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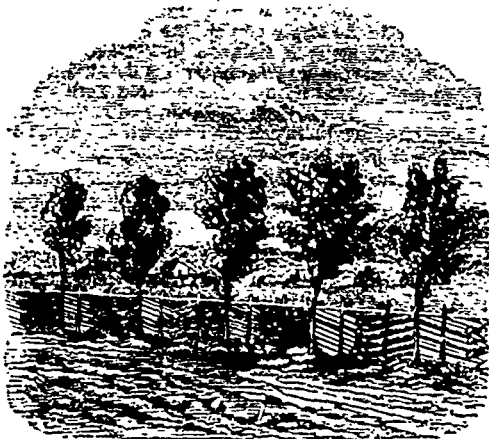
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The Field.



Fencing.

This operation will require early attention on the part of the settler, and indeed should be a subject of forethought before a single tree is felled. If there be a cedar or black ash swamp on the lot, it will be wisdom to depend on it for a supply of fence timber. From its readiness to split, its lightness and durability, cedar stands at the top of the list of fence woods, and when it can be had, you need "seek no further." But it is only in certain localities that this valuable timber is found, and in its absence, the next best choice must be made. This is undoubtedly black ash. But it is often the case, that neither of these are within reach, and then it will be needful to select very carefully as the process of chopping goes on, such trees as may answer this important purpose. Chestnut, hickory, oak, elm, bass-wood, &c., may be converted into rails, and all clean, straight-grained trees of suitable size should be singled out and set apart for fencing. They should be cut up in logs of suitable length for splitting into rails and stakes; the former being from eleven to twelve, and the latter from seven to nine feet long. These logs must be "butted off" as it is termed; i. e. the kerf or chip is made only on one side, the other being cut off square as in chopping down a tree. When the clearing is logged up, the fence cuts must be drawn to the edges of the clearing, and to where division fences are intended to run. They will then be where they are wanted when they come to be split into rails. The exercise of much judgment and skill is required in order to split timber economically into rails and stakes. Without this, a great deal of labour will be vainly expended, and no little good timber wasted. Usually a log will split best from the small end. Some timber splits readily through the heart, while in other cases, this cannot be done, and pieces must be "slabbed off" as it is termed. A little experience, and careful trial of

different methods, will soon make the settler expert at rail splitting. The best of the stake logs must be selected for bar-posts. Those from ten to twelve inches in diameter will answer best for this purpose. In splitting them, care must be taken to calculate how many posts a log will make. If it will make four it should be split through the centre, and then by tracing or starting it a little with the axe and beetle on the side,



MODE OF SPLITTING A LOG INTO FOUR PARTS.

the two halves may be split in two again the wide way, as represented in the above figure. When a log will only make three parts, a slab should be taken off each side, in the manner shown by the subjoined figure. The



MODE OF SPLITTING A LOG INTO THREE PARTS.

split should be started carefully with the axe and beetle from the end, and the course of the opening directed on the sides of the log as the wedges are driven into the end. Without such precautions, a post will often be spoiled by the split running out.

Rails, stakes, and posts being in readiness, the next thing will be to put up the fence. This is usually done in the worm, or zig-zag style. Straight fences involve more labour, and where both land and timber are abundant, the zig-zag plan is preferable. Fences are often made in a very slovenly manner. From want of care in building they are frequently to be met with in a shaky, toppling, tumble-down condition. The proper worm or crook has not been given,—the rails have not been laid securely,—and the fence is not perpendicular. It is a very common fault to leave them without any protection at the corners, when they are easily thrown down by cattle, colts, or the wind. Many cattle are taught breachiness by the insufficiency of the fences. Stakes and riders should always be deemed indispensable. When the stakes are fixed at the fence corners, they project some two feet beyond the fence and so take up considerable room. It is better to put the stakes upright at the corners and connect each pair at the top by means of a wither, a cap with two inch auger holes through it, or a loop of annealed wire. Another plan consists in placing the riders (for which two long poles stretching over two or three panels are best), in a straight line on the top and at the centre of the fence, and then placing upright stakes in each inner corner between the rider and the fence, the lower end simply resting on the ground, and the other wedged closely between the top rail and the riders.

The accompanying figures, showing a ground plan of the several styles of fence will explain these directions, and make the mode of construction plain.

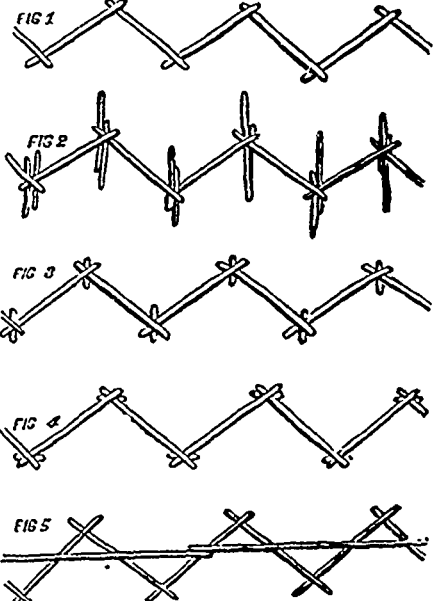


Fig. 1 represents the simple zig-zag fence, as seen too often on carelessly kept domains, without stakes or riders.

