the first rules by which the farmer should be guided in adopting a regular rotation of cropping.

Doubtless, by means of a copious supply of manure, sufficient to return to the soil those ingredients which the harvest has withdrawn, as succession of the same crops may be grown without the grain being either diminished or deteriorated, but the most practicable and convenient plan is to alternate the crops so that after a particular species of plant has been raised the land may have time to recuperate ere it be again required to supply a large quantity of the same kind of food.

The general principles upon which different farmers may work will, of course vary with those differences, climatic and of soil, which exist in their several localities. All considerations of proper rotation should be carefully guarded by the following rules:—

To avoid the immediate succession of similar crops especially if such be of an exhaustive nature, and to throw their return as far distant from each other as practical circumstances will admit.

To grow intermediate crops of grass and roots, soil permitting, between cereals.

To give the preference to such green crops as afford the best prospect of food for live stock, and particularly to those which will admit of cultivating by hoc.

Never to lay down to grass until land be free from weeds.

The subject of this paper is, like newly cleared land all but inexhaustible. I will therefore simply note a few of those courses which are now in vogue in Great Britain, only promising that in Canada wheat is undoubtedly the staple product, and that, owing to the length of our winters, we require much more fodder for our stock.

First, a Quadrennial Rotation:—

1st year, summer fallow; 2nd, wheat; 3rd and 4th, clover.

Now, I hardly dare here give my private views on the subject of summer fallowing, for I know that many farmers advocate, and indeed practically, adopt it. The use and abuse of the summer fallow may well form a subject for future discussion.

The advantages claimed for the above rotation are, that the system is economical, requiring nothing but the most simple operations and the most inexpensive implements, that it does not require so much attention to the management of the land as does a purely alternate system, for the repetition of the summer fallows affords plenty of time for the preparation of the land for wheat; that the labor is

evenly divided throughout the seasons; that if the clover be ploughed under after the second year, the land is kept in good heart, and will be still more enriched by the application of our barn-yard manure to the fallow; that the fallow cleans the land, and is undoubtedly followed by a good crop of wheat.

We now take a Five Year's Rotation, usually adopted upon the light lands of the east of England, a part of the kingdom famed as a great turnip raising country:—

1st year, roots; 2nd, barley; 3rd and 4th, clover; 5th, wheat.

It is not customary, nor indeed convenient to grow such a large proportion of roots in Canada. We may therefore put part of this field in roots, peas, &c.; but should, when the rotation again comes round to this field, reverse the division, sowing grain, where we before planted roots, and roots where we grew grain.

The advantages of this system are that it is peculiarly suitable to our lighter lands and loams; the roots get a thorough cleaning, and prepare a mellow seed-bed for the barley; and a young sod is held to be, when broken up by a single ploughing, a good preparation for a sound seed-bed for the ensuing wheat crop.

I will close by laying down for consideration a rotation for such land as we have generally through this township of Ancaster.

This extends over six years, and is as follows:—

1st year, wheat, 2nd, 3rd, and 4th, grass; 5th, hoed crop; 6th, barley.

By bringing in grass for three years—say one in pasture and two in hay—we have an excellent sod to plough down, and we also have plenty of opportunity to enrich that land, which may have been put to barley by a liberal dressing of dung before putting in fall wheat.

The advantages that I claim for this rotation are an even distribution of crops over the land, a thorough enriching of the soil every sixth year, and a good proportion of superior hay and wheat—the two most valuable products of a Canadian farm.

#### FRUIT GROWERS' ASSOCIATION.

##### WINTER MEETING.

*Reported by the Secretary.*

The regular winter meeting of the Fruit Growers' Association was held on Tuesday, Feb. 7th, 1871, in the City of Hamilton. There was a good attendance, members being present from London, Goderich, Brantford, Toronto, Cayuga, Clifton, Niagara, St. Catharines, Winona, Milton, Oakville, Wellington Square, Thamesford and other places.

The minutes of the last meeting were read and approved.

The following papers were then read, viz:

By the President on Thinning fruit.

By A. B. Bennett, Esq., The Garden and Farm.

By G. Leslie, jr., Esq., Tree Planting for Shelter.

By W. H. Mills, Esq., Vegetable Tissues and Fire Blight.

By Rev. George Bell, Experiments in the Culture of Small Fruits.

Moved by Mr. Morse, seconded by Mr. Saunders, that the gentlemen who have read papers be requested to hand their papers over to the custody of the Directors for disposal as they think fit. Carried.

Moved by Mr. Holton, seconded by Mr. Martin, that a cordial vote of thanks be tendered the gentlemen who have so kindly furnished the papers we have just read. Carried.

Resolved, that the seedling and other apples be handed over to the Fruit Committee to examine and report.

Mr. Arnold brought a russet apple before the meeting, for the purpose of soliciting an opinion as to whether any one had seen anything like it before. After various opinions had been given, he stated that it was a Spitzenburg, a remarkable variation from the normal form.

Mr. Arnold also read an interesting letter from Mr. Thomas Meehan of Philadelphia, in relation to a singular combination of the apple with the pear, which had been sent by Mr. Arnold to Mr. Meehan. It was a fruit shaped like an ordinary apple, and having the external appearance of an apple, but found growing on a pear tree. Mr. Meehan stated in his letters that he had carefully examined the fruit sent him, and that he had found the pulp to be apple, and the stem, core and seeds to be pear, and was of the opinion that it was produced by the blossom of the pear tree having been fertilized by the pollen of an apple.

Here is a new field for investigation. Can the pear be fertilized by the apple, or the apple by the pear? If so, what new combinations are yet to be brought out by the crossing of these fruits, and what a field of experiment is opened to the fruit raiser! It is to be hoped that Mr. Arnold, who is skilled in cross-fertilization, will make such numerous and careful experiments next spring as will settle the question of cross-fertilization between the apple and the pear.

Moved by Mr. Martin, seconded by Mr. Morse, that any member sending to the Secretary the names of five new members, with their subscriptions, shall be entitled to a double supply of fruit trees at the next distribution. Carried.

The discussion of the appointed subjects was now taken up.

##### BEST TIME FOR TRANSPLANTING TREES.

Mr. Freed approves of digging the trees early in the spring, as early as possible; turn the roots and heel them in until ready to plant.

Mr. Watson, Summerville, has light land, and has found fall planting most successful with him. Does not prune, in case of fall planting, at the time they are planted, but in the spring following.

Mr. Grey, of Toronto—It depends on the soil; fall planting is to be recommended on light soil, spring planting when the soil is heavier. If planted in the fall, the trees should be banked up with earth, or mulched, to protect the roots.

Mr. Holton, of Hamilton, thinks, as a rule, spring planting is most successful; but when a tree survives the winter uninjured, the growth during the following year is much better. Fall planting does as well, perhaps better, to cover the roots well with earth, taking care to select a dry place for them.

Mr. Bell, of Clifton, has had excellent success with spring planting.

Mr. Arnold, of Paris, thinks there can be no general rule for either fall or spring planting. If the wood is well ripened, and the winters not too severe,

thinks fall planting would succeed best, but taking all things into account would usually recommend spring planting.

Mr. Caldwell, of Galt, advocates spring planting, but would recommend the taking of trees up, and root pruning and heeling-in in the fall, because the cut roots become calloused during the winter, and more readily send out their rootlets when planted out.

Mr. W. Brooking, of Dundas, believes in spring planting; if trees are properly mulched, thinks there is little danger of losing them from the heat.

Mr. Hopkins, of Stoney Creek, has found spring planting do well. Out of 400 trees planted in spring only lost 4. Believes that want of success in planting is often due to the length of time the trees have been out of the ground. Advocates purchasing trees as near home as possible, so as to lessen the risk in this way.

Mr. Graham, of Fort Erie, believes that there is more in the way in which the trees are planted than the time of planting; advocates spring planting, mulching, and staking.

Mr. Bell, of Clifton—Parties planting should see that the land is well drained before planting; if this be done, thinks there is little danger, providing the planting is done well, whether it is done in spring or fall.

Mr. Mills, of Hamilton, advocates spring planting because the roots heal over during the winter.

Mr. D. W. Beadle, of St. Catharines, thinks the healing process in the root will not take place unless the tree be deeply covered when heeled in, sufficiently to exclude the frost. Fall planting is theoretically the time for planting trees, if the work be well done, will succeed best. If heeled in it is all important that the trench be deep and the earth well banked up, so that the roots be out of the reach of the frost.

President Burnett has found fall planting most successful, and thinks he gains time by so doing. No fear of the want of success if the planting is carefully carried out, and the small rootlets properly spread and covered. Believes the fall planted trees keep their foliage better, makes a more vigorous growth, and stand the dry weather of summer better.

Mr. HOLTON finds that there is a great deal of bad planting among those who plant trees. Has known them sometimes to be planted too shallow, with roots scarcely covered; sometimes in a cramped hole seven-by-nine inches, at others planted in a narrow post hole arrangement eighteen inches deep, into which the tree is thrust half way up the stem. Advises planters to try to strike the happy medium in reference to the depth of planting, and loosen the soil well all around the spot when the tree is set.

#### MANURES.

Mr. LEE, of Hamilton, has found the clipping from hides buried under the surface about vines, with bones broken small, to give a great impetus to growth of grape vines.

Mr. GREY considers rotten turf the best manure; has found it much better than highly stimulating manures.

Mr. ARNOLD thinks that barnyard manure answers much the best for general purposes. Does not believe animal manure buried around the roots of trees or vines are ever good for them, unless the material is well rotted. Believes in bone dust as a

manure for vines; would prefer applying manure early in the fall. Thinks there are more trees and vines killed by over-feeding than by lack of manure.

One of the members having referred to the ravages of field-mice among his trees, a discussion took place on the subject.

Mr. W. SAUNDERS advocated that the use of stove-pipe iron; cut one sheet into three pieces, and bring each piece into circular form with a roller; enclose each tree in one of these and tie it with a string. The cost of this on a large scale will be 3½ cents per tree.

Mr. D. W. BEADLE recommended that the trees be painted with a mixture of lime, cowdung, and soot, after a receipt given by Charles Downing, and published in the Canada Farmer.

Mr. GREY agreed with Mr. Beadle.

Mr. BROOKING has found stovepipe iron very useful as a protection, and very cheap.

Mr. Mills advocated the use of 4 inch tile, split up the middle, the two halves placed together and tied with a string.

The discussion of manures was resumed.

Mr. Caldwell thinks all manure should be composted. The fall should be the best time, and the application should be made on the surface in light soil; if the soil be heavy then it should be slightly covered.

Judge Logie uses ashes, and, for vines, broken bones mixed with manure from barnyards. Fall manuring on the surface is preferable.

Mr. Barnes, of Hamilton, uses all he can get; put in salt, a pailful to a load of barnyard manure, uses plaster also; for grape, does not like high manuring.

Mr. Lewis, of Clifton, used common stable manure on the surface for grapes. If you wish a crop manure moderately; thinks high manuring produces much wood and but little grapes.

Mr. Graham of Fort Erie, said: All kinds of manure are good; put on all you can get well prepared, and for grapes cut back well. Prepare thoroughly for new orchards before you plant; for orchards put on straws manure from cow yards. Sprinkling with plaster also is very beneficial; bone dust may be applied any where. I think salt not good. For new orchards I use well rotted manure and worked it in; for peaches I find ashes the life of the tree, and also keep the grass away. Ashes are good for any kind of tree. I seed my old orchard in pasture.

Mr. Bell: To determine the exact manure would require an analysis of the soil. Manure should be composted and applied near the surface. Bone dust and ashes are always good. Fresh manure, if applied to the surface in the fall, will not harm; if in the spring it should be well composted. Ashes are particularly good for grapes.

Mr. Bennett—At first he trenched and manured largely, now I manure lightly and have less wood, but more fruit. I manure with plaster, ashes, &c., in the fall. Salt is not good for all trees. The plum, being a marine tree, is greatly benefited by the use of salt in moderate quantity. A friend used the flesh of some cattle for manure; it caused fungus on his vines; which destroyed them.

Mr. Ross, of Goderich—For grapes I use a compost of muck and manure. My soil is gravelly. I apply it to the surface in the fall.

There was a fine display of choice apples and a few pears placed upon the table.

The fruit committee presented their report, which is given below.

It was resolved that the summer meeting be held in Hamilton, and the autumn meeting in Goderich. The time for holding each meeting to be fixed by the directors.

#### REPORT OF THE FRUIT COMMITTEE.

An apple said to be a seedling, exhibited by Mr. Demick, of West Flamboro, through Mr. Brooking, of good size, fair appearance, smooth skin, yellow splashed with red; form, flattish oblong; quality at present second rate, but evidently past its prime. The apples somewhat resemble the colvert, but no improvement thereon. We would recommend the exhibitor to send specimens next year, when the apple is at it best, the opinion of the fruit committee, to the President of this society.

### GOOD AND BAD HUSBANDRY.

BY HORACE GREELY.

Necessity is the master of us all. A farmer may be sternous for deep plowing as I am—may firmly believe that the soil should be thoroughly broken up and pulverised to a depth of fifteen or thirty inches, according to the crop; but, if all the team he can muster is a yoke of thin, light steers, or a span of old, spavined horses, which have not even a speaking acquaintance with grain, what shall he do? So he may heartily wish he had a thousand loads of barn-yard manure, and know how to make a good use of every ounce of it; but, if he has it not, and is not able to buy it, he can't always afford to forbear sowing and planting, and so, because he cannot secure great crops, do without any crops at all. If he does the best he can, what better can he do?

Again: Many farmers have fields that must await the pleasure of nature to fit them for thorough cultivation. Here is a field—sometimes a whole farm—which, if partially divested to the primitive forests, is still thickly dotted with obstinate stumps and filled with green tenacious roots, which could only be removed at heavy, perhaps ruinous, cost. A rich man might order them all dug out in a month, and see his order fully obeyed; but, except to clear a spot for a garden or under peculiar circumstances, it would not pay, and a poor man cannot afford to incur a heavy expense merely for appearance's sake, or to make a theatrical display of energy. In a great majority of cases, he who farms for a living can't afford to pull great stumps, but must put his newly cleared land into grass at the earliest day, mow the smoother and pasture the rougher portion of it, and wait for rain and drouth, heat and frost, to rot his stumps until they can easily be pulled or burned out as they stand.

So with a regard to a process I detest, known as Pasturing. I do firmly believe that the time is at hand when nearly all the food of cattle will, in our Eastern and Middle States, be cut and feed to them—that we can't afford much longer, even if we can at present, to let them roam at will over hill and dale, through meadow and forrest, biting off the bitter plants and letting the worse go to seed; often poaching upon the soft, wet soil, especially in spring, so that their hoofs destroy as much as they eat; nipping and often killing in their infancy the finest trees, such as the sugar maple, and leaving such as hemlock, red oak, beech, &c., to attain

maturity. Our race generally emerges from savagism and squalour into industry, comfort, and thrift, through the pastoral condition—the herding, taming, rearing and training of animals being that department of husbandry to which barbarians are most easily attached; hence, we cling to Pasturing long after the reason for it has vanished. The radical, incurable vice of Pasturing—that of devouring the better plants and leaving the worse to form and diffuse seed—can never be wholly obviated; and I deem it safe to estimate that almost any farm will carry twice as much stock if their food be mainly cut and fed to them, as it will if they are required to pick it up where and as it grows or grew. I am sure that the general adoption of Soiling instead of Pasturing will add immensely to the annual product, to the wealth, and to the population of our older States. And yet, I know right well that many farmers are so rough and otherwise unsuited to soiling as to preclude its adoption thereon for many years to come.

Let me indicate what I mean by Good Farming through an illustration drawn from the Great West.—

All over the settled portions of the valley of the Upper Mississippi and the Missouri there are large and small herds of cattle that are provided with little or no shelter. The lea of a fence or stack, the partial protection of a young and leafless wood, they may chance to enjoy; but that it is a ruinous waste to leave to prey to biting frosts and piercing north-westers, their owners seem not to comprehend. Many farmers far above want will this winter feed out corn and stacks of hay to herds of cattle that will not be one pound heavier on the 1st of next May than they were on the 1st of last December—who will have required that fodder merely to preserve their vitality and escape freezing to death. It has mainly been employed as fuel rather than as nourishment, and has served, not to put on flesh, but to keep out frost.

Now, I am familiar with the excuses for this waste, but they do not satisfy me. The poorest pioneer might have built for his one cow a rude shelter of stakes and poles, and straw or prairie grass, if he had realised its importance, simply in the light of economy. He who has many cattle is rarely without both straw and timber, and might shelter his stock abundantly if he only would. Nay, he could not have neglected or omitted it if he clearly understood that his cattle must somehow be supplied with heat, and that he can far cheaper warm them from without than from within.

The broad, general, unquestionable truths on which I insist in behalf of Good Farming are these; and I do not admit that they are subject to exceptions.

1. It is very rarely impracticable to grow good crops, if you are willing to work for them. If your land is too poor to grow Wheat or Corn, and you are not able to enrich it to sow Rye or Buckwheat, if you cannot coax it to grow a good crop of anything, let it alone; and, if you cannot run away from it, work out by the day or month for your more fortunate neighbors. The time and means squandered in trying to grow crops where only half or quarter crops can be made, constitute the heaviest item on the wrong side of our farmers' balance-sheet; taxing them more than their National, State, and Local Governments together do.

Good crops rarely fail to yield a profit to the

grower. I know there are exceptions, but they are few. Keep your eye on the farmer who almost uniformly has great Grass, good Wheat, heavy Corn, &c., and unless he drinks, or has some other bad habit, you will find him growing rich. I am confident that white blackbirds are nearly as abundant as farmers who have become poor while usually growing good crops.