Fig. 2 is the common "staked and ridered" fence, well-braced and strong, but taking up too much land.

Fig. 3 is a better method, having upright stakes placed at the opposite corners, which are held together by a wither, cap, or loop of wire.

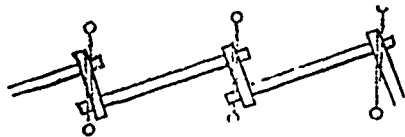
Fig. 4 is like the last, but better, because the stakes are put in the acute corners, and so keep their places and brace the fence more firmly.

Fig. 5 shows the method last suggested, and which, though not perhaps the neatest, is by far the most secure of the plans described.

It is very necessary to set the fence corners on blocks of stone or wood, so as to keep them well up from the ground, and secure their lasting as long as possible. In order to keep the fence straight, a number of small, thin stakes must be set in a line, where the middle of the fence is to come. The length of the rails will determine the amount of worm or crook to be given. It is better to give a fence too much than too little. Old settlers recommend peeling the rails and poles if practicable, as a fence lasts much longer when this is done.

Sometimes a wretched apology for a fence is made with brush, a practice which cannot be too strongly condemned. It soon rots, and breaches are easily made through it,—besides, it is in constant danger of taking fire. A device sometimes resorted to, is the log or pole fence. Where easy splitting timber is scarce,

this plan may be adopted. It is explained by the subjoined cut. Logs thirty feet in length, may be used



for the two first tiers, and may be rolled to their places by the help of a team. When it is one or two logs high, it may be finished with heavy poles.

There are some styles of hurdle and cheap fencing, which may be used to advantage. Even the bush farmer ought to have a supply of hurdles for temporary cattle and sheep pens.

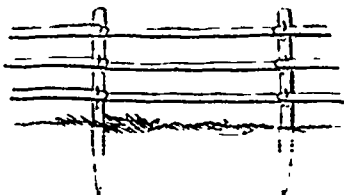


Fig. 1

Fig. 1 shows a cheap temporary fence, intended for confining cattle or horses only. It is made of common split rails, attached to posts by means of annealed fence-wire, thrust through half-inch auger holes made for the purpose, and secured by a twist. One good rail will make two posts, which are set about 20 inches deep into crowbar holes. The meeting ends of the rails are placed on opposite sides of the post, and both are held by one wire, as shown by Figure 2.

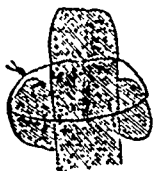


Fig. 2

Another fence, more portable in form, sometimes used on Western prairies, where winds are violent, is represented by Fig. 3. It is very cheap, though not



Fig. 3

neat in appearance. Short sticks are mortised as represented, to form a support, to which common fence rails, or poles, are nailed. A rider is added without nailing, as exhibited in Fig.

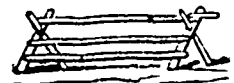


Fig. 4

4 It stands firmly upon the ground, and may be moved with great facility. It is as easily made as the preceding, and more durable

Work for April.

THE tug of farm work begins this month. First comes the care of the fences. These should be kept in thorough order, that there may be no danger of unruly cattle breaking in upon the growing crops. It is a good plan to renew a portion of the fencing of a farm year by year, so that it may all undergo a constant process of renovation. A common evil in early spring, is letting cattle and horses upon meadows and pastures, while the ground is wet and springy. Avoid this by all means. It injures the roots of grass, and while there is but little feed, only tantalizes the stock, and makes dry food distasteful. As soon as meadows are tolerably dry, loose and projecting stones should be picked off, and the land rolled. In these days of mowing machines, it is desirable to get meadows as clean and smooth as possible. Stumps should be got rid of, brush exterminated, and small hillocks levelled down. Let bare spots be re-seeded, and the whole top-dressed with fine well-rotted manure, unless indeed this was done last fall,—the preferable plan. Put in force Old Richard's advice this month. "Plough deep while sluggards sleep." Of all operations on the farm, ploughing most needs to be done well. Eschew all slovenly, skim-surface work, and be thorough about it. Let teams be well cared for,

as to feed, grooming, and attention generally. They should be gradually brought to hard work, so as to harden to it. Horses are very apt to get collar and harness galls in the spring; guard against this. A Dutch collar is often very useful, to change the bearing, and prevent wounds.

Clover may still be sown either alone, or on winter grain. Give it a dressing of plaster. Various crops as oats, barley, potatoes, are much affected by the time the seed is got into the ground. Sow as early as the state of the land will permit. Pull out rod root and cockle from among wheat. Now milch cows and their calves, will require attention. To rear calves, they must be kept clean and comfortable, fed regularly with nutritious diet, and sudden changes of food avoided. They do best if weaned early. Lambs must be cared for, and all needless exposure guarded against. The yearling ewes must not be neglected. Manure heaps should be turned over, compost arrangements made, and any well-rotted dung that may be on hand, carted out. Orchard and shade trees may be planted out as soon as the weather and land are favourable. Trees heeled-in last fall, may be delayed longer than trees left in the ground until the buds are swollen. Rainy days this month, should be improved in cleaning out cellars, putting tools in order, greasing waggons, oiling harness, preparing seed, squaring up account books, and reviewing plans for the busy season. In the garden, as well as on the farm, there will be enough to do this month. Early potatoes and peas should be planted so soon as the ground is free from frost. Rake off the coarse litter from asparagus beds, fork in fine manure, and give a dressing of salt. The beginning of April is early enough to start the hot-bed for family gardens in this climate. Cold frames and hand-glasses, will be found useful in starting and protecting tender plants. Remove the covering from strawberries, raspberries, grapes, and plant out cuttings of currants, gooseberries, &c. Early in the spring is the best time for setting out strawberries. If properly done, they will bear a little the same season. Draining, manuring, path-making, pruning, and transplanting should all be attended to as early as possible. In the garden, as well as on the farm, it is wisdom to take time by the forelock, and never put off until to-morrow what can be done to-day.