3. The fairest and single test of good farming is the increasing productiveness of the soil. That farm which averaged twenty bushels of grain to the acre twenty years ago, twenty-five bushels ten years ago, and will measure thirty bushels to the acre from this year's crop, has been and is in good hands. I know no other touchstone of farming so unerring as that of the increase or decrease from year to year of its aggregate product. If you could convince me that X is a good farmer, do not tell me of some great crop he has just grown, but show me that his crop has regularly increased from year to year and I am satisfied.

#### THE SCOTCH DOUBLE FURROW PLOW.

An agricultural writer in the *Mark Lane Express*, describing a visit paid to Stirlingshire in the beginning of December, thus describes the workings of the double-furrow plow:

On the removal of the corn crop, the stubble is turned over on the first favorable opportunity, as deeply as possible. The double furrow plow being admirably adapted for this work on medium soils, and a considerable number of them being at work in this district, and all giving much satisfaction to those who had the spirit to purchase them, I will here describe its workings. The one on this farm is of Scotch make, exceedingly simple in construction, easily thrown in or out of gear, and is turned at the end of the ground with as little difficulty as the ordinary swing plow.

The furrow slice was exactly nine inches in width by seven in depth, the soil admitting of nothing further; and yet it seemed to me that it was deep enough for all ordinary purposes, the work being so thoroughly well done. At this depth and width, and with the plow powerfully horsed, the breadth gone over in a day amounted to an acre and a half imperial. Many persons may say that this is not doing much, but when it is taken into consideration that this work was done in the best manner, and by but one man and three horses, it will be found that it was really a great deal.

The most striking feature in looking along the furrow is the beautiful way in which the bottom is cleared out, no ridge, no unsoftened piece of soil being visible along its entire length. This is a matter always difficult to manage with the ordinary plow, but with this one it is easy; as, when once set, there is no possibility of missing. Viewing a break of about ten acres finished with this plow, I found every furrow neatly laid over to the proper angle, firmly packed, and the stubble completely buried. The field sloped considerably, and the plowing was across; yet there appeared to be no difference in the quality of the work done, the packing being quite as firm on as off the land, or, in other words, as well and firmly laid up the hill as down. As large a surface was exposed to the disintegrating influence of the frosts of Winter as could

possibly be obtained, care being taken at the same time to preserve an angle on the furrow sufficient to defend the land from the furious effect of heavy and continuous rains.

Comparing the work done by the single and double plows, as seen in the same field, the superiority of the latter was distinctly observable, both as regards quantity and quality, as with this implement drawn by three horses, and guided by one man, exactly the same amount of work was done as could be accomplished by four horses and two men, working the ordinary swing plows. In the one case, scarcely an open-backed furrow was met with, while in the other, they were pretty numerous, and the bottom not nearly so well cleared out, as in many instances when thrown out by a stone, the horses had moved on several yards before the plowman could recover his depth.

Looking upon the double-furrow plow as an implement which should be on every farm of sufficient size to require four horses, I yet consider it of no use in the hands of those farmers who keep light or badly fed horses, as disappointment and disgust will be the inevitable result of such men attempting to work it. To turn over the soil in a manner fit to bear inspection, the horses must possess both bone and substance, and be liberally fed so as to be above their work, and to be able to maintain a steady, unbroken step from morning till night. It is absolutely painful to witness the struggles and unequal pulling of weak, underfed horses when on any plow, but with this one they cannot get on at all, unless it is lifted so far out the ground as to entirely destroy its efficiency.

#### FARM GLEANINGS.

There are not less than a thousand sets of steam plowing apparatus in regular use on English farms.

Mr. Waring, in his *Ogden Farms Papers* in the February *American Agriculturist* says, weevil is another name for weak plants and weak plants mean a weak soil.

Ben. Perley Poore, the journalist, has on his farm at West Newbury, Mass., a plantation of five acres of oaks started thirty years ago. Many of them are now forty feet high.

Some persons of an inquiring and philosophic turn of mind says the microscope reveals the fact that a speck of potato rot the size of a pin head contains 200 ferocious little animals, biting and clawing each other savagely.

Keene, N. H., claims the champion pumpkin raiser, in the person of Deacon Isaac Rand. From one seed the good deacon coaxed up eighteen lusty pumpkins, whose aggregate weight mounted up to 429 pounds.

He who rescues a tun of offal from streams or the sea, does double service; he adds to our manure supply, and he checks the pollution of our waters.

A Scotch farmer says that long experience has convinced him that for most purposes on a farm, gas lime is equal to quick lime, and it costs less than half.

The strongest vegetable fibre known is the New Zealand flax. It has long, swordlike leaves ten or twelve feet in length. It is used by the settlers for binding their sheaves, fastening their gates, tying up their horses, and in almost every possible way.

Under the ordinary field culture of wheat in this country the usual produce of wheat is estimated at about sixteen grains to one; the unusual produce, under the highest order garden culture, has gone as high as seven thousand four hundred and forty-five grains to one.

At the late trial of implements at Utica, under the auspices of the new York state Agricultural Society, six kinds of potato diggers were exhibited. One was a hand digger, sold for \$7, which the operator threw out nine hills of potatoes in one minute and ten seconds.

The *Country Gentleman*, speaking of hair as a fertilizer says that it contains a large amount of nitrogen. It may be spread evenly over the ground at the rate of a peck or so to the square rod, and turned in by shallow plowing; or better, mixed in a compost heap at the rate of a tenth part more or less in successive layers.

A correspondent of the *Country Gentleman* urges co-operation among farmers for the following purposes:—To lessen the costs of production of farm produce. To lessen the cost of articles required to be purchased. To cheapen the marketing of farm produce. The maintenance of a reasonable price upon all farm products.

A great many farmers are coming to the conclusion that it does not pay to run their homes as boarding houses for hired help and are building tenant houses and getting married laborers. Said a New York farmer:—"I have always hoarded my help until the present season, but I shall never do it again. I built a tenant house yonder," and he pointed to a neat little domicile twenty rods from his own, "and it has paid its costs already in the added privacy and quiet it has enabled me to enjoy, and in the great blessing of work for the women folks."

Victor Hugo eloquently says:—"These heaps of garbage at the corners, these tumbrils of mire jolting through the streets at night, these horrid scavengers-cars, these fetid streams of subterranean slime which the pavement hides from you—do you know what all this is? It is flowering meadow, it is green grass, it is marjoram and thyme, and sage, it is game, it is cattle, it is the satisfied low of huge oxen at evening, it is perfumed hay, it is golden corn, it is bread on your table, it is warm blood in your veins, it is health, it is joy, it is life. Thus wills that mysterious Creation which is transformation upon earth and transfiguration in heaven.

The *Western Farmer* gives the account of a farmer who bought a field which had been plowed for twenty successive years, with a soil only four or five inches deep. He applied a subsoil plow, running it fourteen inches deep, then run it the other way, and then harrowed it twice, with an interval of a few days, and had his ground broken up without the aid of the ordinary plow. At one time he marked ground for corn by running a subsoil plow fourteen inches deep, both ways at proper distance, and planting at the crossings. He had a good crop notwithstanding a severe drouth.

A correspondent of the *Western Farmer* recommends the use of a "Smoother" in preference to the "Roller" for smoothing and pulverizing the soil. The "Smoother" is made of two or three hard wood planks about three inches thick, and pieces of 3x4 joist put on cross-wise, the forward ends extending

a foot or so over the front of the implement to which to attach clevises. It should be nine feet long. The inventor finds that it crushes lumps, levels and smooths the land much better than a roller.

## The Live Stock.

### SUCCESSFUL BEE-KEEPING IN A NUT SHELL.

BY ELSHA GALLUP.

"The great secret in successful bee keeping consists in knowledge how to keep all stock strong, or having them strong with brood in all stages, nursing bees and outside laborers at the commencement of the honey harvest. To illustrate this: A and B both have the same resources in their respective localities, or, we will say that both reside in the same locality, and their honey harvest commences on the first of June and the last half of July, and first half of August there is no forage for bees. June and the first half of July is good, and the last half of August, and the month of September is good.

"A commences in spring to stimulate, equalize, &c., and replaces all old queens or queens that do not come up to the standard of fertility with young prolific queens, allows but little increase (that is, providing surplus honey is the object). Here I will remark that with young prolific queens and abundance of room there is but very little danger of increase, and on the first day of June when the harvest commences he has every stock completely filled with comb brood in all stages, nursing bees in abundance, less than sixteen days old, honey gatherers over sixteen days old, and they are in the very best possible condition to commence storing surplus honey immediately. Then during the scarce time, in the last of July and first of August, stimulates and keeps up the fertility of the queens until the harvest again commences in the middle of August. His bees are then ready to commence storing surplus again as soon as the harvest commences. The consequence will be that A receives a profit in surplus honey, and pronounces the season a good one. In fact, meets every one with a smiling countenance, and is well satisfied that bee keeping pays, &c. On the other hand, B commences with the same number of stocks, in the spring lets them manage themselves, and on the first day of June they are not in condition to store surplus, or at least but very few of them, and those few he allows to swarm themselves to death, or which amounts to about the same thing. When the honey harvest commences his stocks commence breeding very rapidly, and by the time his stocks get in condition to store honey the harvest is done, or nearly so, for it takes twenty-one days to hatch out a worker, and sixteen days more, or there about, before they commence laboring outside, &c. Now the scarce time comes on again, and B has got no surplus honey, but perhaps has a number of extra swarms. The queens stop breeding entirely, or nearly so, especially so if the forage is entirely dried up or cut off. Now, when the honey harvest commences, in the middle of August, his stocks, instead of being in condition to commence storing, have to go to raising brood again to replenish their stock of workers, for recollect that the brood hatched in June and July is very soon used up with old age, for the lifetime of a working bee is only from six to eight weeks during the working



season. Now you can readily see that B's stocks are expending all their force and energy to replenish their number again, and by the time they are ready to commence storing the harvest is past, and B has any quantity of stocks that he has to feed in order to carry them through the winter, or he has to double up stock, &c., and when he comes to sum up the season's operations he has received no surplus honey, and his surplus stocks, or a large proportion of them, have either to be fed or doubled up, in order to winter them, and the consequence is, his force is somewhat elongated, and his conclusion is that the season has been a poor one for bees.—He certainly had bad luck, and he is ready to attribute his luck, as he calls it, to anything but his own neglect or carelessness. For example, the season has been a poor one for bees, or his climate is not adapted to bee keeping, &c. A, with his management, in the same locality, mind you, has had good luck, as it is called. His stocks are all in excellent condition for wintering, no doubling up or feeding in winter, &c., for he has fed at the proper season to feed, for I hold it to be a fixed fact that the summer and spring is the proper time to feed. Keep your bees in the right condition to store honey, and when the harvest comes they will store it. There may be seasons and localities where bees have to be fed in winter; but I have never seen such when they were properly taken care of in the summer.—The whole secret of successful bee keeping is contained in the above nut shell.

"The very first knowledge sought by the new beginner in bee keeping should be the above."

#### SPRING MANAGEMENT OF BEES.

A little attention given to bees at the proper time in spring will often enable the bee-keeper to save stocks that would otherwise perish.

As soon as the weather is warm enough for the bees to fly without being chilled, it will do to put out such stocks as have been housed. Every stock should be examined, as it frequently happens that good stocks have consumed nearly or quite all their stores, and would perish if not fed. When such is the case they should be fed at once, and feeding should continue until they can gather honey. They should not be fed lavishly, but a small quantity every day or every other day. Daily feeding is considered the better way, but it must be kept up, when once commenced, until the bees can gather in the field. All filth and dead bees that may have accumulated during the winter should be cleaned away.

The bees will in most cases do this themselves; but when it is done for them it allows those bees to gather honey that would otherwise be occupied in cleaning away the filth. Those using frame hives will find no difficulty in cleaning their hives, or ascertaining the amount of honey each stock has on hand. Often if will be found convenient to take frames from strong stock and exchange with weak ones, thus equally dividing the honey among the bees. But where common box hives are used it is not so easy to ascertain their true condition, as any honey not consumed during winter is generally at the top or near the top of the combs, where it is impossible to see it in the common box hive. A

very good plan in such cases is to take a long wire and push it down to the sides of the combs, and if there is any honey it will easily be felt when the wire passes into it and it may also be seen on the wire when it is removed. Sometimes, on setting out stocks in the spring, or on examining those that may have remained out, some stock or stocks may appear dead, or nearly so, but they should not be hastily buried, for it frequently happens that they are only exhausted for want of food, or benumbed by cold, and if taken into a warm room or placed in the warm sun, will show signs of returning life, and if they want food, a spoonful of honey or syrup will revive the whole stock.

J. H. THOMAS.

Brooklin, Ont

#### GEORGE MILLER'S SALE.

On Wednesday, January 18th, the sale of Mr. Miller's thorough-bred and grade stock took place at Riggfoot, in the township of Markham. The roads were very good, the weather all that the most sanguine could have wished, and the attendance large.

The following is a list of the animals sold, names of the purchasers, and prices obtained:—

THOROUGH-BRED BULLS, AGED.	
Bell Duke of Oxford—Robert Miller; afterwards sold to Birrell & Johnston, Maple Hall, Pickering, for \$300.....	
Duke of Riggfoot—J. R. Craig, Edmonton...	\$225
THOROUGH-BRED BULLS—CALVES.	
Prince of Sparta—George Mackay, Co. York..	95
Statesman—Robert Miller, Pickering.....	195
Baron of Riggfoot—T. W. Perry, Scott.....	100
Royal Arch Duke—W. Armstrong, Markham..	85
Markham Duke—W. Thompson, Markham..	90
THOROUGH-BRED COWS, HEIFERS AND CALVES.	
Mara—Birrell & Johnston, Pickering.....	345
Mara 3rd, and calf at her foot—John Miller, Markham.....	410
Royal Mary—John Wilson, Pickering.....	190
Miss Barnum—Simon Beattie, Pickering....	335
Miss Syme—George Tenant.....	125
Lady Jane 6th—J. C. Snell, Co. Peel.....	245
Dairy Maid—J. Gardner, Co. Peel.....	225
Miss Boyne 2nd—S. Carswell, Co. York.....	110
Miss Lucy—J. C. Snell, Co. Peel.....	230
Rose of Markham—J. Gardner, Co. Peel.....	215
Princess of Bourbon—Birrell & Johnson, Pickering.....	250
Maid of Laprairie—Franklin Wickson, Pickering; afterwards sold to J. C. Snell, Co. Peel.....	215
Wild Rose 2nd—H. Reazon, Co. Halton.....	100
—Heifer—B. Reazon, Co. Halton.....	99
GRADE COWS, HEIFERS AND CALVES.	
Susan Gray—R. T. Hackins, Markham.....	80
Blossom—George Stockdale.....	125
Mary Ann—J. Keefer.....	71
Calf—J. Keefer.....	30
Miss Purdy—J. Ingain, Markham.....	33
Maggie—D. Smile, Vaughan.....	200
Red Rose, H. Reazon, Co. Halton.....	40

## DAIRY COWS.

—V. Foster .....	30
—J. Scott .....	22
—J. Higgins .....	20

## GRADE BULL CALVES.

St. Elmo—Calvin Davis .....	75
Pilgrim Boy—J. Russell, Co. York .....	25
—J. Jenkins, Pickering .....	10
1 Steer—J. Pike, Markham .....	35

## BERKSHIRE PIGS.

Boar No. 1—J. Hope, U. S. ....	21
“ No. 2—J. Cowrie, Scarboro' .....	15
Sow—J. Hope, U. S. ....	12

## COLTSWOLD SHEEP.

Two Ewes—Wm. Miller, Pickering .....	78
“ J. J. Davidson, Pickering .....	60
Two Ewe Lambs—J. J. Davidson, Pickering .....	30
“ J. J. Davidson, Whitby .....	24

## SMITHFIELD CLUB CATTLE SHOW.

The Smithville Club Cattle Show took place in the Agricultural Hall, Islington, during the second week of December, and excited the usual interest, bringing together some of the finest specimens of live stock, and attracting a large concourse of visitors. Amongst the exhibitors were not only those who make stock-raising their regular calling, but amateurs from the noble and wealthy, with Her Majesty and the Prince of Wales among the number, who thus give evidence of the estimation in which they hold the farmers' vocation.

The show this year was, by all accounts, up to the high standard of these annual exhibitions, and following so close on that at Birmingham possessed many of the same features of interest. The principal winners at the Midlands show were also successful in the metropolis, though many as usual, some of the awards at the first were not sustained in the larger competition of the Smithfield show. The show of short-horns was, perhaps, not of extra merit; but that of Devons was particularly fine. The Herefords were good. The champion plate, value £100, for the best beast in the show, was awarded to Mr. Pulver of Kettering, for a magnificent short-horn ox, winner at Birmingham. The gold medal for the best male animal, was won by Mr. Taylor for a Devon. The medal for the best cow or heifer, was also won for a Devon, by Mr. T. L. Senior. Mr. Heath Harris was again successful in the class of Scotch polled steers against Mr. McCombie.

The show of sheep was excellent, headed by Lord Berners' Leicesters, and Lord Walsingham's South-downs.

The pigs were as usual a splendid lot.

A display of implements by the chief manufacturers in Britain, gave additional interest to the occasion; and the show of mammoth roots was really "prodigious" with mangolds weighing 50 lbs., and samples from crops yielding 72 tons per acre.—*Globe*.