The Proper Time for Gathering Hops.

AN interesting discussion on the above subject, recently took place at a meeting of the Maidstone Farmers' Club, (England), with a brief notice of which, such of our readers as are hop growers and brewers, will feel themselves interested.

It appears that a great change has taken place in England, within the last quarter of a century, in regard to the degree of ripeness which hops should attain before being gathered. The constantly increasing amount of pale ale which the great brewers export to foreign countries, as well as the increased consumption at home, seems to have occasioned a corresponding demand for what are called pale hops, that is hops having a bright green or yellowish colour, that have not attained to perfect ripeness. Formerly, hops after getting thoroughly ripe, and having a brown colour, commanded good prices, but now such qualities are almost unsaleable, except at greatly reduced rates. Hence the temptation to growers to commence picking before their hops get fully ripe; a practice that seems of late years to have much increased, and which is attended with serious disadvantages. Hops, when gathered before perfect maturity or ripeness, lose considerably in weight, being as it is termed deficient in "condition." This, of course, is a positive loss to the grower,—and as the sequel will show, of no particular advantage to the brewer. Besides it is well known to practical men, that when the vines (bines) are cut before the fruit is well matured, the stock is liable to injury; that is, its reproductive powers become weakened, as is often

seen by the feeble state of the bine in the following year. Several instances of this kind, we observed both in Canada and the State of New York, last season.

In reply to a remark from a planter, that the brewers had set the fashion of so great an extension of pale ale, Mr. Baverstock, an experienced and extensive brewer remarked: "That the brewers had nothing to do with causing the bines to be cut so early, and would endeavour briefly to show this. At the time these letters were published he made extracts from different samples of hops of different growths in various parts of the country, and showed them to Mr. Punnett. The result led him to the conclusion that it was quite unnecessary to pick hops green, to produce pale beer. No matter how brown the hop grow—he did not care how brown it was, as long as it was brown from natural ripeness—it would produce as pale an extract as if it were picked before its time. The extract he made from the green hop was browner than that made from the hop fully ripened in the usual way. As to whether the brewer introduced pale ales in this country, that had very little to do with this question, but what they had to consider was, what was best for themselves, and he could safely say, as a large consumer, it was much better for them to leave their hops to ripen on the poles in the natural way—supposing they were growing independently of any disease—and they would produce quite as pale, and a much more wholesome beer, than as if they were prematurely picked. With regard to the origin of pale ale he might state that it was first made in Calcutta in 1822, and when it was introduced into this country the demand for it grew so rapidly that it was manufactured here, with great success. The colour, however, had nothing at all to do with the quality of the beer, which could be made just as good brown as pale."

Mr. Baverstock further mentioned that beer brewed from well ripened hops, kept better, and was of a superior flavour, and would be even of a paler colour, than from green, unripe hops.

"Mr. Hodson remarked that if any gentleman could devise a plan of so training the bine as to allow of the hops being picked without cutting the bine at all, he would be conferring a great boon on the agricultural interest; and he suggested whether it might not be advisable for the club to offer a prize for an essay on the subject. Messrs. Simmonds and Hunt were now trying the experiment of training hops on strings, but it remained to be seen how that plan answered. They all know from experience that when they had a bad crop of hops, and had not cut the bines until near Christmas they got a much better crop next year. When he first commenced growing hops, in the year 1859, he tested almost every day's picking throughout the season, and made decoctions each day. The picking lasted five weeks, and he found that those hops picked late in the season, and which therefore were riper, gave a somewhat paler liquor than those gathered in the commencement of the season. He was therefore greatly astonished to find that the merchants gave a much better price for the earlier picked hops, on account of their colour. It was to be regretted that some steps had not been taken to remove this erroneous impression, because they all knew that it was much better not to pick their hops until they were ripe.

Mr. Barling, an old and extensive hop grower, observed. "If it was a necessity for the farmers to produce a light hop to meet the demands of the market, right or wrong—and he maintained that it was wrong—how to do this with the least amount of damage to the plant. Having paid considerable attention to the means by which plants were nourished, and the mode in which they provided for the production of other plants like themselves, he had learnt that the sap which left the root of the plants had to undergo a process in the leaf, and until this operation had been performed it did not descend again through the various channels of the plant to the root. The sap traversed all portions of the plant, and while in the leaf the character of it was so completely altered that when it descended it fed all the plant system. The root did not grow from the earth, but from the leaf, which took the nutriment from the air. This fed the branches, and they carried it into the stem, and thence it proceeded to the root, on which a new coat was formed every year, just in the same way as a ring of wood was added to a tree. It was on the health of that ring that the future crop found the chance of being good or bad. Therefore in cutting the bine early, to supply light hops, they severed the connection between that which was going to feed the root for another year, and inflicted great injury. Now they could not cure this evil, except by allowing the bine to grow its natural time, but they could moderate it by cutting the bine as high up as