## BIRMINGHAM POULTRY SHOW.

The annual show of poultry at Birmingham, which takes place simultaneously with the cattle show at Bingley Hall, came off this year with its

usual *éclat*, and though not quite equal in the number of its entries to those of 1867 and 1868—the largest on record,—it surpassed by more than a hundred pens that of last year. The total number of entries was 2,578. There was a slight falling off numerically in Dorkings, as compared with last year, while in Cochins, Brahmas, and Game there was a considerable increase. The Game and white Cochins were a remarkably good class; the Buff Cochins were good, though not up to the Birmingham standard, and we are sorry to note the existence of the most reprehensible practices which too often disgrace poultry shows, as indicated by such criticisms as the following from the *London Field*:—"If the Judges had disqualified all the cocks with their tails pulled there would have been a great alteration in the prize list." Anything like trickery should always be a disqualification for the time being and ever after, we should say. Of the light Brahmas, the *Field* says:—"They were remarkable. In the first place the arrival of the specimens from America caused a flutter of excitement. As English breeders wished to see the standard there in vogue. Mr. Simpson's specimens were very large fine birds, necessarily suffering from the voyage, which told on them in the matter of condition. Their defects, judged by our standard, were that they were too creamy in color, somewhat too leggy, and a little deficient in pencilling on the hackle; but they held their own most creditably, and deservedly found their place in the prize list in despite of the drawbacks of the voyage. The gem of the light Brahmas were Mr. Cook's pullets; one, if we dare use the term, was absolutely perfect." The French fowls were "magnificent." The largest class was that of Game, numbering 374 pens. The specimens of Domicide from America excited considerable attention. The weight of the ducks we have already given. Altogether the show was a grand success.—*Globe*.

## MR. BEATTIE'S IMPORTATIONS.

Mr. Simon Beattie, who now resides near Bangor in Pickering, besides his valuable services in selecting stock for Mr. Cochrane, has recently imported on his account several short-horns of great beauty and high pedigree. Among them is the cow Innocent, a fine looking animal of large size, the dam of some excellent stock in England, and descended from Mr. Robert Collins' Cowslip, the ancestress of the celebrated prize heifer Countess of Yarborough, winner of premiums at the Royal and Yorkshire shows. Mr. Beattie has also imported two bulls, Bothwell, 25661, and Lord York, 26766. The latter is half-brother to Mr. Cochrane's renowned heifer Duchess 97th, both having been sired by Captain Gunter's Third Duke of Thorndale. A very superior entire colt, a Cleveland bay bred by Mr. Bruere, of Braithwaite Hall, Yorkshire, also came out by the "European" for the same enterprising importer.

DESCRIPTION OF HEN HOUSE.—I send you a description of a hen house that I have just put up:

It is 8 x 8 feet square on the ground. The roof boards are six feet long, and made to come even with the floor, and a few inches above the latter. The floor is made of the same material as the roof,

and slopes down within a few inches of front boards. This space is intended for the droppings to fall down through when raked down from under the roost. The space between the eaves and upper end of floor is closed with a board turning on a hinge, similar to a blind slat. This is for the purpose of ventilation, and turning the water from roof on the floor, for washing it off.

The front is of glass, six sashes coming up near the roof. The nest boxes are close under the window sill, convenient to get at by raising the lower sash. The door is immediately under nest boxes, and extends clear across the front, and is about one foot wide, hung on hinges to raise up or let down, as fancy may dictate.

On each side there is a wheel about two feet high, on which about two-thirds of the entire weight of the house rests. By taking hold of the back end, the house can be easily moved from place to place.

This house will comfortably hold about fifty hens. The space under the floor is used for sand and dirt boxes.

The entire cost of material was twelve dollars. I made it myself, and consider it superior to any I ever saw or heard of; and it can be made neat enough to grace any man's door-yard.

JNO. T. SMITH.

#### CEDAR RAPIDS, IOWA.

**THEORY OF FEEDING CATTLE.**—A farmer has three things to consider, with three distinct objects to attain in feeding his cattle, to wit: 1st, to make *bone*; 2nd, to make *flesh*; and 3rd, to make *fat*; without the first he can have no flesh, and without flesh he can have no fat. This being so, it is absolutely necessary in feeding cattle that their food shall contain all the elements of bone, flesh and fat; the former should be plentifully furnished the growing animal, and the latter when fattening for the shambles. Bone has for its elements phosphoric acid, and lime; flesh has gluten, fibrine, etc., and fat has carbon. It is necessary, therefore, that cattle feed should contain all these in due proportion to their wants with reference to the purposes in view; in the young, bone and flesh constituents are required; and these are found in sweets, cabbages, potatoes, with good hay or grass, according to the season of the year; flesh, with a view to fattening, grain, oil, meal, and hay and grass, must be furnished.

The kinds of feed being known for the accomplishing of certain ends, the next thing to be considered is, the quantity required, best adapted to promote the end in view, be it growth or fattening. An English writer says an ox requires two per cent. of his live weight of hay a day; if he work, two and a half per cent., a milch cow, three per cent.; an ox fattening, five per cent. at first, four and a half per cent. when half fattened, and four when fat. Grown up sheep require three and a half per cent. to keep them in good condition.—*Boston Cultivator*.

**AN INDUSTRIOUS HEN.**—A month or two ago the *Ottawa Free Trader* contained the following account of a very busy hen:—"Sam Parr is going out to fight the world, armed only with a setting hen! She can beat that other hen that sat four years on a couple of billiard balls and an ivory door knob. Since the first of March she has hatched out four lots of chickens. She hatched 11 in April and raised 8; in June she turned out 13 and raised 10;

in August she produced 13 and raised 11; and in October she got out 13 and has 10 lively little chicks running around her at present, making in all 39 chickens raised, or nearly so, and 50 hatched this season. She laid the eggs herself, fixed up her own nest in a haymow, out of the reach of other hens, and conducted the transaction to suit herself. She is evidently a strong minded female of the hen persuasion. She is a business hen, and unmarried, we believe, or, at all events, her husband's name is unknown."

**BREEDING FROM YOUNG STOCK.**—Mr. Walcott maintained, in a paper before the Central New York Farmers' Club, that breeding from young stock is a prolific cause of abortion in cows. Heifers are more subject to abortion than other cows. A yearling bull is unfit for breeding, and should be discarded altogether from use. This rule will apply with equal force to all kinds of domestic animals. Pigs bred from young stock are not only little runts, but usually too weak to walk, and commonly die within two hours from birth. Texas cattle but seldom breed until they are three years old, or older, and they are fed upon grasses and forage grown upon soils abundant in mineral plant food. Their calves, when a few hours old, will run like the elk across the prairies, and a herd of cattle stampeding will run ten or twenty, and sometimes twenty-five miles in less time than horses could be driven, showing strength and endurance. Mr. Walcott believed that breeding from too young stock was one prolific cause of abortion in cows. It deteriorates the constitution of the animals.

**EARLY CHICKENS.**—The season of the year has now fully arrived when breeders ought to have their stock mated and placed in their breeding pens, and whenever a hen shows signs of incubation, no time should be lost in placing eggs under her. The early hatched chicken has many advantages over those of later birth; it should be borne in mind that it is in early chickenhood the frame is made that will hereafter place it in the rank of the large birds of its breed. And although feeding has much to do in the production of size and maturity, other things being equal, the early chicken is sure to be the best. It behoves breeders, then, who wish to excel in this respect, to produce early chickens, although at the cost of considerably more care and attention than is necessary in the raising of those at a later period in the season.—*Poultry Chronicle*.

**HARDEN THE NECKS OF YOUR TEAMS.**—Some horses have tender skins, and the harness will sometimes gall them cruelly, in defiance of all means to prevent it. But, many times, the true cause is attributed to a bad collar, bad harness, or to good harness improperly fitted to the animal. A yoke of bows that do not fit the oxen well will often gall them, and unfit them for labor, when if these things were as they ought to be, they would work with far more ease, and their skin would not be galled.

When a harness or yoke of bows do not fit properly, and the skin is liable to be galled, bathe those parts before they are galled, with cold water until the outside skin appears quite soft, and then bathe those parts with a strong decoction of white oak bark. Let this be done every day, and the skin will become much harder and tougher than it usually is. A little care in preventing an ill, is far better than much labor and skill in curing it, or in endeavoring to obviate its injurious effects.—*Working Farmer*.

**PIGS LOSING THEIR TAILS.**—The *American Agriculturist* says:—The trouble is caused by a ring, supposed to be of a fungoid character, growing round the base of the tail. If taken in time, before it has completely girdled the tail, its growth may be checked and the tail saved. But when the ring is once around the tail, it is almost impossible to save it. Carbolic soap and glycerine, with a little carbolic acid mixed with it—say one part of carbolic acid to ten parts of glycerine—is likely to prove as efficacious as any other remedy. We have generally depended on petroleum, and we have saved some tails, and some we have not. We have never lost a tail from a thorough-bred pig, but have lost a good many from cross-bred pigs and grades. A correspondent of that paper says:—"Grease the tails when the pigs are born, and I will guarantee that they will not come off."

**CURE FOR CATARRH IN SHEEP.**—A correspondent of the *Rural New Yorker*, E. L. Gage, in speaking of this very common and equally troublesome disease and its cure, says:—"Take a quill from a hen's wing, immerse the feather end in spirits of turpentine, run it up the nostril of the sheep, the whole length of the feather end, twist it round before withdrawing it; wipe it off clean each time before immersing. One application will cure ordinary cases; the second or third, at intervals of two or three days, will cure the worst."

The writer claims that by the above treatment he has cured cases of catarrh that refused to yield to ordinary treatment, and gives an opinion that catarrh is sometimes "caused more by hot, dry weather than wet,"—in which he will find the majority of flock masters arrayed against him.

**HOW LONG A HOG CAN FAST.**—The *Farmers' Home Journal* of Lexington Ky., says:—Mr. Wm. Hardin, of this county, missed about four weeks ago one of his fat hogs. He supposed it had been stolen. A few days ago he was hunting in one of his fields, his dogs were attracted to a sink-hole, and on his examination the hog was discovered at the bottom in which there was a quantity of mud and water. The hog was drawn out and afterward well fed and is now doing well, though it laid for twenty-eight days without food.

**HEAVY PIGS.**—A correspondent of the *Ohio Farmer* writes:—I do not brag much on my pigs, I will only say that I sold two of a litter of nine, that weighed five hundred and eighty-eight pounds, at seven and one-half months old. They were not the largest in the litter; the mother weighed five hundred and sixty pounds with indifferent keep—run on a clover lot through the summer, with what milk and slop we could afford them; they are big Poland and China crossed with Berkshire.

#### LIVE STOCK GLEANINGS.

The *Rural New Yorker* characterized the practice of docking the tail of a horse as a "most infernal proceeding," and "the most miserable thing that one brute can inflict on another."

The *Ohio Farmer* says that if all that the dogs in this country eat was fed to hogs, it would make \$50,000,000 worth of pork. Add to this the value of sheep they destroy, and something of an idea of the curse of dogs can be obtained.

The Goodhue (Minn.) Republican speaks of three

dressed pigs, one of which, 15 months old, weighed 546 pounds; the other two, 10 months old, weighed respectively 530 and 526 pounds, which were fattened entirely on wheat.

For galls on horses' backs or necks, one of the most effective remedies known is an application of white lead moistened with milk. When milk is not at hand common white lead paint will answer. If applied in the early stages of the injury, the cure is certain.

It is best to handle calves and colts as much as possible, and pet them, lead them with a halter, and caress them in various ways. Young stock managed in this way will always be docile and suffer themselves to be approached and handled, both in the pasture and in the barn.

The Conestago fat cattle fair was a success. There were present on the ground nearly 200 head and twelve buyers, several of whom were from Toronto, Guelph and Buffalo. Very large prices were in some instances realized, \$80 being a common price for a fat ox.

At the Walkerton monthly cattle fair there was a pretty good attendance. The buying, however was not so lively as on some previous occasions. Some sixteen head were only purchased. Cows ranged from \$21 to \$28. The average price offered for other animals was about \$3 per 100 lbs. live weight.

The sale of Mr. Spears' Shorthorns at Tullula, Illinois, we learn from the *Prairie Farmer* was well attended and successful. There were 23 head sold. Two brought \$1,000 each, and 11, in all, \$500 or more each. The lowest price was \$150; and the next lowest \$225. There were sold at the same time 72 Berkshire pigs at an average of \$27 each. A number of the sows sold brought from \$50 to \$100 each.

A Cincinnati paper brags a little over the dexterity with which its butcher boys do their work: "The operation of killing and dressing is so rapidly performed that, if you study the faces of the hogs after they are hung up to cool, you will find an expression of the most intense bewilderment upon them, as though puzzling themselves to make out what had been going on and where they were."

I notice different cures for scratches. I will give mine, which is as follows:—One ounce red precipitate, one ounce Burgundy pitch, one ounce Venice turpentine, simmered in one pound of fresh lard or butter, well stirred while simmering. When the ointment is cool; apply to the affected parts daily until there is no further occasion for the remedy. I have used this ointment with good success for several years. It is excellent for galls or sores of any kind on man or beast.

A correspondent of *Practical Farmer* says:—I have quarter of an acre in raspberries adjoining my apiary of two hundred swarms of Italian bees, and I am very sure the bees were a great advantage to the berries. Every blossom produced a berry. I sold between thirty and forty gallons of raspberries off the quarter acre the second and third year after it was planted. I value the raspberry highly for its honey and fruit, and think of planting ten acres next year.

A veterinary surgeon, writing in the *English Farmer's Journal*, says that many owners of horses, grooms, and others who have charge of them, pro-

less to know how much water a horse ought to be allowed to drink; and when a poor, thirsty, ever-driven animal arrives at his journey's end, he is treated to a very limited supply. It is a mistaken notion that cold water produces colic, as it often cures that disease. When cold water does cause abdominal pain, it is from long abstinence, and when the animal drinks to excess. Horses should have plenty of water at all times.

Sheltered run for chickens is one of the secrets of success. All that is needed, is a simple roof along the south side of a tight fence facing the south. If the roof be three feet above the ground, it should be three feet wide, and if 4 feet above the ground at the top of the pitch 4 feet wide. A fall of six inches or less is abundant. Such a roof affords shelter from all rain, except driving southeasters, and from sunshine in the middle of the day. It does not interfere with attending to the hens and coops, and it keeps the earth dry beneath, so that if ashes and sulphur be scattered in the cavities here and there the chickens will keep free from lice.

When a farmer loses a horse, or ox, or any other animal, instead of leaving the carcass to be devoured by dogs or crows, he should cover it with six or eight times its bulk of earth, and thus arrest the fertilizing gasses which will be thrown off in the process of decomposition. By so doing he would secure a quantity of manure which would pay him five times over for the trouble it would cost him; for there is very little land in the older portions of the state, which might not be greatly improved by the application of fertilizers.

A sensible writer says that the blame of balky and scarey horses belongs to those who teach them to be so: "A horse can easily be taught to pull by the traces or the halter strap. If you want him to pull well on the halter, all you have to do is to hitch him with something he can easily break, and he will soon learn to pull back with such force that no bridle will hold him. If you want him to pull well in the traces, give him a light load until he learns to move it, and he will soon learn to move it, and he will soon pull his best at heavy loads."

Of all our domestic animals there are none that require more systematic care in feeding than the horse. A horse should be fed regularly and in moderate amount, and when worked he should be worked judiciously. A horse fed in this way may be kept at a moderate cost, and will be more healthy and perform more labor than if fed highly, or as high as many are in the habit of feeding their horses. Horses will certainly eat hay enough to injure them if they can get it. When hay is kept constantly before them, horses are apt to spend their time in throwing it around topsy turvy in the rack; they soon become dissatisfied with their food, and lose their usual keen relish for it. The general practice should be to feed regularly three times a day.

Homer A. Kidd, of Walden, Orange county, N. Y., writes to the *Utica Herald* that in order to get good pure, sweet milk at his factory, he washes with steam all the farmers' cans, both night and morning. Forty quart cans are used, the same as are used on railroads to send milk to the city. He thinks this extra work pays fourfold for he finds that he cannot trust the farmers to keep their cans sweet and clean. He has learned the importance of having good milk in making a prime article of cheese. With this

washing of the cans, and the farmers having tin pails to milk the cows in, he gets the milk in much better condition.

Man's inhumanity to cows is often illustrated by abuse of the animal for restlessness caused by the pain inflicted in milking, by sharp finger nails. Mr J. F. Furnam, Segel, Iowa, writes to the New York Farmers' Club, that one of his cows had always been very sensitive; but that after he commenced milking by clasping his fingers clean around her teats, so that his nails could not hurt her, she became gentle. Some cows will bear the pressure of the finger nails, and not resent it; while others will flare up on the first grasp, and knock the pail across the yard; then come pounding and kicking. Let us be careful with our cows, and not act without thinking.

An agricultural exchange thinks that five per cent., and perhaps ten, could be added to the milk product of cows of the country if these rules were observed:

1. Never hurry cows in driving to and from the pasture.
2. Milk nearly at equal intervals; at half past five in the morning and six at night are good hours.
3. Be especially tender of the cow at milking time
4. When scuted, draw the milk as rapidly as possible, being certain to always get it all.
5. Never talk or think of anything besides what you are doing when milking.
6. Offer some caress, and always a soothing word, when you approach a cow and when you leave her.

Few things are more trying to horse owners, than to see, day after day, the projecting ribs and bones of a horse that is upon a very liberal allowance of feed. In such a case the following is recommended: Mix ground barley, oats and corn, in equal quantities of each and when sprinkled on cut feed of hay or oats add one-fourth part of oil meal. Feed two or three times daily. If the horse will eat that greedily, let the quantity be gradually increased until he will eat four or six quarts at every feeding, three times a day. So long as the animal will eat this allowance, the quantity may be increased a little every day. But avoid the practice of allowing a horse that has run down in flesh, the groom should be very particular to feed the animal no more than he will eat up clean and lick his manger for more.

The *Journal of Agricultural* says:—Though most farmers keep fowls, and raise their own eggs, there are many who have not learned the difference there is in the richness and flavor of eggs produced by well-fed hens and those from birds that have been half-starved during our winters. There will be some difference in the size, but far more in the quality. The yolk of one would be large, fine-colored, and of good substance, and the albumen or white clear and pure; while the contents of the other will be watery and meagre, as in the parent fowl, to properly carry out and complete the work nature has sketched. In order, therefore, to have good eggs, the fowls should be well fed, and also provided, during the months they are unable to ground, with a box containing an abundance of fine

gravel, that they may be able to grind and prepare their food for digestion. Of eggs those from the domestic hen are decidedly the best, but those of the duck and goose may be used for some of the purposes of domestic cookery.

An exchange has the following about farm dogs: Though we boast of being the most progressive people on the face of the earth, we must confess ourselves far behind the nations of Europe in utilizing the dog, not to mention the collies, without whose assistance the great downs of England and the moors of Scotland would be, comparatively, valueless, or the great Pyrenean shepherd dog, the guardian of the great Murino flocks of Spain. It is through the intelligence of dogs that France is enabled to free herself from that greatest of agricultural burthens, enclosures. We doubt whether there is an enclosed field in the whole kingdom, and yet the largest herds of cattle are driven afield and tended there by old people or children, assisted by dogs—generally two dogs to a herd. A correspondent of the *American Farmer's Magazine*, thus speaks of a dog in his vicinity.—“He sleeps in the barn and never allows the cattle to hook each other. Should any one of them get loose he runs immediately to the house to bring out the farmer. He never permits the cattle to hook each other at the water trough. When the bull “puts on airs” the dog remind him of his folly by nipping his nose. When the animals are turned out he moves about among them reminding them, when necessary, that it is better for them to use the feed allotted to them than to covet that in the adjoining fields. He does not like the company of boys. He prefers to drive the cows without any assistance. He never runs them to and from the pasture. When the time comes for him to bring them from the pasture he goes quietly to the field, and they, understanding at once what he is there for, start at once in the right direction.” The moral of our friend's article is that farmers should have good dogs, dogs that are sensible and teachable. Such dogs, when properly trained, are invaluable to any farmer.

## The Garden.

### NEW FRUITS AND VEGETABLES OF 1870.

The *Florist and Pomologist* says:—“Acquisitions in the fruit department have not been quite so numerous or so important as usual. We have nevertheless obtained a few valuable additions. In respect to grapes, the leading fruit of our *bonne Angleterre*, we have again something worth chronicling, not perhaps such nuggets as the Madresfield Court or the Golden Champion, which, especially the former have so well sustained their reputation, but still, extremely useful sorts. That long desired white champion to the Black Hamburg Mr. Pearson promises to give in his Chilwell White, a hybrid from the Frankenthal, and like it, only the color is white. Mr. Pearson's Ferdinand de Lesseps has also won the highest honors during the past season. We have another valuable late white grape in Mr. W. Paul's Waltham Cross, a most appropriate name,

it being a true cross of Waltham. The berries of this grape are a longish-oval, like the Morroco of a most beautiful amber color, and sweetly flavored; it hangs well, and will be valuable for late work.

“Peaches, although they were never so abundant as last year, only bring us one new variety, viz: the Lady, a Frogmore seedling, rich, pure, white in flesh and delicate as a lady. In plums, we have a good addition in Mr. Dry's Duke of Edinburgh, a full brother in appearance to Prince of Wales, but of better quality. In cherries, Mr. Gilbert brings us forward an old seedling of Burghley, named Burghley Park Seedling, a very excellent variety, but not distinct from Reine Hortense. In figs, we have a grand acquisition, although not exactly a new variety, in Royal Vineyard, the high class merits of which have only lately been recognised, and which has been provisionally christened by the Messrs. Lee of the Royal Vineyard Nursery. It somewhat resembles Lee's Perpetual, but is redder, and, like it is prolific and very rich.

“Of pears, we have a good addition in the Brockworth, Park, a supposed seedling of Gloucestershire, and in appearance and quality rivalling the Louis Bonne de Jersey itself, coming into use a week or two before that variety. Another valuable addition in this way is Essington's Autumn Josephine, a pear like Josephine de Malines in quality, etc., but of Autumn instead of Spring use. In apples there is little to add, many have been brought forward, but they mostly have been found wanting. We are already so well provided with the fruit that little improvement seems possible. We would just, however, notice an old Irish seedling, the Echlinville, which although a leading Irish apple, has singularly enough, been little known to us; it is a very large and particularly fine early Autumn sauce apple. We also notice the advent of another, called Beauty of Hants, which though exceedingly beautiful, we take to be but a fine form of Blenheim Orange.

“Of Strawberries, we have as usual, a prolific supply, including some excellent additions. Mr W. Paul gives us Waltham Seedlings, an improvement on Sir Charles Napier; Mr. Bradley, the raiser of the Dr. Hogg, Oscar, etc., gives us another of his triumphs, the Amateur, a very large and wonderfully productive sort. From Mr. Trotman we get Royalty, smaller, but of very fine quality; and from Edinburgh we get Moffat's Duke of Edinburgh a large and good market fruit. There are, besides, several promising continental varieties from Dr. Nicaise. Among melons there is not so much of novelty. We have, however, one of the best old sorts re-introduced to us, viz: Victory of Bath; and the Colston Basset Seedling is a very excellent new one.

Coming now to vegetables, the least attractive portion of garden produce, yet the most useful, we find still something added, although we look less for novelty here than in either fruit or flowers, the improvements being mainly effected by selection. The most important addition is Saxton's William the First Pea, an early hybrid, blue, wrinkled variety. There is also Saxton's Quality and Quantity, two very fine wrinkled sorts, with McLean's Best of All, and Este's Kentish Invicta. In Brocoli, we have the addition of Cooling's Matchless, a splendid late spring variety, and Vecht's Autumn Giant

Cauliflower, which furnishes a fine late Autumn supply.

"In beets, we have the new Red Egyptian—turnip rooted; and we get an excellent parsley in Carter's Covent Garden Garnishing. In onions, we have a fine addition in the New White Italian Tripoli, which has very large and solid pure white bulbs. In tomatoes there are Hepper's Giant and Trophy, two very large sorts, greatly resembling each other. Among kales, we have Melville's Hybrid Imperial Scotch Greens, a hybrid perpetual having excellent close hearts. Of cucumbers, there are many, Heatherside Rival, a black spined sort, being the best. We must notice Temple's new Chinese cucumber, 'Sooly-Qua,' a huge thing, growing to the length of seven or eight feet, and twelve inches in circumference, said to be eaten, when boiled, by the Chinese, and as much relished as roast pig. In potatoes there are many claimants, but none calling for special notice. Thus as regards both fruits and vegetables, we have, during 1870, been marching onward."

#### GARDEN GLEANINGS.

The *Journal of Horticulture* objects to whitewashing the bark of fruit-trees on the ground of the looks and of its forming a coating that tends to exclude the air.

For covering strawberry beds, Purdy's *Small Fruit Recorder* recommends evergreen boughs placed on the rows and next to these any kind of boughs or brush, with straw, stalks or sorghum bagasse, scattered through them.

Mr. Knox realized \$3,600 last year from two acres of the Jucunda strawberry. He has frequently sold fancy berries at the rate of one dollar per quart. They are done up in fancy boxes, and also in small cases of five to ten quarts, ready to send off to any address. The quart baskets frequently held but eighteen berries, or nine to the quart.

A correspondent of the *Cottage Garden* gives the following cure for mildew on roses: Rub down in a gallon of soft water one pound of soft soap; with the solution syringe the upper and under surface of the foliage, and the mildew will disappear as if by magic.

Soot, which is generally the cause of destructive fires in private houses, is an excellent manure for fruit trees, vegetables, and flowers. It is better to collect it frequently from chimneys and stove pipes, and use it in the orchard or garden, where it will be very beneficial, than to allow it to accumulate and become a standing menace to property and life.

P. Barry writes in the *American Rural Home*, that he has been told by dealers that not one grower in ten will either assert or pack his apples in such a manner as to bear transportation without being unmarketable. Dealers in large cities say they would pay three times the ruling market rates, if they could get good lots of good fruit, well selected, and in fine order, such as their best customers demand.

In reply to a query about a remedy for white worms in plant pots, a correspondent of the *New*

*England Farmer* says that lime water will kill them, or a little slacked lime sprinkled on the surface of the earth, and in the saucer of the pot. Lime water can be made easily by slacking a large piece of lime in a pail of cold water, letting it settle and then bottling for use. Give each pot a table-spoonful twice a week.

A recent letter from Paris says that the magnificent collection of orchideous plants at the *Jardin des Plantes*, Paris, has been destroyed by the Prussian shells. This collection, valued at 600,000 francs, was unrivaled by any similar collection in the world, and it will require many years to replace it, if indeed, such another valuable collection can be made. The loss to botanical science in the lamentable destruction is immense.

A market gardener of Lake county, Ill., says he has the most remarkable success in the use of salt upon his tomato plants. He applies it at various times during the season, and in every case its effect is marked in the increased growth of both plant and fruit. In some cases, he lays the roots of back-plants bare, sprinkles them with a table-spoonful of ordinary barrel salt, and covers with soil. Plants treated in this way will take an immediate start, and develop fine fruit.

A lady florist says that another very pretty vine is the sweet potato plant. Put a tuber in pure sand or sandy loam, in a hanging basket, and water occasionally. It will throw out tendrils and beautiful leaves, and will climb freely over the arms of the basket and upward toward the top of the window. Not one visitor in a hundred will know it, but will suppose it to be some rare foreign plant.

A correspondent of the *Journal of Horticulture* says that almost all apples thrive on dwarf stocks, but he has found that some thrive better than others, among which are the Early Harvest, American Summer Pearman, Summer Rose, Early Strawberry Red Astrachan, Gravensten, Porter Summer Rambo, Duchess of Oldenburg, Maiden's Blush, Fall Harvey Hubbardston's Nonsuch and Fallawater.

The *Gardener's Chronicle* says that Dr. Poselger has shown by repeated experiments, that the growth of trees and shrubs is not interfered with by any quantity of coal gas that may escape in the soil and find its way to their roots, and, consequently that the illuminating gas escaping from mines does not injure the trees growing along the streets and promenades of cities, as many persons have supposed.

A correspondent of the *Cincinnati Gazette* says that he has used sulphur for more than twenty years, with benefit, to prevent rot in grapes. Rot is not caused by a fungus as some suppose, but by an insect, which punctures the grapes probably for the purpose of depositing its eggs. Upon this discovery is based the sulphur remedy for the rot, as sulphur is distasteful to all the insect tribe. Fumigation with sulphur in the evening is better than dust, as the insects work at night.

S. Miller, of Blufferton, Mo., an experienced horticulturist, says that water in which tobacco leaves have been steeped, is not only an excellent wash

on trees, or as a syringing on plants, where injurious insects infest, but it is a most excellent fertilizer. The saltpetre extracted from the tobacco is one of the stimulants for a soil deficient in that ingredient. It is peculiarly adapted for strawberry plants.

The Sweet William (*Delphinium barbatus*) is a widely known and always popular family of plants, perfectly hardy and easily raised from seed. A bed of fine varieties presents an attractive sight. It sports into almost endless varieties,—pink, purple, crimson, scarlet, white, various edges, eyed, and spotted. This flower has been greatly improved of late years.

Candytuft (*Iberis*) is one of the most useful border annuals, very effective in beds, groups, etc. The plants are easy of culture, and the flowers are fragrant and very useful in forming bouquets. No flower garden is complete without candytufts. Early flowers are soonest obtained from seeds sown in Autumn but sown early in Spring in the open border, it will flower from June to August.

When the Petunia is grown as a house plant and trained on a trellis, it presents a much prettier appearance than when grown in the garden. A very neat trellis may be made of old hoops, forming pieces of them into three circles seven, five, and three inches in diameter, fastening each circle firmly with the clasps taken from hoops. Then a fine stick, two feet long, nicely polished and sharpened at one end, must be put through the circles, first under one side of the smallest, then over the same side of the one next in size, then under the other side of the first, etc., weaving them in securely fastening the upper side of the largest one with a little wire staple.

One of the great botanical curiosities of the Island of Ceylon, is "the forbidden fruit," or "Eve's Apple Tree." Its native name is "Dirvi Kaduree." Kaduree signifies "forbidden," and Dirvi, "tigers." Its botanical name is *Tuber memontura dichotoma*. The flowers of this extraordinary production are said to emit a fine scent. The color of the fruit which hangs from the branches in a peculiar and striking manner, is very beautiful, being orange on the outside, and deep crimson within; the fruit itself presenting the appearance of having a piece bitten out of it. This circumstance, together with the fact of its being a deadly poison, led the Mohammedans, on their first discovery of Ceylon, which they assigned as the seat of Paradise, to represent it as the Garden of Eden.

Henry Ward Beecher says that every country place should have that very coquette among trees, the Aspen. It seems never to sleep. Its twinkling fingers are playing in the air at some arch fantasy almost without pause. If you set at a window with a book, it will wink and blink, and beckon and coax, until you cannot help speaking to it. That must be a still day that does not see the Aspen quiver. A single leaf will sometimes begin to wag and not another on the tree will move! Sometimes a hidden breadth will catch at a lower branch, then shifting will leave them still, while it shakes a topmost twig. It is the daintiest fairy of all the trees. One should have an Aspen on every side of his house, that no window should be without a chance

to look upon its nods and becks, and to rejoice in its innocent witchcraft.

A correspondent of the *Country Gentleman* says that the principle point in the successful culture of the Lima bean, is to get the seed well started. The best way of doing this is, to plant in a hill of light earth, made so by sifting the soil, if it can be had in no other way. A shovel full of well rotted manure should go into each hill. He mixes sand and muck and after placing each seed bean with the germ downward in the hill, he sifts the covering over it through a willow sieve. Corn planting time is about the right time to plant Lima beans. The after cultivation is the same as for the common pole bean.

LETTUCE IN WINTER.—It is said that heads of lettuce can be produced in Winter in from twenty-four to forty-eight hours by taking a box filled with rich earth, in which one-third part of slaked lime has been mixed, and watering the earth with lukewarm water; than taking seed which had been previously softened by soaking in strong brandy twenty-four hours, and sowing in the usual way. We are assured, but will not vouch for the fact, that a good sized head of lettuce may be obtained in the time mentioned.—*Harper's Magazine*.

Mr. W. H. Randall, of Ypsilanti, Mich., says that he protects trees from mice by cutting a common sized sheet of tin into four equal parts, bending around a fork-handle to give the desired shape, and apply to the trunks. This costs but a trifle, and makes a barrier that the mice cannot get over or around. Dr. Hexamer says that it is easier and cheaper to bank up earth around the trees twelve or fourteen inches high. It is also well to tramp down the snow solid after each fall.

The *Rushville* (Illinois) *Citizen* says: Mr. Wm. King, of this vicinity, has been experimenting with potatoes as follows: He planted, last spring, several varieties of potato balls in a hot-bed, and then transplanted the shoots as is done with sweet-potato plants, one in a hill. They grew and thrived finely, making an unusual large yield of the very best quality of potatoes. In one hill he counted seventy-five potatoes; in another the product weighed eight pounds.

A correspondent of the *New York Tribune*, from Elizabeth, N. J., says that he keeps tender plants perfectly healthy in his cellar all Winter. The cellar is dry, cool, and dark. About the 1st of November, he puts the orange, lemon, oleander, etc., into the cellar. The plants are in large tubs, with exception of the oleander; this he placed in a tub when taken in, and covers the roots with soil. The plants are watered once a week with tepid water.

Dr. Swasey, of the *Southern Horticulturist*, advocates the high training of pear trees, and give up the pyramidal system. He says the object in high training is to give free access under the head of the tree, for light, air, whitewash, and brush, and team, in cultivation; and the cutting out of the leader and confining the base of the head to three or five main branches, is designed to give an open, round-headed tree that will give every leaf and



fruit equal access to the vivifying influence of light and air.

Bulbs and plants from California are being transported over the Pacific Railroad in a good state of preservation. Thirty thousand *Lilium auratum* bulbs were lately received in this way in New York where they were sold by auction. They come in boxes, packed in kiln-dried earth and were sent from Yokohama to San Francisco by the Pacific Railroad. It is but a few years since these bulbs brought four dollars each, and even now good ones are sold by florists at one dollar each.

Annie S. Downs, of Andover, Mass., writing, in the *Springfield Republican*, on "House Decorations in Winter," says:—If your window is sunny, there is no limit to the flowers you may have, from Christmas until the wild ones come again. With two maurandias, one white, the other purple, with a high-colored dwarf nasturtian, or *tropaeolum*, as it is properly called, an English ivy, and a vigorous plant of German ivy, or *senecio scandens*, you can make a screen for your windows more beautiful than Raphael or Da Vinci ever designed, for yours is the original of their defective representations."

—At a recent meeting of the Horticultural Society of Western New York D. S. Wagner gave a description of the method he adopts in grafting the grape vine. He grafts from early Spring till last of June. The grafts are cut early the previous Winter and packed in saw-dust. He grafts a little below the ordinary surface of the ground and covers with earth. The moisture of the soil is preserved by two inches of mulching. The cleft is sawn in without splitting. He has set the Delaware and Isabella roots with good success, and in one instance had a crop of grapes the same year. A strong stock desirable such as Isabella, Catawaba, and Diana. The Rebecca does better on a strong stock than on its own roots.