possible, and leaving all the leaves they could. He did not care about the bice bleeding if they left plenty of branches and leaves. A few days since he was walking on the farm of Mr. White, when he saw a striking proof of what he had stated in regard to the action of sap, and the altered quality of that which descends to the root. He came across a young ash tree, 15 or 20 years old, round which some one had cut a ring in the bark, thus exposing the stem of the tree. The ring was on some four or five years ago, perhaps, and now the part of the tree above the ring was totally different to the lower part. The bottom portion of the bark was healed up, and the tree below the ring was 17½ inches in circumference, and 21 or 22 inches above. Now, if the ascending sap had made the tree, and was as good as the descending sap, why did not the bottom part grow the largest? With regard to the tinting power of the pale or brown hops, he had always thought the brown hops, from the gum in the petal being entirely dry and consequently more difficult to dissolve, would produce a paler ale than the green hop, in which the gum was more readily affected by solution. With regard to the weight of the hop, it was the lupuline that increased the quantity of weight, and also the quality. The petal was of no more use than the shell of an oyster. Mr. Barling then concluded by remarking that his object was to see their plantations kept up their standard, and not be beaten by the foreigner, which would certainly be the case if the English farmer continued to cut the bice before the hop was ripe."

A few Hints on Growing Indian Corn.

To the Editor of THE CANADA FARMER :

Sir.—I am pleased to observe a growing interest among the farming community, in this excellent grain, and expect should I live ten years more to find it cultivated to a large extent. I remember the period when Indian corn formed a principal crop all through Upper Canada, where it was relied upon as a surer and more profitable crop than wheat. But since the plough has come to be so universally used, the cultivation of corn has given place to other cereals. Until within a few years wheat has been considered the only grain upon which a farmer could depend to meet his liabilities. A course of deficient culture—the neglect of a system of rotation of crops, has, however, deteriorated the fertility of the soil, and in many places the average of wheat has declined from 30 or 40, to 10 bushels per acre. The Canadian farmer has through his own negligence allowed his rich and grateful fields to become so poor that he can no longer hope successfully to raise wheat, and he is now more likely to listen to suggestions on cultivating some other paying crop. Now I do consider that Indian corn can be raised almost in every portion of Upper Canada to profit, and when fairly tried, I am certain that a great many who now think but little about it, will come to esteem it as remunerative, and very advantageous. Having raised it more or less for some 40 years, I will offer a few hints that may be useful to new beginners. The soil best adapted for Indian corn is warm rich loam. Choose the lightest soil with a south or eastern exposure. Manure it well with barn yard or any other manure. If not ploughed in the fall, plough as early in the spring as you can, and let it remain until you are ready to plant, when you can plough it again, and harrow it level. If the field is rich, have your hills 4 feet each way, if not very rich, 2 feet 6 inches or 3 feet 9 will do. To make the hills at right angles, some drag a chain lengthwise and across. Some take a scantling 12 feet long, and put wooden pins the requisite distance apart, and attach it to a horse. Which ever way is adopted, try and have the hills in straight rows, and at right angles to each other, as in addition to its neat appearance, it facilitates weeding and hoeing. When the field is thus gone over, open a small hole at the angles about 1½ inches deep, a boy can follow with corn, and drop 4 or 5 grains in a hill, and in every other hill and every other row drop a pumpkin seed, another boy can cover, but the latter should begin at the far end, after a row has been planted, so as to draw the earth towards himself. For seed corn, choose from traces carefully preserved, the best eight-rowed ears that are plump

and full, break off the top end about 1 or 2 inches, shell out, and if you are late in planting, and the ground is dry and the weather warm, you may pour scalding water on it, and let it remain all night. You require from 6 to 8 quarts for an acre. The best time for planting is from the 5th, to the 20th of May. In the valley of the St. Lawrence, about the 10th of May, is a good time; on the table lands, which are more subject to spring frosts, from the 15th to the 20th May, does better. If you plant early, and the ground is damp and cold, by no means soak the seed, and be careful not to bury deep. Germination is very easily destroyed by moisture, and the plant will not thrive on cold damp land. When it is up about 3 or 4 inches high, go through the rows each way with a horse and scuffler when the weather is dry, so as to cut up and destroy the weeds; then with the hoe clear away the weeds around the hill, and replace by fresh earth what was scraped away. In about three weeks after, you will require to repeat the operation, and may continue it a third or fourth time if the ground is woody. By no means make a hill around the plants until the last hoeing, about the 10th or 15th of July. Then it is considered useful to support the stocks from falling over. In olden times this was considered indispensable, but there is now a difference of opinion, respecting the utility. Of late years I have not hilled up my corn, and I have found it do pretty well. Still I am of the opinion that the practice would be rather beneficial than otherwise. The chief prejudice against raising corn by farmers who have formerly raised it, is the vast amount of hard work connected with it. This is somewhat reduced by the scuffler, and abandonment of the hilling-up system.