—The *Gardener's Magazine* says that the ever-greens most suitable for windows are the aucuba, rhododendron, box, arbor vitae, holly and evergreen privets. All hardy kinds of ivy are suitable; the commonest kinds looks well if properly trained from the bottom of the pot outwards, and if allowed plenty of water. When the plants are on the outside of the window sills, put a little chip, or wedge, under them, so as to keep them level, or else you cannot water them properly; also fit in the joint of the walls, strong nails, half way up the plants; then get some thin copper wire and fasten it to the nails from one side to the other. This prevents the wind from blowing them down.

A correspondent of the *New England Farmer* says that Scarlet Zonale Geraniums, and all their varieties of cherry, pink salmon, and white, are the most desirable plants for house culture, because they are never infested by insects. They require little care, and will bloom ten months out of twelve. Plants of a years growth do better in doors than those of a greater age. If plants are kept in the kitchen, the frequent opening of the outside door will freshen them, and the moisture arising from cooking on the stove will be very conducive to their health. More thrifty and vigorous plants

may be seen in a farmer's wife's kitchen, than in a gorgeous parlor in Boston. Fresh air and moisture produce the results.

An English cultivator of the rose says that few persons are aware of the magnitude to which the rose may be grown as a standard, or the splendid effect it may be made to produce on a lawn or pleasure ground. Yet, with a stem sufficiently strong, and system of careful and patient training, there can be no reasonable doubt but that the standard rose can be grown to the size and form of the ordinary examples of the weeping ash, having the branches all produced from the top of a single stem, and flowing downward on all sides, thus forming a very ornamental object on a lawn.

A correspondent of the *Gardener's Chronicle* says that the *Lilium auratum* is not permanent; the best varieties have a tendency to revert to their original common kind. He states that a few years ago he took great pains in keeping separate a few remarkable distinct varieties; among them a genuine semi-double. Another season, he discovered a pure white variety, with no spotting, and with scarcely the sign of the usual yellow band. Also a fine, large-flowered variety, that had more dark red about it than any color. The following year, they all turned out the common kind.

A correspondent of the *Rural World* says that in gathering Janet apples last Fall, about a peck of them fell on the inside of his garden, near a place where he had occasion, subsequently, to throw the clay from a flowing pit, which he had excavated. Not noticing the apples, the workmen threw the yellow, dry clay over them, about a foot deep. There they remained until January when on removing the clay, the apples were found in an excellent state of preservation, and were delightfully mellow and juicy—far more so than those gathered from the same tree, and which had been stored in barrels in a dry cellar.

A. M. Purdy, in his *Small Fruit Recorder*, relates his experiments with blackberries. Twenty-five years ago, he bought at South Bend, Ind., a piece of land that was said to be too poor to grow white beans. The blackberries planted on it made a moderate growth, but subsequently bore enormous crops, being literally loaded to the ground. A richer piece of land was also planted; the bushes grew rank, bore moderately, and winter-killed badly. Blackberry bushes, like the large-growing Harrison grapes, do not want rich soil. It is proper to add that the poor soil was thoroughly cultivated.

A correspondent of the *Florist and Pomologist* says that he used sheet India rubber as a substitute for grafting-wax, with very satisfactory results. It may be purchased in sheets about the thickness of brown paper from those who deal in articles of that class. The undressed sheets are the best. Before using it, wash it in clean water, and dry by rubbing it with a handkerchief or cloth. These sheets are cut into pieces of about an inch in length, and about an eighth of an inch in width, according to the space to be covered, and the little band so formed, is twisted round in the same way as a piece of matting would be, and, of course, elongated considerably, encompassing the stem two or three times. The end is simply but securely fastened by pressing it into the other with the thumb nail.

### Editorial.

#### FARMING FOR THE YOUNG FOLKS.

It is a good plan for parents, whatever their occupation or position in life, to give children an opportunity in some way to make a little money which they may have as their own, their "very own," as juveniles are wont to express it, and in the use and increase of which, they may form habits of economy and good management. Farmers have the opportunity of doing this quite as readily as any other class of people, and we invite their best attention to part of an article on this subject, which we clip from an American exchange:—

"We remember with pleasure some instances of our early life in New England, where an uncle, a large landholder, made it a rule to give to each hired man and boy an acre of ground to cultivate as their own, and to the proceeds of which they were to be fully entitled, no rent being charged, nor pay taken for necessary plowing or a reasonable quantity of manure. Portions of the land were planted in potatoes, beans, cabbages, and perhaps a late crop of turnips. The profits from these little patches usually averaged from \$30 to \$50. But the lesson was a most salutary one. It taught each boy to think for himself, be his own master, his own farmer; taught him the secret of good farming—viz., getting big crops; and, best of all, how to *sell his crops*, thus making him a good salesman. When potatoes were worth \$1 per bushel, an acre would yield not far from \$100. The employer also found that he had more steady laborers, he could always depend upon them, and they rarely or never felt a disposition to leave and go to any other place. And often the same hands, as day laborers, would be equally anxious to renew their contracts year after year as the employer was to have them. In this way the farm was well managed, and always had the reputation of being the best in the town; and yet the land was no better, neither did the laborers get any better pay, neither did they work any harder than on any other farms. They were treated with consideration and respect, allowed reasonable privileges, and inducements rather than commands were the principal levers in their control. So we think farm-life would be

far more attractive if farmers would give opportunities to their own sons, daughters, or wives to earn a little extra money. They would find the demands upon their purse for household conveniences and necessities would be materially lessened, while every one would be glad to feel an independence in furnishing his own clothes, books, and papers. Many a little boy or girl has taken the first step in manliness or womanly culture when they earn their first dollar and spend it in a subscription for their own journal. They have a happiness and delight in welcoming it every month such as older heads do not know. The best way to train our boys and make them contented on the farm is to first make home happy. Make every one of the family personally interested in the success of the farm, and we really believe boys would feel less anxiety to leave for the city, and girls contented to marry country boys of good character and solid acquirements, rather than the well dressed fops and idlers of the village and city. Here is another practical example, by an editor who was brought up on the farm in this very way:

"When I was a boy, my first savings of ten-cent pieces, earned by Saturday afternoon work (for school kept half a day on Saturday then), were expended in buying a heifer calf. Then I worked on, and paid my father a certain sum each month for keeping. When the calf was one year old I traded it for two steer calves; and now I had to put in good and strong to pay for their keep. But I occupied all my spare time in learning these calves to work in the yoke; and at one year old they would gee and haw as well as old oxen, and my father paid me for their use in leading the team for breaking in his two and three year olds. Again, I had a piece of ground each year after I was fourteen that I could plant and work on shares; and, I wanted help, why I had to give two days of my time to the hired man's one day. I grew just what my fancy and reading dictated, and from the proceeds I dressed as well as any boys now. I had always some time to play, time to read, and now look back with love and pleasant thoughts to the old farm-hand who taught me to use every tool, and whipped me when I neglected to drive the team out straight at the end of the furrow in plowing. This remembrance of my own boyhood has always induced me to favor all items of encouragement at home on the farm; and I believe if it were more

generally practiced we should have more good farmers, and less broken-down merchants, or loafing hanging-on, time-serving clerks, ready for anything except honorable labor and usefulness."

The girls, too, may not be confined to housework and plain or fancy sewing. We know of no better way to encourage them, too, than by giving the care of a good flock of poultry. It will please them immensely, and very few have any adequate idea of the large profit that will accrue from a small flock well kept. Here is a story of the way in which a Vermont girl regained her health and made money:

"A farmer's daughter, in delicate health, living on the Vermont side of the Connecticut River, took charge of twelve hens in February, 1867. Part of the hens were set with turkeys' eggs. The flock of chickens and turkeys was quite numerous and well fattened by Thanksgiving. Seventy eggs were used in the family during the first year, and seven turkeys (the best ones) given away at Thanksgiving. Much the same liberality was used each year. The total cash received for eggs and poultry during the three years was three hundred and thirty four dollars and fifty cents. The cost of keeping was fully met by the eggs used in the family so the above amount is clear profit. In addition to this, the invalid is much improved in health. The food for the fowls was mainly corn and cobmeal given warm in cold weather; boiled potatoes and hog-scrap, an excellent addition, given occasionally. Few know the real profit of keeping hens. So many think "they don't pay" that little care is given them. Let them have good, comfortable quarters, and food properly prepared, and they are the most profitable investment a farmer can make requiring so little capital."

Another one tried hens and chickens on a large scale, and here is the report:

1869.	POULTRY.	Dr.
October 10	—To stock on hand, 98 to 75	....\$73 50
	Cost of feed one year	....119 36
		\$192 86
1870.	POULTRY	Cr.
October 10.	—By eggs sold	.....\$118 86
	Chickens sold	.....91 10
	Poultry (hens) sold	....19 94
	Stock on hand, 76 to 75c	57 00
		\$287 00
Profit	.....	94 14

Besides, they used all the eggs and poul-

try they wanted in the family, and had a fine pile of manure.

In this way it will be seen that the farmer is paid himself for all the food taken from the farm for the food of the poultry; has had many a nice chicken, and so saved a butcher's bill; has got left a valuable pile of manure; and still his daughter makes nearly \$100 for her trouble. Think how far this will go in making home and inmates happy.

### THE FARM AND THE CITY.

There is a host of young men in Canada, farmers' sons, weary of country life, and aching to try their luck in the city, who might read and ponder to advantage the following communication and the reply to it, which appeared in a recent number of *The Advance*, a religious paper published weekly in Chicago. The counsel tendered to John—and the half-million young men who like him are anxious to escape from the farm to the city, is eminently judicious, and we commend it most heartily to the restless, aspiring youth of our own land.

To the Commercial Editor of the Advance:

I am a farmers boy, eighteen years old, have good health and a common school education. Father offers me a fair chance if I stay on the farm, but I have a taste for life in the city. What do you advise me to do.

JOHN—.

Probably "John" is but one of half a million young men in the United States who, like him, are longing to escape from the imagined dullness of the farm to the apparent gayety of the city. What counsel should be given them? The importance to themselves and society of a right decision is incalculable. It will not do to pretend that the subject is disposed of in a lump by the four words, "Stick to the farm." It is sometimes best that the farmer's boy should *not* follow his father's calling. The cities must annually draw fresh blood, muscle and brain from the meadows and the hills, or burn themselves out by the intensity of their own existence. Statistics would probably show that a vast majority of the men who are to-day successful and prominent in the professions and business life were reared in agricultural homes. The rugged strength that is born of the country, supplemented by the after culture

of urban life, is usually the foundation of the most potential character among us.

These things being true, it is safe to say to "John," and all his companions in perplexity, about this: Unless you have very marked reasons for a change of calling, remain on the farm. As a rule, there are but two reasons which should influence the young farmer to abandon the plow; First, such physical weakness as unfits him for farm labor; second, the possession of a taste so clamorous, and an adaptation so evident for some other vocation as to make it a clear case. Having decided on these grounds that the case is a clear one, the country boy—supposing him to act in his own behalf—should seek the first opportunity to fit himself for his new work whatever it be, and then rely upon his thorough mastery of his calling, upon perfect integrity, upon a constantly widening intelligence and tireless industry, for a worthy success. But if nine tenths of the farmer's sons who have left, and wish to leave, the country for the towns, will examine themselves and their circumstances, they will find no good reason in either for the change of place and work. A foolish whim is usually the only motive—a vague and vealy desire to have light work, wear better clothes, enjoy jolly company, see new sights, and make money faster than farmers can make it. The matter of permanent taste and adaptation for city employments seldom has any weight in deciding the question.

A few hard facts may bring the truth home to our correspondent and those in a like situation. For example, no sensible young man would choose to surrender the certain comfort and competence of farm life for a city clerkship, unless he expected to rise some day from clerk to merchant; and none would care to become a merchant unless he felt tolerably sure of being a successful one—that is, one able to pay his debts. Now see what are the chances for such final success of the country boy who turns his back on his farm home and seek "a situation" as clerk in a great city. In the first place the positions are filled, and the probability is that our applicant will fail to get any sort of a foothold. Suppose, however that by means of influential friends he obtains a place. Then begins the long struggle for promotion, with the knowledge that not more than one clerk in twenty can possibly become a proprietor, on account of their great number and the natural limitations of trade. But even granting suc-

cess in this long competition, too, then we are met by the fact that only one merchant in twenty is finally successful—the other nineteen becoming bankrupts, and either falls back into the unfortunate fraternity of life-long clerks, or engaging in some other pursuit. With these facts before him, our correspondent can compute his chances of untimely mercantile emirance. No such risk attends the business to which he has been bred, and which he fully understands. If few great fortunes arise from agriculture, it also furnishes very few absolute failures. Its dignity as a pursuit is under-estimated, and too little pains taken to raise it socially to a higher level. But the tendency is just now in the right direction, and every farmer's boy who has a "fair chance" on the homestead, and no special call to another pursuit, should do what he can to ennoble farm-life by throwing into it the nobility of a worthy manhood—remembering that, after all, usefulness and not position, character and not appearance, are the true tests of success.



THE AMERICAN BEE HIVE.

The following is the description of the Bee-hive herewith illustrated, as supplied by the proprietors and patentees, Messrs. H. A. King & Co., 240 Broadway, New York:

In shape and depth of comb, the American Side-Opening Hive closely resembles the common box hive. In the engraving, the bottom-board, A, projects in front of the hive, making a convenient alighting-board, and being inclined, is kept clean by the bees during the working season. By removing the entrance-block, C, a large opening is made for brushing out litter in winter or early spring, and for living new swarms. By the use of the small slide, B, held in place by the same button, the entrance can be contracted, if necessary, to the admission of a single bee, thus effectually guarding a weak swarm from robbery, and the entrance may be closed entirely by making the notches *d, d*, in the slide, correspond with the pillars, C, C.

The large observation glass in the back of the hive, gives a view of all the combs, and is covered by the door, F, which is hung to the clamp above, and cannot tighten by damp weather. This is convenient for noting the progress of new swarms in building comb, and for visitors to see the bees at work. It will also reveal the strength of the stock or show when it is necessary to examine the combs, and toward spring, the amount of honey on hand may be judged by the height the bees have ascended in consuming their stores.

The cap, (forming a perfect roof,) is made large enough to fit closely over the hive, and being supported by strips fastened upon its inside, excludes water and insects, and is easily removed without jar. The movable side, f, is inserted from above into the rabbets, a, a, and is held in place by buttons, and by the notched clamp, k. The hive is so constructed as to be firmly clamped on all sides, and will not warp, though exposed to the direct rays of the sun. The movable side being slightly shortened at the bottom, no bees are crushed in closing the hive. By thus opening the hive at the side, honey for the table, or frames of honey and brood to strengthen weak stocks, are easily removed without injuring the combs, or irritating the bees, as in lifting them out at the top of the hive. The double projections on the frames prevent them from swinging together, and hold them at an exact distance from each other, and from the walls of the hive, leaving no place in the hive in which moths may deposit their eggs where they cannot be reached and removed by the bees. The arrangement of the central bars not only aids in securing straight combs, but the bees almost invariably leave holes through the combs just above the bar, which serve for winter passages, and save the trouble of inserting in the combs, coiled shavings or tins, as usually recommended but which bee-keepers generally neglect to do. The object of leaving a cavity above the frames, is not only to give room for the honey boxes without injuring the appearance of the hive by a high cap, but mainly to form a basin which (after the honey-boxes are removed and the openings from below covered with a piece of screening,) serves to hold in place cut straw or shavings, to absorb the moisture arising from the bees in winter, thus keeping the interior of the hive dry and free from frost. *A swarm of proper size thus prepared, will not perish while there is honey in the hive.* In moving bees the cap is left off, and a piece of wire screening tacked over the top of the hive. By thus leaving a large space between the screening and the

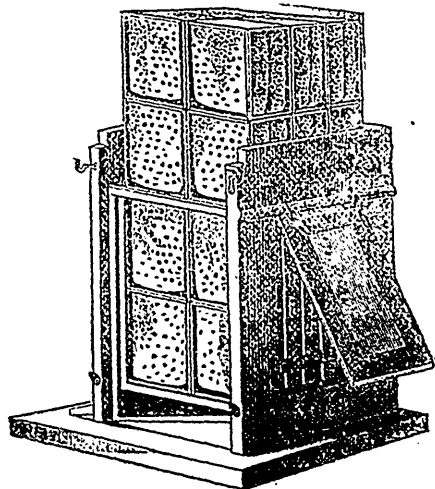
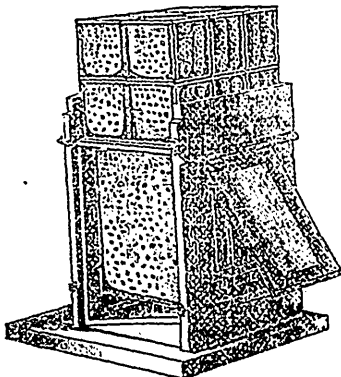
top of the frames, the bees remain upon the combs, leaving a free upward ventilation, and can be moved or shipped almost any distance with safety.

#### IMPROVED HIVE, NO. 1.

We now make two styles of this Hive. The old style of Improved Hive No. 1 (for those who have these Hives in use, as made in '69 and '70) have six small honey boxes, with glass sides, made in the best and cheapest form. These boxes are specially designed for the city market, being neat and attractive, and honey stored in them brings the highest price. The top bars have two rows of mortises, and they are each half an inch wide.

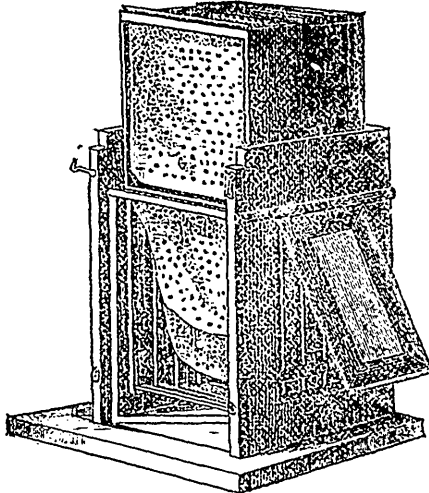
In the new style of improved Hive No. 1, the rabbets on which the frames hang, are cut down two inches lower, and the frames are made two inches shorter than those formerly used. The space thus obtained above the frames is filled with a double tier of twelve honey boxes. These boxes are made with glass sides and ends, and have openings across the bottoms and tops, which admit the bees, and secure new comb in position for Guide Combs in all the boxes ever used on a hive, after the guide combs are placed in the six lower boxes of the first set, which have openings through the bottoms only. Two strips of comb are attached to the top of each of these boxes, and when these are lengthened nearly down to the bottom, the boxes are gently lifted up, bees and all, and boxes with openings through both tops and bottoms are placed underneath through which the pass to and from the boxes above, in which they are working. The lower edges of the new comb, in the upper boxes, are now in position for guide combs to the lower boxes, into which they are lengthened down and extended towards the ends, and attached to the tops. Thus there is no suspension of labor, as is usually the case in the box arrangement of all other systems. Bees seldom commence in new boxes while finishing up those nearly filled, and thus several days are often lost in the midst of the honey harvest. The difficulty of inducing bees to commence in new boxes after the first set is filled, is thus overcome, and it is only necessary to remove the upper tier when finished, and elevate the lower boxes as before, to keep the bees constantly at work while the honey harvest lasts.

#### LARGE HIVE NO. 2.



While No. 1 is appropriately styled "*The American Farmer's Hive*," No. 2 is eminently "*The American Bee Keeper's Hive*," being especially adapted to the wants of those who make honey a specialty. When box honey is desired, the hive is provided with a side case, holding four boxes. The space above holds 15, making in all, 16 surplus boxes.

Those who have used the Honey Extractor, and do not desire box honey, will find Hive No. 2 cheap convenient and highly satisfactory. When used without the side case, it holds 10 frames below and 9 in a case above, thus furnishing capacity for



about 100 lbs. surplus. By this arrangement, cards of drone-comb and honey can be elevated to the top case to prevent rearing a host of "dead-heads," and at the same time the bees are easily induced to commence working in the top case.

When boxes are used above, it is a good plan to elevate four frames to the top case, and place boxes on each side, to induce the bees to commence in them as soon as the honey harvest opens, instead of spending precious time in preparation for swarming, or hanging idly about the entrance of the Hive.

#### WHAT IS TO BE DONE WITH THE MIDGE ?

(To the Editor of the Ontario Farmer.)

DEAR SIR :

I have taken up my pen with the desire to call the attention of my brother farmers to the above important subject, and to suggest the only severe and effectual way known to me of getting rid of this noisome and ruinous pest. Whether my brother farmers will acquiesce in, or follow out my suggestions, or propose a better and quicker mode of exterminating the plunderer is for them to determine, but sure it is that no one can gainsay that for many years past this pest has robbed the country of millions of dollars.

Is it not therefore not high time something were done to eradicate so ruinous and great an evil ?

Where is the use of cultivating a crop that, year after year, has not, in many instances, paid the farmer for his outlay in seed and labor? and a crop too, from which he looks to defray a variety of expenses his family and the management of his farm necessarily impose upon him? It is no secret to the community in general, that eight bushels to the acre is a fair, if not a high average estimate for the last several years of Spring wheat in many counties. I know of many instances, and it is as well known to others, where the crops of Spring wheat has been so injured by the midge, year after year, as not to be worth thrashing out! What, then, I again ask, is to be done ?

Neither a clear fallow, nor yet high farming, it appears, will secure a better or more satisfactory yield, for that has been tried over and over again by many, and the result has been as stated above. Indeed that is not to be wondered at, for notwithstanding you may think you have got rid of the pest, so long as your neighbour's farm is troubled with him, you will in spite of yourself and good management, *have the pleasure of his company also*. No, sir, the only sure way in my humble opinion to get rid of the *vermin!* is to cease growing him food for three years, and you may rely upon it there will be no further trouble with him—for in this way he will be starved out, but so long will he, for certain, *stick to you*. Is it not reasonable that he should? perhaps it may be thought a strange proposition to cease wheat growing for three years. But, Sir, I am convinced it must come to this sooner or later, and I ground my advice on the following facts, viz: at the time the "Hessian Fly," destroyed the fall wheat crops for years in the Lower province, now some years ago, and actually ruined many farmers, they ceased growing wheat for three years, and afterwards had no more trouble with that pest. The same was the case in the state of Pennsylvania, for I had the facts from farmers residing in that state, and in a few years afterwards the same trouble occurred in the state of Ohio and as I was one of the sufferers from that cause at the time, I can speak with truth to the fact of many thousands of acres that did not produce five bushels of wheat to the acre for some years, and many farmers were ruined by it,—other crops were, however, substituted for the wheat crop, and at the end of three years the destroyer was gone. Then again, I can give you another instance where the cessation of growing the pea crop for three years to get rid of the bug proved successful. It was in the vicinity of Ancaster, where I once resided. The bug destroyed the pea crops there for several years, so as to render it no longer worth growing. And a friend of mine (W. A. Cooley Esq.) who had ceased growing the crop for three years sent to me for seed, knowing that we

were free from the bug in this neighbourhood and that year he had the finest pea crops he had ever grown, and I have not heard of there being any bug since.

Now, Mr. Editor, with this information, and these suggestions, the growers of wheat can please themselves as to substituting other crops for a while, for their wheat crops, say such as pea, oat and grass, which are certainly under existing circumstances, far more remunerative, or they may go on year after year losing a fortune in trying to raise wheat. After all it is not the farmer individually who suffers this enormous loss, it is a direct loss to the country at large of millions of dollars.

A word in conclusion on Spring wheat seed. A friend of mine the other day hearing that I was going to write to you, begged of me to ask if you, or any of your readers would kindly inform him where he could procure the most desirable and reliable wheat for sowing the coming spring, and he says that, nothing daunted, he intends trying his luck with the crop once more.

I remain, respectfully yours,

LEICESTERENSIS!

Guelph Township, 5th Feb., 1871.

P. S.—There has been much said about "midge proof wheat," but I have been told by those who have grown it, that it was a complete failure with them, perhaps it was not the "simon pure." I hope that some of your readers may, in your next number, be able to throw more light on the subject than we at the present possess.

L.

### ILLINOIS SWINE BREEDERS' ASSOCIATION.

Pursuant to a call, a meeting of the Executive Board of this Association was held at the office of the *Prairie Farmer*, on Feb., 21st-22nd ult., for the purpose of considering the propriety of accepting certain propositions made by the citizens of Chicago for holding a large swine fair in that city during the fall of 1871.

This meeting was called to order by the President, Mr. Thomas J. Crowder, who briefly stated the object for which it was convened.

The Secretary was requested to call the roll of names from each congressional district, which was answered by W. W. Corbet, of the 1st; Andrew Lovell 2nd; E. P. Sisson, 5th; Frank Searls, 6th; A. M. Fauley, 7th; Henry Funk, 8th; L. F. Ross, 9th; Urial Mills, 11th; at large, Charles Snoad.

Hon. J. P. Reynolds, and Mr. Rust,

Chicago; Z. L. Owen, of Mokena, Ill.; J. S. McLeary, of Canton, and L. T. Clark, of Onarga, were invited to take part in the proceedings.

The committee appointed at the January meeting of the Association to receive propositions for holding a swine fair during the fall of 1871, made the following report:

That in view of the very liberal proposition made by Col. R. M. Hough, Mr. Sherman, superintendent of the Union Stock Yards, and others, offering the Association the use of Dexter Park, with its entire fixtures, with such additions and charges as may be desired by the Association as to accommodate any number of hogs that may be placed upon exhibition; also to furnish litter and feed, \$3,000 in money, together with all the receipts at the gate and entrance fees, your committee would very respectfully recommend the acceptance of the proposition; also, that immediate steps be taken to carry out the plans desired, and the holding of the largest Swine Exposition in the history of the World.

T. L. CLARK,  
EDMUND TERRILL, } Com.  
CHARLES SNOAD,

On motion of Mr. Funk, the report was accepted and adopted.

On motion of Mr. Terrill, it was decided to hold a fair the 19th, 20th and 21st of September.

### CATALOGUE RECEIVED.

J. A. SIMMERS' CULTIVATOR'S GUIDE FOR 1871.—Mr. Simmers deserves much credit for the completeness, neatness and we may add tastefulness, which characterized this little publication. It is embellished with a beautiful coloured lithograph of the Trophy Tomato, as a frontispiece, and by a number of excellent engravings of flowers and vegetables. Mr. Simmers has long since established for himself a first-class reputation as a seedsman, and we are glad to find that his business is rapidly growing, so much so that he is now engaged pretty largely into growing the seeds he sells. Among other novelties Mr. S. offers this year the celebrated Bresee potatoes,—also the Climax,—of his own growing.

JAMES FLEMING & Co's CATALOGUE OF GARDEN AND AGRICULTURAL SEEDS.—This old and well known house keeps abreast of the times in its life of business, and has issued this year a larger and very complete catalogue, which besides advertising seeds, contains many valuable hints on culture, etc. We may inform the lovers of mushroom, that the firm can supply the spawn, and their catalogue gives full directions for the production of the delicacy. They also

advertise Books for the Farm and Garden, Lawn Mowers, various fertilizers, the Yorkshire Cattle Feeder, and Miller's Tick Destroyer.

Both the above publications will be sent to any address on application to their issuers at Toronto.

**SHORT HORN IMPORTATION.**—We learn from Major Greig of Kingswood Farm, Beachville, Ont., that he has lately purchased at a very high figure, a very choice young Short-Horn bull, "King of the Ocean" from Messrs. Wolcot & Campbell of New York Mills. This choice young animal was calved July 6th 1869, and is strongly dashed with Booth blood, having been got by "King Richard," (26,523) and tracing his descent from Booth sires for five generations. His immediate sire was got by "Commander-in-Chief," (21,451) out of "Lady Grateful" imported by Mr. Cochrane of Compton, last season at a cost of 1500 guineas. "King of the Ocean," is therefore of high pedigree. His present owner describes him as a very promising young bull, and we hope he will render good service to the Major's herd, and win for himself name and fame, not only in the immediate neighbourhood of Kingswood Farm, but throughout our Province and Dominion.

**OMITTED ADVERTISEMENT.**—We regret that through an oversight the advertisement of the Windsor Nurseries which should have appeared in our last issue, was left out. It will be found in this number, and we have pleasure in calling attention to it.

**GOOD MUSIC.**—We have again to thank Messrs. Root & Cady, the eminent musical firm of Chicago, for specimens of their recent publications. They are for the most part excellent, "Hear the cry that comes across the sea," dedicated to the French Aid Organization must be spirit-stirring when rendered to an appropriate audience.

## WOOLENS.

The New York *Tribune* says that five cases of woolens, made wholly of American fleece wool, were sold recently in Boston, for export to Canada, and that the price obtained was just what would have been paid by American merchants for the same article. We cannot dispute the assertion, and yet the thing seems almost incredible. Last year we sold the United States nearly two and a half million pounds of wool, valued here at just under 32 cents. The duty on this wool would be over 40 per cent. *ad valorem*, proving, when freight and handling are considered, that wool in the United States is worth at least 45 per cent. more than it is in Canada. Mr. Larned, in his recent letter to the Secretary of the Treasury of the United States, says that wages in New York and New England exceed wages in Canada by from 65 to a 138 per cent. In the manufacture of an article of such universal use as woolen goods there is no reason why Canada should not have the best and latest labor-saving machinery—no reason why fabrics should not be produced cheaper than in the United States by just the difference in the cost of the material and the labor. The manufactured cloth, when imported into Canada, pays a duty of 15 per cent. So that a yard of woolen fabric manufactured in the United States and offered for sale in Canada is at a disadvantage, as compared with the home-made article of 45 per cent. on the cost of the raw material, say 75 per cent. on the cost of the labor, and 15 per cent. on the cost of the finished article in duty. This takes no account of extra freight and handling.

The trade and navigation tables show that we imported woolens from the United States last year to the value of \$200,990. This is not a large import—say five cents worth for each inhabitant of the Dominion; and it does not make a very large showing in a total import of woolens of \$6, 893,424. But the question we wish to ask is, how is it possible to import even so small a quantity or any at all?

It is just possible that the five cases of woolens of which the *Tribune* speaks and the \$200,000 worth imported from the United States are of a class which, not being in general demand, we have not yet begun to manufacture, and we hope this will be proved to be the case. Mr. Larned, however, to whom we have alluded, says that satin cloth is as cheap in New York



or Maine as it is in Canada. This is simply shameful; and shows either that our woolen manufacturers do not understand their business, or that they are imposing upon the public by the exaction of extortionate prices.

### Agricultural Intelligence.

#### THE AMENDED AGRICULTURAL BILL.

During the past season of the Ontario Legislature several amendments and additions have been made to the Agricultural Bill. A manual embodying these alterations, together with the original Act, is now, we are informed, in the hands of the printer, and will shortly be issued by the Commissioners of Agriculture, for the information of Agricultural Societies, and others interested therein. In briefly noticing these changes, we shall consider them in connection with the organization to which they refer, rather than in the order in the Amendment Bill. These organizations are the Agricultural and Arts Associations, the County and Township Agricultural Societies, Mechanics' Institutes, the Veterinary Colleges, the Fruit Growers' Association, and the Entomological Society.

With regard to the Agricultural and Arts Associations, the most important change is that which enacts that all the members of the Council shall retire annually, instead as heretofore, only four of their members; and that a fresh election shall take place every year—the retiring members being, however, eligible for reelection. This provision places the executive body completely under the control of the county societies, who will now certainly have only themselves to blame if the affairs of the association are not wisely conducted. Any useless or obnoxious member of the Council can be removed at the end of the year, while those who prove themselves efficient and worthy of confidence may be retained in their office as long as their constituents please, and they are themselves willing to serve.

An arrangement of minor consequence in reference to the Council is an alteration in the time allowed for the return of their report to the Commissioners. It is now enacted that this shall be sent in by the first day of April, instead of the first of July, with a supplementary report of the Provincial Exhibition, within thirty days

of holding it. This will give the Commissioner more time for the preparation of his annual report before the meeting of Parliament.

The amendments affecting Agricultural Societies are chiefly respecting matters of detail. On two clauses of the old Act are rendered more definite; it is required that one week's public notice be given of the annual meeting; the time for sending in the affidavits is extended, in the case of county societies to the first of September, and to the first of August for township societies. The latter are also permitted to hold a show in the same township as the county society, provided the place of exhibition be not within five miles of the county show. No person under eighteen years of age is allowed to vote at the annual meeting, and no subscription paid after the pole has been duly opened for the election of officers will entitle a member to vote in such cases; the time for taking votes is also very properly limited. Stricter regulations are made in regard to the certificates of delegates, in order chiefly to prevent unauthorized persons voting or otherwise representing societies. Legal provision is made for the holding and conveying property by Agricultural Societies, in certain cases in which the power of giving a title was heretofore somewhat doubtful. The city of Toronto is put on the same footing with other electoral divisions in respect to the proportion of funds to be raised by its Agricultural Society to entitle it to the Government grant—namely, one-third, instead of the exceptional amount of two-thirds as heretofore.

The only change affecting Mechanics' Institutes has reference to the amount of grant allowed, which is now increased to a donation of \$400 instead of \$200, and in place of being equal to the amount raised and expended by the Institute, is now double the sum so contributed.

The clause relating to the Veterinary College simply incorporate that body, and give it a legal status, empowering it to grant diplomas, and entitling its members to receive professional fees as witnesses in Courts of Justice, and making it illegal for any who are not members of a recognized Veterinary College to style themselves as such.

The annual grant to the Fruit Growers' Association is increased from \$350 to \$500.

The practical importance of entomology and the claim of the Entomological Society

are recognized by incorporating that institution, placing it on the same footing as other kindred associations, and authorizing an annual grant of \$500. This society, as well as the Fruit Growers' Association, is well established to such recognition and encouragement by the Government of the country; and we have no doubt that the aid thus judiciously given will stimulate them to renewed efforts, increase their membership, and very materially extend their usefulness.—*Globe*

### CATTLE DISEASES IN BRITAIN.

The *Veterinarian* of February gives the following account of the principal epizootic diseases prevailing in Great Britain and the European continent:

**THE CATTLE PLAGUE.**—At the close of the year Belgian Luxemburg was believed to be free from the cattle plague, the disease having been reported as effectually stamped out within a few weeks of its introduction from France. The risk, however, of its entrance into the province of Hainault in consequence of the progress of the German army in the Nord department of France, led the Belgian Government to dispatch troops to the frontier to assist the customs officers in preventing the fraudulent attempts which were being made to bring cattle over it. For this purpose Chimay, Beaumont, Enghelennes, Dour, Peruwelz, and Tournai, were occupied by military, and the Government also ordered a census of the cattle to be taken in several communes of the arrondissement of Tuin. On January 3rd a fresh case of the disease was reported at Corbion, near to Bouillon, and great fear was entertained that the plague might show itself at Virton and in the commune of Villiers-devant-Orval in consequence of its existence in the contiguous French villages of Lafosse and Maigny. The latest intelligence from Belgium shows the plague to be on the increase in the province of Luxembourg and among other villages at Halanzy near to Longwy. Besides this reintroduction of the cattle plague into Belgium, and the further spread of the disease in the northern parts of France, the malady is reported to have shown itself at Limours, about twenty miles south of Versailles. Recent reports from eastern Europe also show that fresh outbreaks of the disease have taken place in Poland and Galicia, and that Transylvania still suffers from a continuance of the plague in the comitat of Hunyad.