Many recommend guano, ashes, and artificial manures being applied while planting, all of which I have no doubt are excellent for producing a good crop; but I do not approve of the plan on account of the labour involved in it. I prefer having the field for corn manured in the ordinary way, and in raising a crop of corn, the ground is little injured, and is in prime condition for wheat. Corn will do well on the same ground for several years, but like all other crops is better of change. There is a difference of opinion as to the wisdom of breaking off the suckers, or allowing them to remain. I have tried both ways but cannot say which is best. I have latterly adopted the plan of an old Vermonter, whose advice I had asked respecting them. Said he, "if the ground'll bear 'em, let 'em grow." I prefer the yellow corn as being the most nutritious, and yielding the best return. The small white variety will however, ripen earlier, and may answer in some localities, but I would not raise it where I can raise the yellow. If you wish to plant different varieties, you must plant them apart from each other, else they will inoculate one another, and your crop will be part of each. Change your seed occasionally, and if possible procure it from a more northern locality. When you obtain a good variety, do not part with it until you have obtained a better. Perhaps there is no crop raised, that seems to benefit so much from attention to tillage as corn; every time it is hoed it seems to rejoice, and manifest its gratitude by stretching out. It does best in moderately dry warm seasons, and will ripen in favourable seasons, and good localities, in about three months. Farmers, try a patch, and my word for it, if you attend to it you will continue to raise it.

Rockland, March 1865.

Cultivation of Flax.

As information from those who have been long practically conversant with the cultivation of flax is valuable, we are induced to give the following extracts from a letter on the subject which was lately put into our hands by the gentleman to whom it was addressed. We may state that the letter was not originally intended for publication, but, coming as it does from an experienced flax grower resident in the neighbourhood of Omagh, we are glad to be allowed to bring it under the notice of our readers:—
"The first thing you have to look to is your soil. What is recommended by eminent flax growers is a sound, dry, deep loam. I have had the experience of two sorts of soil this season: the hill and the low ground on opposite sides of water. The hill, as you are aware, is sharp, gravelly soil, and produced flax twice as good in quantity and quality as that sown

on the low ground, which is deep loam. With regard to the preparation of the land, there are many and varied opinions. How I treated the hill last season was by ploughing about this time of the year with the intention of grubbing again before sowing, but when I saw that no weeds appeared upon the surface, I prepared by the harrows for the seed, and it did well. There is another system in this country which appears to be taking the lead, that is ribbing; it keeps the land dry and warm, besides rotting the stubble. This I believe to be the proper way to keep it until from three to six weeks of sowing the seed; then plough, and finish by harrowing and rolling. You cannot give it too much of the harrows before sowing, as it requires but one double tine after the seed. This is exactly how I intend preparing my own this season.

"Riga is now generally sown upon all soils as the most productive to the farmer. I have sown Riga, Dutch, and English upon the same soil, and Riga is what I would by far recommend for any soil. The time to determine upon for pulling is the most particular part of flax cultivation. If pulled too soon, although the fibre is fine, the great waste in scutching renders it unprofitable, and if too late, the additional weight does not compensate for the coarseness of fibre. The proper time to pull is when the seed begins to change from a green to a pale brown colour, and the stalk to become yellow for two-thirds of its height from the ground. If you are for saving your seed, let the handfuls of pulled flax be placed diagonally across each other, so as to be ready for rippling. The best method is to save it at home by spreading upon lofts and turning twice a day; finish upon a corn kiln, taking care to keep a slow fire. By this plan of slow drying the seed has time to imbibe all the juices that remain in the husk. If it be taken from the field and dried hurriedly upon the kiln these juices will be burned up, very little nutritious matter remaining. Flax ought not to be allowed to remain, if possible, the second day in the field; it should be rippled as pulled, and at once got into the steep for this process. River water is the best. If spring water must be used, let the pond be filled some weeks before the flax is put in, that the sun and air may soften the water; the best size of steep pool is from 12 to 18 feet broad and 3½ to 4 feet deep. Steep your flax with the roots down, the top sloped a little off from the man who puts it in; have it laid very regularly, so that it may water evenly; cover the flax with moss sods on a stiff old lea, cut thin, laid perfectly close. It generally takes from 8 to 14 days in the pool, according to the heat of the weather and nature of the water; after fermentation subsides take out some stalks, and break them in the centre about 8 inches apart; catch the broken bit of wood, and if it will pull freely out downwards for that length without breaking or tearing the fibre, and with none of the fibre adhering to it, it is ready to take out. Select, if possible, short, thick, pasture ground for spreading; mow down and remove any weeds that rise above the surface of the sward; lay the flax evenly in rows on the grass, and spread thin and very equally. If well watered, the less time after 3 or 4 days on the grass the better. This is the best information I could possibly give you; it is exactly what I have done and intend doing myself. There are far more expensive modes, but this I believe to be the best."—*Irish Farmers' Gazette.*

PLANTING PEAS DEEP.—Deep planting is not generally resorted to, under the impression that the seed will rot in the ground. This is a mistake. Peas covered six or eight inches deep, will produce twice as much as those covered but an inch, they will continue flowering longer, and the vines are more vigorous, and do not lie down, it is often the case when shallow plantings are made. We have tested this matter, and therefore know from experience, that if it is desired to get a large crop, the seed must be buried deep in the soil. A suitable piece of ground, which had been enriched the previous year, was deeply ploughed in the fall, and again in the spring, and put in fine tilth. One-half of the piece was marked out in drills, and the seed covered two inches deep. On the other half the plough was sunk beam deep, and the seed scattered at the bottom of the furrow. In this way one-half the piece was gone over and afterwards merely leveled, leaving the seed at least eight inches below the surface. The peas that were ploughed in were a little longer in making their appearance, but they shot ahead of the others, the vines were thrifty and vigorous, and produced treble the quantity of those in the two inch drills by their side. The seed used was of the same lot, the Champion of England variety, the soil, time of planting, and culture, (except the manner of putting in) were precisely the same for both places. This experiment convinced us that peas flourish best in deep planting, and we have repeatedly had our attention called to the fact, in observing different crops, and learning the manner of culture.—*Ulster Herald.*

The Breeder and Grazier.