**PLEURO-PNEUMONIA.**—We have nothing very different to report respecting Pleuro-pneumonia this month from last. The disease exists in thirty-five counties of Great Britain, and the centres of the infection number eighty-seven. One rather serious outbreak in Dorsetshire was traced to the purchase of some Irish beasts at Bristol market. The malady still prevails in London dairies and in the environs of the metropolis.

**MOUTH AND FOOT DISEASE.**—The fluctuations in this disease continue in a somewhat remarkable manner, fresh outbreaks taking place in districts which were thought to have been effectually cleared of the malady, and a great increase of attacks occurring in some localities which have long suffered from the affection. Diseased pigs have been sent here from the Continent, and chiefly from Belgium. In each instance the animals have been killed at the landing-place. We observe from the local papers that more energy is being displayed on the part of the authorities in the proper carrying out of the regulations for the suppression of the disease.

### DAIRY PRODUCTS IN OHIO.

The importance of the dairy interest in Ohio is shown by statistics which have been collected and published, taking the business for nine years from 1860 to 1869 inclusive.

The total make of butter in the first year was 38,440,498 pounds, and of cheese, 24,816,420 pounds; in 1868, butter, 37,005,378, cheese, 17,814,599. The table shows an increase of butter in 1868, of 2,446,969 pounds, above the average for the nine years, and a decrease from the average of cheese, amounting to 2,227,569.

In the manufacture of cheese, Geauga takes the lead of the counties in the State, her products for 1869 being 4,534,980 pounds. Trumbull is second, her production for the same season being 2,988,564; Ashtabula third, 2,771,810; Lorain fourth, 1,985,946; Portage fifth, 1,946,527; Medina sixth, 1,499,696; Summit seventh, 1,428,743; Cuyahoga eighth, 1,342,464. These are the great cheese counties; none of the others reach half a million, and most of them but a few thousand pounds.

In the manufacture of butter, there is not so great a difference, nearly all the coun-

ties producing largely, Ashtabula taking the lead. In 1869 she produced 1,000,911 pounds; Wayne second, 919,554 pounds; Trumbull third, 869,825 pounds; Lorain fourth, 848,805 pounds; Portage fifth, 824,337 pounds; Stark sixth, 789,014 pounds; Medina seventh, 789,653 pounds. Paulding produces the least butter of any county, her product for 1869 being only 104,356 pounds; and Montgomery, the least cheese, making but 100 pounds.

## Our Country.

### A LECTURE ON CANADA.

A lecture delivered at the Russell Institute, London, England by Captain F. Duncan, R. A., M. D., C. Q., Fellow of the Royal Geographical Society &c., &c.

I may be at least flattering to our vanity, if not stimulating to our enterprise, to find that Canada absorbs more of the attention of the Imperial Government, and of our English friends in general, than any other colony of Great Britain. Our condition, our resources, our dangers, our prospects, are all made subjects of frequent discussion, alike in social circles, in the lecture room, in parliament, and in the press. We have every reason to be gratified with the allusions which are made to us in the highest quarters, while in some cases the descriptions which have been given of Canadian scenery, life, &c. have been highly picturesque and instructive. It is well the English people should be made thoroughly acquainted with our country and our people. In proportion as they know us they will prize us, and the result of a more intimate knowledge will be a strengthening of the ties by which we are united together.

One of the most recent efforts we have seen in this direction is a lecture delivered in London by Captain Duncan, which we have read with much pleasure, and from which we propose to make a few extracts. The gallant captain is evidently "well up" in his subject, and the result of his reading and observation has certainly to good account. Some of his audience, we can well understand, would listen with surpris to a few of his statements, and it is quite as well that the facts here narrated should be told by a dispassionate and impartial observer rather than by our imagination agent whose business it may be supposed to be to paint their country in the brightest colors.

In working out his ideas Captain Duncan proceeds to give a very general and correct idea of the size and natural condition of "the country which offers to our surplus population a home across the sea." The figures are worth noting. First as the size of close British North America, and in other qualities you will best realize the truth by comparison. It contains over considerably 3,000,000 square miles, being 500,000 square miles larger than

the United States; 500,000 square miles larger than the whole of Australasia; more than three times the size of British India, and fifteen times as large as France. Its population as yet is only a little over 4,000,000, but is rapidly increasing. To give you an idea of the progress it is making, let me instance the growth of some of its principal towns. Forty years ago, Montreal had a population of 17,000; to day it numbers 150,000. Toronto increased between 1840 and 1850 no less than 95 per cent; while New York only increased 66 per cent. In 1811 the population of Upper Canada amounted to 77,000; in 1851 it was over 950,000 or in other words, an increase in 40 years of over 2,100 per cent. Between 1845 and 1855 the increase of population in the United States was 13½ per cent, in Upper Canada it was 104 per cent.

Our readers will no doubt readily subscribe to the remark of Captain Duncan that "statistics are dry;" yet they are, as he says "admirable witnesses;" and he has done well to justify his arguments by facts and figures. Here are a few illustrative of the maritime power and commercial prosperity of Canada: I take the provinces of Quebec, Ontario, Newfoundland, Prince Edward's Island, and Vancouver's Island, whose returns I have to a very recent date. I find that, excluding coasting vessels total tonnage of vessels belonging to Great Britain, entered and cleared in one year, amounting to over 2,350,000 tons. In the same time how much do you think was the tonnage of *foreign* vessels entered and cleared? Only a little over 380,000 tons; or in other words, England did a business in this one item with British North American colonies, more than six times as large as was carried on by the whole of the rest of the world.

In round numbers, the population of British North America is 4,000,000; while that of the United States is about 38,500,000. Should the assertion which I have assailed, and which I emphatically deny, be correct, namely, that a county is as good a customer when independent, as when a colony we would find the trade between the United States and this country, to be nine-and-a-half times as great as that between us and Canada. What do we find, however, to be the case? That while our trade with Canada, imports and exports, for one year is valued over £14,000,000 sterling, and with the United States amounts to only somewhat less than £67,000,000; in other words, instead of being nine-and-a-half times as great, it is rather less than five times.

In another part of his lecture Captain Duncan says:

In the year 1868, the mercantile marine of the dominion of Canada included 5822 vessels, with an aggregate measurement of 776,343 tons, and a crew of 37,325 men. Now listen; of this number of vessels, 2136 were under 5 years of age, and 335 of these were steamers. Does this look like a worn out country? Does not this bode well for a state whose chief defence, as also her chief source of wealth, lies in her rivers, lakes and seas? By treaties framed by England at times when she cared far more for peace and quiet than for her colonies' welfare, the naval force allowed to be kept by us on the Laker in Canada was reduced to almost nothing. Those were the days when however we might neglect our colonies, we never dreamt of abandoning them. Unfortunately, while with many the feeling has changed, the treaty has

remained, binding with its chains our young dependency, to which we have professed to give *self* government. So might I take one of you and leading you into a post of danger, might *away* your word, and say, "Now, go fight."

On the question of independence Captain Duncan speaks intelligently, "Nor let us," he says, "be ever contemplating a separation, even a friendly one. So lightly do the silken chains of our rule sit upon our colonies that there is no additional liberty to be obtained by them were the connexion severed. Let us avoid the example set by a short sighted portion of our press, which is always offensively begging our colonies to ask for separation. It will be the beginning of the end when such a separation take place; the shrinking of the empire into a pretty state; the dotage of a parent whose boast may be of her powerful offspring, but a boast uttered by mumbling lips in a palsied head, not the pride of a strong father in his unalienated children. Our fame, our strength, and our mercantile wealth lie in continued union with our colonies."

Captain Duncan is equally clever and decided on the subject of military defences. His remarks, indeed, are well worthy of attention both of Government and people, but we cannot afford the space their length would require.

These are a few quotations from a lecture which is really very creditable to the author, and very interesting to the reader. We might make other extracts, equally to the point. The whole lecture evinces a clearness of observation and thought, and an intelligent appreciation of our character and position, which are not always to be met with in British officers who are resident with us for a few years, and who for the most part give themselves up to amusement. Our readers, we are sure, will feel indebted to Captain Duncan, and we hope he will continue to diffuse among his countrymen should information on subjects on which English people are still lamentably ignorant. We dread nothing so much as a want of accurate knowledge respecting us as a part of the English parliament and the English press. Such efforts as those of Captain Duncan will have great influence for good.

#### CANADIAN MANUFACTURES AND COMMERCE.

We reprint the following communication lately addressed to the editor of the *Leader* by a Toronto gentleman who has had twenty-five years experience in business, in this, as well as in other British colonies:—

To the Editor of the *Leader*,—Sir,—It must be gratifying to every friend of progress in Canada to notice the rapid strides which have been made in our manufacturing interests during the past ten years, and it is largely due to the wisdom of our legislators that the duties on some articles were so arranged as to give an incidental protection to those in which we can successfully carry on and compete with the outside world, thereby inducing capitalists to invest their money and give employment to thousands who would otherwise cross the borders to enrich our neighbors with their energy and labor. I am of opinion that if Canadians will

now rise to the dignity of their position and insist upon (whatever government may be in power) carrying out a decided policy to open up our tremendous Dominion resources, by building new canals and improving our old ones, and giving land to build railways and roads in every part of the country, our manufacturing interests would thereby steadily increase, until we supplied a large portion of our own people and might export our surplus to the sister colonies of the Empire in the East and West Indies, Australia, &c., where they at present take cargoes of American wooden-wares, axes, hammers, &c., from Boston and New York, and bring back return cargoes of teas, spices, &c. Surely we can now compete with our Yankee friends who are so much heavier taxed than we. We have mill-sites and water privileges equal to any part of the world. The canal system to connect us with the seaboard is also now to be improved by a government grant of lands. These canals will give an impetus to hydraulics for manufacturing woollens and cottons. The Welland canal is an example of this. where Gordon, Mackay & Co.'s Lybster Mills have been turning out this year immense quantities of tickings, denims, and sheetings cotton yarn, &c.

We only require united action in favor of new railway avenues into the country, which I trust will be carried to the great Pacific. When this is done, no part of the world could offer greater inducements to immigrants. The writer of this can testify that Australia never can, for we can grow the staples for human sustenance to a far greater extent, and our climate is more healthy and invigorating. Let us lay aside vindictive political strife, and support measures rather than men for the progress and future greatness of United Canada. A national party is really required at the present time, which will promote good-will and protect moderately our manufacturing and mechanical interests for the mutual benefit of the people.

I am, &c.,

J. L.

#### THE MANUFACTURE OF SEA SALT—WHAT MAY BE DONE IN CANADA.

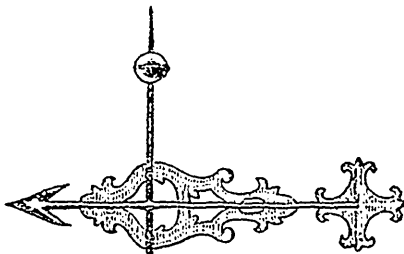
It appears that down in the lower St. Lawrence and the Gulf the people are contemplating the possibility of making sea-salt on a large scale, and it is quite possible that soon another important branch of Canadian production may challenge general attention. We find the following in the Quebec correspondence of the *Montreal Gazette*:—

"My allusion to the establishment of Salines on our coast, from the interest taken in manufactures just now, led to my being questioned upon a matter which was regarded as one of deep interest to our people. You know that the Republic of Venice owed the beginnings of its power and wealth to its Salines. For years and years the policy of Venice was to make a monopoly of this staple of life, and wherever a Saline was established that would compete with her she took possession of it, and the cases are not a few of the Venetians destroying such as the Republic could not make use of, and treaties exist by which she made peace with neighbouring princes, upon the condition that they would not again re-establish suppressed Salines. At periods of her history, Venice, in the interests of

her trade, ordered the suppression of her Salines, and augmented those of the Grecian Islands, which she had conquered, and by which means she retained for herself the monopoly of the salt trade for all Southern Europe. The years that mark the downfall of Venice, mark the rising into importance of the Salines of Provence and Languedoc, and when Napoleon I. created the Kingdom of Italy he caused the Salines of Venice to be once again re-organized. In France and upon the shores of the Mediterranean these extensive sources of national wealth are worked upon a great scale. Mr. Sterry Hunt, in his report printed in 1857, has written upon this question in a way to convince any man of the practicability of manufacturing sea-salt upon the shores of the lower St. Lawrence and the Bay des Chaleurs. The thing is worthy of experiment, and I hope to see it taken up."

There is evidently a stirring up of the dry bones among our fellow-citizens down stream. From the important railway projects now being brought into shape at the 'ancient capital,' and from other indications, it seems that some powerful efforts to go ahead will certainly be made. Recent action taken shows that the Province of Quebec is determined to have manufactures, and to favor the same in all possible ways. Free trade has 'no sight' there, we reckon.

**Arts and Manufactures.**



WEATHER VANES.

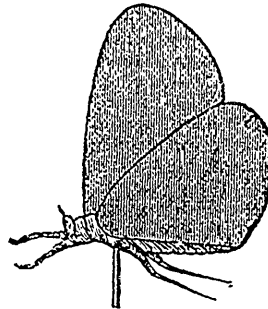
It is hardly possible to give a prettier finish to a nice house, church, or public building of any kind, or even to a neat stable or barn, than by means of an ornamental weather vane. That there is a felt want of some such finish is manifest by the many attempts made in that direction. Not a few of these attempts, however, are wretched failures. Generally speaking, when anything of the kind is wanted, the blacksmith or tinsmith is applied to, and though in the emergency they do their best, the result for the most part is a metallic caricature of some creature that shipped without idolatry, likeness of the earth beneath, or in the waters under the earth.— Many another building is diswell-meant



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ful attempt to put the final, artistic touch upon in the shape of a vane.

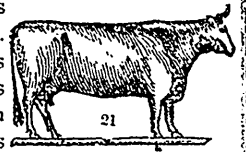
In many cases, buildings whose style of architecture requires something of the sort, are left mani-



festly unfinished, because there is no source at hand from which the want can be supplied. There is an unwillingness to risk disfigurement by giving the job to a blacksmith or tinsmith, and really ornamental vanes are not to be had. Their manufac-

ture is a business by itself, and so far as we know there is no individual or firm in the Dominion of Canada engaged in this particular line of work.

Our American neighbours are ahead of us in this respect. Wherever you travel in the United States

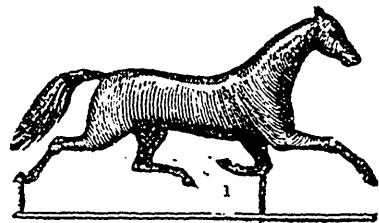
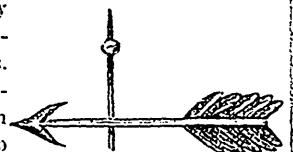


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your attention is attracted to the numerous vanes of various tasteful designs which top off the buildings, public and private, which meet the view.

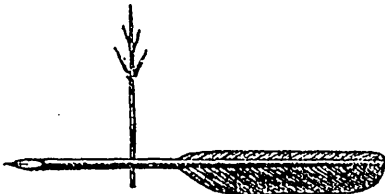
We do not know how many parties are engaged in the manufacture of vanes, but we have made the acquaintance of one firm, Messrs. Cushing & White, of Waltham, Mass., who, we believe, take the lead in this branch of business. The accompanying cuts are furnished by them, and are samples of their patterns.

Beside those herewith shown, the firm just mentioned keep in stock a great variety, among which we may mention the sheep, pig, peacock, eagle, ship steamer, flag, cannon, plough, locomotive, and large vanes especially suited for church spires.

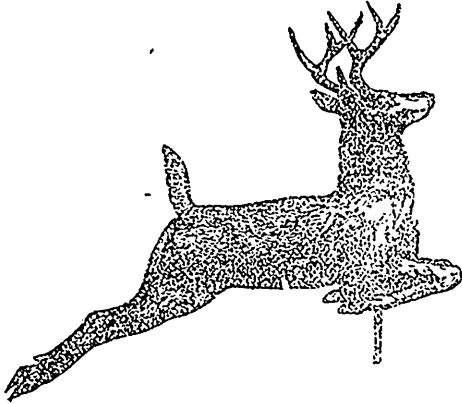


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They also make to order any article of which a drawing or model is sent them. Their vanes are made of thick copper, gilded with the best quality of gold leaf. Cardinal points and balls are furnished with every vane. We can testify to the excellence of their work, having last summer ob-



tained from them the pen vane, of which a cut is given herewith, and which surmounts a turret of our dwelling house. All necessary information



concerning vanes can be had by addressing the firm above named, who will send their illustrated catalogue and price list to any address.

## Hearth and Home.

### STARTLING ADULTERATIONS OF TEA.

(From the London News.)