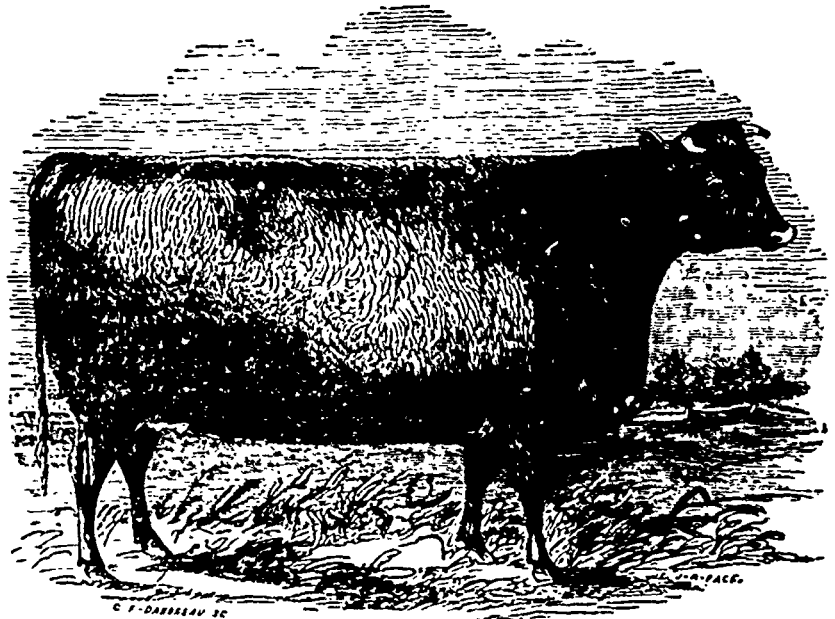
Regularity in Feeding.

FARMERS would do well to bear constantly in mind that next to a sufficient supply of nutritious food, is *strict regularity in feeding*. The horse, and domestic animals generally,—not even excepting the pig,—have an instinctive capability of keeping time; that is, they know by the natural promptings of their appetite, when the meal hour arrives, and this is the case particularly, when they have been accustomed to *regular feeding*. Animals when fed irregularly, and insufficiently, always manifest a fretful and uneasy feeling, which is very inimical to a healthy and thrifty condition. If they are supplied at regular intervals, with a sufficient amount of suitable food, they will keep perfectly quiet during the intervals and evince no fretfulness or desire for food, till the regular period for feeding approaches, and this is a state most essential to their comfort and well doing. As soon as an animal begins to worry, from whatever cause, it will decline in weight and condition. This result is always apparent where cattle of different strength and ages, are kept loose in a yard together, the stronger and older will worry the weaker and younger. No amount or quality of food, can make up for irregular periods of feeding. With fattening stock, which require to be kept uniformly quiet and in good temper, this is strikingly apparent. We have often seen cattle kept in good condition, upon a smaller amount of food, of the same quality, than has been consumed by others that have made much less progress; and the cause has been, that the former have been fed punctually and systematically, and the latter just the reverse. The practice of throwing a large quantity of hay, or any other food to cattle, once or twice a day, and allowing them to have a scramble for it, as is not infrequently the case, is wasteful and exceedingly detrimental.

There is no department of rural economy that requires, perhaps, so much close and systematic attention, and the exercise of a sound and enlightened judgment, as the breeding and management of farm stock; and particularly when they are in a state of artificial confinement during the winter months. Not only is strict punctuality as to the time of feeding imperatively required, but the amount, and to some extent, even the quality of the food should be varied to meet the changing conditions of temperature, humidity, and other physical agencies affecting the progress and well being of animal life. In sharp, dry, frosty weather, cattle require a larger amount of food, richer in both carbonaceous and nitrogenous ingredients, than when the atmosphere is warm and humid. But, how often does it happen from carelessness or ignorance, that sometimes they are starved, and at others made to fast; both conditions being opposed to a healthy state of progress.

We observed the other day, half a dozen cows in excellent condition, and yielding a large supply of milk, kept on a variety of food, mainly the produce of eight acres. Here cleanliness and strict regularity in feeding, are carefully practised, with all necessary attention to warmth and ventilation. With a moderate quantity of chopped hay and straw twice a day, are given a few mangolds or carrots; the other meal consisting of steamed hay and straw, and linseed, with a little corn meal, forming a warm and nutritious diet. In another direction, we found a considerable herd of cattle, on a large farm, in a miserable plight, partly owing to insufficiency of food, but more to neglect and irregular feeding. Some of the cows would evidently have great difficulty, whatever attention may now be paid them, in getting through calving. With the addition of a few roots, there was sufficient hay and straw on this farm, to carry the stock through the winter, if sufficient care and judgment had been exercised, in comparative comfort. The housing or protection was also bad. How is it possible for people to succeed in matters of this sort, who persistently act in opposition to the ordinary laws of nature?