It would be a comparatively small thing for the Chinese to sell us their old tea-leaves for new tea if they did nothing worse. But our valuable monthly contemporary, the *Food Journal*, has been investigating the quality of the cheaper kinds of English tea, and in doing so has thrown some very unwelcome light into our teapots. The celebrated "Maloo Mixture," which we helped to expose some time since, consisted not only of old tea leaves, but of old willow leaves and of other second-hand adulterations. In the wholesale market, Mr. Muter who has conducted these *Food Journal* inquiries, found gunpowder tea, which ought to be the best green, to consist of common caper, faced with Prussian blue. Some "Morning Congon" he found to be almost entirely dried up leaves, and a sample of Kalsow was greatly made up of rice husks and other matters. But this is nothing to the results obtained by examining thirty-one samples of tea bought of various retailers in London, and four bought in Birmingham. Of these thirty-five samples, which were all tested by an experienced valuer and tester, not one was worth within eight-pence a pound of its price, and many of them were worth but a few pence a pound. One sample bought at the cheap price of sixteen-pence a pound, is described as "very common dust, mixed with a small quantity of red-

dish unknown seeds, and iron filings much burnt;" while in one of the Birmingham purchases there was rice faced with plumbago and lamplack, with some pieces of free plumbago scattered through the mixture. Another mixture, sold at eighteen-pence a pound, consisted of "common fannings mixed with broken stalks, rice husks, fractured tea buds and iron filings." Another sample contained a considerable proportion of "exhausted leaves rendered astringent with catechu," and in another there were actually found a few feathers, scattered among rice and pea-husks, and leaves of the Chinese willow. The decoction produced by this last compound is described as "very mild and not unpleasant, but totally unlike tea." The rice husks and iron filings seem to be the commonest form of adulteration; and it is fortunate that it is so, for they are at least noxious, and it is better to be cheated and not poisoned than to be both cheated and poisoned, as the buyers of higher class tea sometimes are. A common black tea "faced" with Prussian blue to make it sell as the finest green tea, is actually poisonous. Indeed, it seems likely that the real or supposed unwholesomeness of green tea is due more to its facing than to anything in the nature of the tea itself. There is, however, very little reason to believe that the better qualities of tea are at all seriously adulterated. Like other evils, this one of adulteration falls most heavily on those who can least protect themselves against it. Those who have least money to spend have least chance of spending it to advantage.

It is satisfactory to know that this adulteration is not so much the fault of our English tea-dealers as of the Chinese. The demand of the English market is for cheap tea, and the ingenious Mongolians send us the cheapness if they do not send us tea. They find that whatever they send us we buy. The Government takes duty on it as tea, the grocers buy it as tea from the wholesale dealers, and sell it as tea to their customers, hiding the taste of the decoction with milk and sugar, and drink it as tea. It may, of course, be pleaded that it really does not matter what it is so that it does duty by providing a vehicle for the milk and tea; but we may at least plead that even when sold as cheap tea rice husks and iron filings are extremely dear. If they make a passable decoction, just let us know it, and buy them at their natural price. The Government at any rate has right to charge a tea duty on these materials.

### CARE OF BOOTS AND SHOES.

The first thing to be done with any pair of new shoes for farm use, is to set each one on a platter or an old dinner plate, and pour on boiled linseed oil sufficient to fill the vessel up to the upper edge of the soles. Allow the leather to absorb as much oil as it will for eight hours. Linseed oil should not be applied to the upper leather, as it will soon become dry rendering the leather hard and tough. But if the soles be saturated with this oil, it will exclude the dampness, and enlarge the pegs, so that the soles will never get loose from the upper leather.

If the soles be sowed, the oil will preserve the thread from rotting. Now, wet the upper leather thoroughly when the boots or shoes are to be put on the feet, so that those parts which are tight may give a trifle, and thus adapt the form of the shoe to the foot far more satisfactorily than when the upper

leather is not wet. Keep them on the feet until nearly dry. Then give the upper leather a thorough greasing with equal parts of lard and tallow, or tallow and neat's foot oil.

If the shoes be treated in this manner and a row of round-headed shoe nails be driven around the edge of the soles, they will wear like copper, and always sit easy to the feet. Boots and shoes should be treated as suggested, and worn a little several months before they are put on for daily service. This is the true way to save shoe-money.

#### EASE IN SOCIETY.

"I'd rather thresh wheat all day in the barn," said Reuben Riley to his sister, as he adjusted an uncomfortable collar about his sunburnt neck, "than go to this pesky party. I never know what to do with myself, stuck up there in the parlor all the evening. If the fellows would pull their coats off, and go out and chop wood on a match there would be some sense in it."

"Well I hate it as bad as you do Rube," said sister Lucy. "The fact is we never go nowhere, nor see nobody, and no wonder we feel so awkward when we do happen to stir out."

The remarks of this brother and sister were but echoes of the sentiment of many other farmers' boys and girls, when invited out to spend a sociable evening. But poor Lucy had not hit the true cause of the difficulty. It was not because they so seldom went to any place, but because there was such a wide difference between their home and company manners. The true way to feel at ease in any garb is to wear it often. If the pleasing garb of good manners is only put on upon rare occasions, it will never fit well, and never seem comfortable.

Learn to behave properly at home—to cultivate yourselves. Do not sit, or stand, or lounge, about in ungainly attitudes, but acquire a manly, erect, graceful bearing. I have never seen such vigorous, hearty manhood in any class as among cultivated farmers' sons. Let table manners be especially looked after. If you are so unfortunate as to have a mother careless in this regard, you must do the best you can to remedy the early defect in your home training. Note carefully how well-bred people behave, and do your best to imitate them. It is noble to be an imitator of that which is good and beautiful. Above all, if you wish to be at home in society fill your brains with ideas. Set your mind to work. Wake it out of the sluggishness it would naturally sink into, if you were only a plodder and nothing more, by good, stirring thought. Take the newspapers, and read them thoroughly. Knowledge is power in more senses than one. If you go into society with something in your mind worth talking about, you will not fail to find listeners who will treat you with respect, and where you are well received you will not fail very soon to find yourself at ease.—*Country Gentleman.*

#### DOMESTIC RECIPES.

**BAKED SOUP.**—Take one pound of lean beef, chop rather fine, place in an earthen pot which will hold five quarts of liquid.—Slice and add two onions, two carrots, two tablespoons of rice well washed, a pint of whole or split peas, a teaspoon of black pep-

per, and a tablespoon of salt; pour over all one gallon of cold water; put the lid of the jar on it, or a close fitting plate, and bake four hours. This is a nice, wholesome dish.

**COTTAGE PLUM PUDDING.**—A pound and a half of flour, four or five eggs, and a pinch of salt, a little nutmeg, one pound of raisins, half a pound of currants, sugar to taste, and a little milk. Make a thick batter with five well-beaten eggs, a pound and a half of flour, and a sufficient quantity of milk. Then add the currants, washed and picked, the raisins stoned, a little nutmeg and sugar to taste. Mix all well together, and boil it in a basin or floured cloth for quite five hours. The peel of a lemon grated and a few pieces of citron cut thin may be added.

**ROAST GOOSE.**—The *Hearth and Home* says a goose less than a year old can be cooked so as to taste almost as well as turkey. When the animal is nearly ready to be killed, put vinegar into its food, and the day before its neck is brought to the block, pour a spoonful of vinegar down its throat. It has the effect—the reason of which is not well understood—of making the flesh tender. Boil slowly for about two hours, if the goose is old taking care to skim away the oil. One hour for a young goose. Then stuff, and roast, or bake, like a turkey, using a little good vinegar with the basting.

**APPLE SNOW.**—Put twelve good tart apples in cold water and set them over the fire; when soft, drain the water, strip the skins off the apples, core them, and lay them in a deep dish. Beat the whites of twelve eggs to a stiff froth; put half a pound of finely powdered white sugar to the apples; beat them to a stiff froth, and add the beaten eggs. Beat the whole to a stiff snow; then turn into a dessert dish.

**TO KEEP STOVES BRIGHT.**—Make a weak alum water, and mix your British lustre with it; put two spoonfuls to a gill of alum water; let the stove be cold, and brush it with the mixture, then take a dry brush and lustre, and rub the stove till it is dry. Should any part of the polish become dry as to look gray, moisten it with a wet brush, and proceed as before. By two applications a year, it can be kept as bright as a coach body.

#### MUFFLING THE THROAT.

What is the best mode of protecting the throat from colds, where a person is very susceptible to them? The common way of protecting the throat is to bundle and wrap it up closely, thus overheating and rendering it tender and sensitive, and more liable to colds and inflammation than before. This practice is all wrong, and result in much evil. Especially is this the case with children, and when in addition to the muffling of the throat, the extremities are insufficiently clad, as is often the case, the best possible conditions are presented for the production of sore throats, coughs, croup, and all sorts of throat and lung affections. It is wrong to exclude cold air from the neck, and it is overheated a portion of the time, when it is exposed, some form of disagreement of the throat will be apt to occur. The rule in regard to clothing the neck should be to keep it as cool as comfort will allow. In doing so you will suffer much less from throat ailments

than if you are always fearful of having a little cold air come in contact with the neck. Any one who has been accustomed to have his throat muffled should be careful to leave off gradually, and not all at once.—*Herald of Health.*

#### LET THE BOYS HAVE TOOLS.

Every man who can afford it should supply his boys with tools, and a room where they may be used and cared for. A boy takes to tools as naturally as to green apples, or surreptitious and forbidden amusements; and ten to one, if he has a chance to develop his mechanical tastes and gratify them to their full extent, his tendencies to vicious courses will remain undeveloped. Such a result is enough to compensate for all the expense and trouble the indulgence we recommend would entail; while the chances that the early development of his constructive facilities may, in this mechanical age, be the means by which he may ultimately climb to fame and fortune are not small.—*Scientific American.*

#### HEARTH AND HOME GLEANINGS.

**POLISH FOR CASTINGS.**—It is said that a good way to polish plaster of paris castings is coating them with melted white wax, and place them before a fire until the wax is absorbed; a considerable polish can then be obtained by friction.

**HOUSING AND PAINTING FARM IMPLEMENTS.**—Every farmer should ask the following questions, and act according to the reply his own good judgement will give: How much will new ones cost when these are rotted down? How much will a few quarts of paint cost, and how much utility will be added to farm tools by the use of it?

**TO CLEANSE WATER.**—If a lump of alum as large as the thumb joint is thrown into four or five gallons of boiling soap-suds, the scum runs over, and leaves the water clean and soft and useful for washing. We have often, in ancient times, "settled" a glass of Mississippi water, and made it look as "clear as a bell" in a few seconds by tying a bit of alum to a string and twirling it round under the surface of the water in the glass.—*Hall's Journal of Health.*

**ICE AND BROKEN BONES.**—An old pedagogue once remarked, "Keeping the center of gravity within the base and you won't fall," which is very true, but hard to achieve when you are smooth shod and on glare ice. So we advise, to heat some sawdust in a vessel on the stove, and sprinkle it on the ice. It will be a perfect preventative of slipping, and won't spoil the drawingroom carpet, as hot ashes on the ice would do.—*Kingston Wig.*

**CHEAP ICE HOUSE.**—Set posts in the ground so as to make a house twelve feet square (three posts on each side), then board or plank it up eight feet high on the inside. The surface earth is now dug out six inches deep, making it six inches above the level of the earth. The ice is carefully packed nine feet square and six feet high, making a space of eighteen inches between ice and boards, close packed with sawdust, and the same thickness of sawdust placed on top—board roof.

**HOW TO MAKE HEAD-CHEESE.**—Head-Cheese is so named because the heads of hogs are the principle ingredient in it. The best cheese of this kind,

however, has other parts of the hog flesh mixed with the meat of the head, and also some beef. Pieces of the legs and shoulders of the hog are generally used with the head. All are boiled until the flesh become so soft that the bones drop out. The bones are then picked out carefully, and meat is cut fine with a meat-chopper, seasoned to suit taste, and then pressed into moulds, which are generally cylinders of tin, perforated with small holes to allow grease to run out during the pressing.

**AN ICE LENS.**—It is entertaining to observe that radiant heat from the sun may be collected into a focus by means of an ice lens, and yet produce all the effects of any diaphanous burning-glass. Such a lens, for experiment may easily be made by placing a flat cake of ice upon a warm concave surface of metal or porcelain dish, such as an evaporating dish used by chemists; as soon as one side is assumed the proper form, the ice must be turned to make both sides alike. Any sunny, crisp, frosty morning will be suitable for the experiment; from which we learn that in Northern regions it would be quite possible to raise a fire without matches—a fact not altogether unworthy of being known.

**INDIA RUBBER INEXHAUSTIBLE.**—The belt of land around the globe, five hundred miles north and five hundred miles south of the equator, abounds in trees producing the gum of india-rubber. They can be tapped it is stated, for twenty successive seasons, without injury; and the trees stand so close that one man can gather the sap of eighty in a day, each tree yielding, on an average, three table-spoonfuls daily. Forty-three thousand of these trees have been counted in a tract of country thirty miles long by eighty wide. There are in America and Europe more than one hundred and fifty manufactories of india-rubber articles, employ some five hundred operatives each, and consuming more than 10,000,000 pounds of gum per year, and the business is considered to be still in its infancy. But to whatever extent it may increase, there will still be plenty of rubber to supply the demand.

**MEDICAL PROPERTIES OF EGGS.**—We find the following in an exchange: "The white of an egg has proved of late the most efficacious remedy for burns. Seven or eight applications of this substance soothes the pain and effectually excludes the burned parts from the air. This simple remedy seems preferable to collodion or even cotton. Extraordinary stories are told of the healing properties of a new oil which is easily made from the yolk of hens' eggs. The eggs are first boiled hard, and the yolks are then removed, crushed and placed over the fire, where they are carefully stirred until the whole substance is just on the point of catching fire, when the oil separates and may be poured off. One yolk will yield nearly two teaspoonfuls of oil. It is in general use among the colonist of South Russia as a means of curing cuts, bruises and scratches."

**MATERIALS IN A PIANOFORTE.**—The actual materials used in a pianoforte may be worth stating. In every instrument there are sixteen kinds of wood, namely: Pine, maple, spruce, cherry, walnut, white-wood, apple, basswood, and birch, all of which are indigenous; and mahogany, ebony, holly, cedar, beech, and rosewood, from Honduras, Ceylon, England, South America, and Germany. In this combination, elasticity, strength, pliability, toughness, resonance, lightness, durability and beauty are individual qualities, and the general is voice.



There also used of the metals, iron, steel, brass, white metal, gun metal, and lead. There are in the same instrument of seven and a half octaves, when completed, 214 strings, making a total length of 787 feet of steel wire, and 500 feet of white (covered) wire. Such a piano will weigh from 900 to 1,000 pounds, and will last with constant use (not abused) fifteen or twenty years. The total manufacture of pianos in New York alone, averages 15,000 per annum.

**CATCHING MUSKRATS.**—It may have puzzled many of our readers to tell how muskrats, beavers, and other animals, are able to stay so long under water, apparently without breathing, especially in winter. The way they manage is, they take a good breath at starting, and then remain under water as long as possible. Then they rise up to the ice and breath out the air in their lungs, which remain in a bubble against the lower part of the ice. The water near the ice is highly charged with oxygen, which it readily imparts to the air breathed out. After a time, this air is taken back in the lungs, and the animal again goes under the water, repeating this progress from time to time. In this way, they can travel almost any distance, and live almost any length of time under the ice. The hunter sometimes takes advantage of this habit of the muskrat in the following manner: When the marshes and ponds where the muskrat abounds are first frozen over, and the ice is thin and clear, on striking into their houses with his hatchet, for the purpose of setting his trap, he frequently sees a whole family plunge into the water and swim away under the ice. Following one for some distance, he sees him come up to recover his breath, in the manner above described. After the animal has breathed against the ice, and before he has time to take his bubbles in again, the hunter strikes with his hatchet directly over him, and drives him away from his breath. In this case he drowns in swimming a few rods, and the hunter cutting a hole in the ice, takes him out. Mink, otter, and beaver travel under the ice in the same way, and hunters have frequently told of taking otter in the manner described.

## Poetry.

### STARS.

The golden glow is paling between the cloudy bars;  
I'm watching for the twilight, to see the little stars.  
I wish that they would sing to-night, their song of long ago;  
If we were only nearer them, what might we hear and know!

Are they the eyes of angels, that always wake to keep  
A loving watch above us while we are fast asleep?  
Or are they lamps that God has lit, from his own glorious light.  
To guide the little children's souls whom he will call to-night?  
We hardly see them tremble in any summer night,  
But in the winter evenings they sparkle clear and bright.

Is this to tell the little ones, hungry, cold and sad,  
That there's a shining home for them, where all is warm and glad?

More beautiful and glorious, and never cold and far,  
Is He who always loves them,—the bright and Morning Star.  
I wish those little children knew that holy, happy light!  
Lord Jesus, since on them, I pray, and make them glad to night!

*Sacred Song for Little Singers.*

### THE OLD STORY.

"The sails are set and the breeze is up,  
And the prow is turned for a northward sea:  
Kiss my cheek and vow me a vow  
That you will ever be true to me!"

"I kiss your cheek, and I kiss your lips:  
Never a change this heart shall know,  
Whatever betide—come life, come death—  
Darling, darling, I love you so!"

Oh, but the northern nights are keen!  
The sailer clings to the frozen shrouds:  
A kiss burns hot through his dreams of home,  
And his heart goes south through the flying clouds.

The maiden laughs by the garden gate—  
Dreams of love are the soonest o'er!  
Kisses fall on her lips and hair,  
And the world goes on as it went before.

*—Lippincott's Magazine.*

### A SCHOOL GIRL OF THE PERIOD.

Geography? Yes, there's a lesson each day,  
But it's awfully hard to remember.  
We've been in South Africa nearly a month;  
Perhaps we'll go north by November.

What history have we? Its quite a big book,  
Without and pictures—the bother!  
To-day I was told I'd sustained a defeat  
In the battle of something or other!

Arithmetic? O, its the bane of my life!  
No matter how hard I may study,  
My knowledge of dividents, fractions and rules  
Continues unchangeably muddy.

Proficient in spelling? I hope that I am,  
Though I shine less as a writer than talker;  
And don't mind confessing how often I use  
A pocket edition of Walker.

I write composition? Of course, one a week—  
We've such a dull subject to-morrow!—  
I manage to spin out a page and a half,  
Though lots of girls copy and borrow.

You ask which lesson of all I perfer?  
You'll think my reply quite alarming;  
In French we've a *gentleman* teacher, you know,  
And somehow, it's perfectly charming!

*—Harper's Magazine.*