Best One-Year-Old Heifer at the Provincial Show, Hamilton, 1864.



PRINCESS OF ATHELSTANE.

THE accompanying illustration will afford our readers a general idea of the very promising young animal which formed a part of the valuable importation of Short-horn stock made by the Hon. David Christie during the autumn of last year, and which were so much admired by the numerous visitors at the last Provincial Exhibition. It will be seen from the accompanying pedigree that the Princess of Athelstane inherits the best blood from both sides, and should she progress as well as she has began, and no casualty occur, she will doubtless become a valuable acquisition not only to her enterprising owner, but to the country at large.

PRINCESS OF ATHELSTANE.

Red; calved July 6, 1863; bred by Mr. James Douglass, Athelstanesford, Scotland; imported in 1864 by and the property of Hon. D. Christie, Brantford, C.W.; got by Watchman (17216), dam Queen of Athelstane by Sir James the Rose, (15290); g. d. Playful, by 4th Duke of York (10167); g. g. d. Place 3rd, by 4th Duke of Northumberland (3649); Place 2nd by Duke of Northumberland (1940); Place 1st by second Earl of Darlington (1945); Place by son of second Hubback (2682); a cow of Mr. Bates', Kirklevington.

Question of Contagion Settled.

THE Governor and Council directed the cattle commissioners to isolate a certain number of animals that had been exposed to the pleuro pneumonia, and to test the contagiousness of the disease. This was done, and two cows taken fresh from uninfected districts put into the barn alongside.

On the 17th of January, one of these cows that had shown no signs, even, of a cough, was attacked with lung disease, and was quite sick for eight days. On Feb. 1st, the other cow that had been coughing, and whose cough still continues, first showed the usual symptoms of pleuro pneumonia, and on the 6th inst. was thought very severely affected, so much so that her recovery was considered very doubtful. The cow has been growing worse up to this date, the 11th, though efforts have been made to save her.

The experiment has shown that the disease is unquestionably contagious, that the period of incubation is still uncertain, showing that the release of animals that have been exposed to the disease, and isolated in consequence, is extremely dangerous.

True this same thing has been proved in the most conclusive manner, in this State, many times over but a skeptical member of the council insisted upon another expensive trial, which, though not ended, has shown in a most satisfactory and unmistakable manner that the disease is highly contagious.—*Ploughman*.

PRODIGIOUS IN HORSE FLESH.—From the high rates of the North Eastern Railway, coupled with the late fearful accident upon the incline between Malton and Whitby, various companies of omnibuses were started to run through the wild moors to the latter terminus. One company, entitled the Whitby and Castleton, came to grief, and upon Saturday week, under the hammer of Messrs Turner and Mead, the following prices for the stud respectively were realised: No. 1, 2l. 4s.; No. 2, 1l. 15s.; No. 3, 1l. 19s.; No. 4, 1l. 10s., making the grand total of 6l. 14s. Compare this with Mr. Chaplin's princely price of 11,000l. for two horses, and our readers must acknowledge there are ups and downs in horseflesh as in every other condition of English life. There used to be a very varmint pack of hounds trencher fed, called the Cleveland or "Rousby Chap's dogs." We hope they had a good feed off the effects of the sale.—*Field*.

FLESH IN VEGETABLES.—All vegetables, especially those eaten by animals, contain a certain portion of flesh; for instance, in every hundred parts of wheaten flour there are ten parts of flesh; in a hundred of Indian corn meal there are twelve parts of flesh, and in a hundred of Scotch oatmeal there are eighteen parts of flesh. Now, when vegetable food is eaten, it is to its fleshy constituents alone that we are indebted for restoring to the body what it has lost by muscular exertion. "All flesh is grass," says the inspired writer, and science proves that this assertion will bear a literal interpretation. No animal has the power to create from its food the flesh to form its own body; all the stomach can do is to dissolve the solid food that is put into it; by and by the fleshy portion of the food enters the blood, and becomes part of the animal that has eaten it. The starch and sugar of the vegetables are either consumed—burned—for the production of warmth, or they are converted into fat, and laid up in store as future food, when required. Grass consists of certain fleshy constituents, starch and woody fibre. If a cow, arrived at maturity, eats grass, nearly all or the whole, of its food can be traced to the production of milk; the starch of the grass goes to form fat—butter—and the flesh appears as casein, or cheese. When a sheep eats grass, the flesh of grass is but slightly modified to produce mutton, while the starch is converted into fat—suet. When a man eats mutton or beef, he is merely appropriating to his own body the fleshy portion of grass, so perseveringly collected by the sheep or oxen. The human stomach, like that of a sheep or ox, has no power to create flesh; all that it can do is to build up its own form with the materials at hand. Iron is offered to a workman, and he builds a ship, makes a watch-spring, or a mariner's compass, according to his wants, but, although he alters the form and texture of the material under his hand, yet its composition remains the same. So as regards flesh, although there be but "one flesh of men, another of beasts, another of fishes, and another of birds," yet their ultimate composition is the same, all of which can be traced to the grass of the field, or a similar source. Flesh, then, is derived from vegetables, and not from animals; the latter being merely the collectors of it. And, as though the plant knew that some future destiny waited the flesh which it makes, it will not use a particle of it to construct a leaf, a tendril or a flower, but lays it all up in the seed.—*Piesse*

The Dairy.

Report of the Munson, Ohio, Cheese Factory.

WHOLE number of cows, 645; average number of cows, 650; number pounds of green cheese, 192,931; number pounds cured cheese, 183,403.

Two sizes of cheese have been made during the past season—part 22 inch, weighing about 1:0 pounds cured, and part 15 inch, weighing about 68 lbs cured. The average weight of all is 81 pounds to the cheese. The average shrinkage is 4 94-100 per cent. Number of pounds of milk to one pound of green cheese, 9 28-100, or 9 pounds 4 1/2 ounces, and for one pound of cured cheese, 9 76-100 pounds, or 9 1/2 pounds of milk.

Our patrons nearly all sold their milk at prices ranging from 10 to 23 cents per gallon. The cheese belonging to the balance was sold in two lots. What was made prior to the 23d of May, was sold in June for 16 cents per pound, and the balance sold in September for 26 cents per pound. Boxing is all done by machinery. The cost of bandage, salt, coloring and rennet, to the 100 pounds of cheese, 42 cents. The bandages used was 39 inch cloth, bought of H W. Mitchell, of Rome, Oneida County. The price got for making is \$1 50 per hundred. The ordinary vat and a steam boiler is used for heating; the vats hold 500 gallons each. Wood has been used for heating, and about 50 cords during the season.

The whey has been fed to hogs, for which we had ten cents a week per hog. The kind of salt used is Syracuse factory laked, and 2-3 pounds to the 100 pounds of green cheese. Of annatto, we used 21 pounds, dissolved in lye in the fore part of the season, and during all the latter part we used Jones' preparation, of which we used 91 gallons, and I considered Jones' preparation a superior article for coloring, as the color is better than that obtained any other way. In cool weather we heat the milk to 81 or 86 degrees, but in warm, only to 82, when we apply the rennet, and want a firm coagulum in from 40 to 60 minutes. When sufficiently firm, we cut with a steel bladed gang knife, so as to have the largest pieces about 1/2 or 3/4 of an inch square as near as may be, or so that it may be moved freely in the whey, then begin to raise the heat moderately, keeping the mass stirred so as to heat uniformly, and raise the heat to 86 degrees, and when the heat is fairly equalized, spread on a strainer and draw the whey down to the curd; (unless the acid is too strong, in which case we carry the heat at once to 91, or if the acid is very sharp we stop the heat at 90 or 92 degrees, then draw the whey, and dip out and salt as soon as the acid is right.) then, before removing the strainer we press the curd down firmly, after which we remove the strainer, and by pressing on the curd with the hands it becomes separated, and as soon as it will move freely in the whey we apply the heat, and let it run up to 94 or 96, being careful not to have it go above 96 at any time, it then stands until the acid is sufficiently developed, which varies according to the state of the milk and the amount of acid used. when it is dipped out of the vat into the drawer, and salted at the rate of three pounds of salt to the thousand pounds of milk used. We have no definite rules as regards time, being altogether controlled in that respect by the development and action of the acid.

Pressure is applied immediately after the curd is put in press, gently at first, increasing afterwards, and we are no ways particular about the curd being fine when it goes to press, but aim to have the salt thoroughly incorporated and evenly mixed. I prefer to have the milk perfectly sweet when the rennet is applied, and endeavor to have it so if possible.—We add some whey when the milk is very sweet, and frequently add sour whey after the last heat is applied, to hasten the development of the acid. We have never tried mixing alkali with the milk when sour.

The curd is put in the hoop warm as appears above. We use the screw press and press one day, but are confident two days pressure would be better. From one to two hours after the cheese is put in the press it is taken out and dropped from the hoop on a round stool, half an inch smaller than the hoop, the bandage is then slipped on by means of a tin socker, turned over, replaced in the press and powerful pressure applied. We have used during the past season tin hoops, 15 inches diameter and 16 inches deep, but do not like them, as they are not strong enough to bear the requisite pressure.

With present appliances for heating, ventilation, &c, I am not able to keep the curing house at any thing like an equal temperature, except the basement room,—aim to keep the temperature of the basement from 50 to 60 deg, as nearly as possible. I prefer to have cheese in higher temperature during the first

two weeks than ever afterward. The curing house is ventilated by ventilators in the roof, trap-doors in the floor, and windows at the sides.

Stirring the milk at night, and cooling as rapidly as possible, prevents the cream from rising in a measure; what rises is mixed with the milk by dipping through a strainer and stirring.

We prefer to mix the night and morning milk together, and after mixing the rennet, we prevent the cream from rising by agitation until coagulation begins, which is from 15 to 25 minutes from the time the rennet is put in, and I am not able to discover that double the usual amount of rennet has any other effect than to hasten the process, provided the rennet is good, and putrefactive fermentation has not commenced in it. The question what makes porous cheese, and how to prevent it, is of much importance to cheese makers, and about which there is so much difference of opinion, that I shall feel fully excused if I devote some considerable space to its discussion.

Milk being a compound substance, is susceptible of being operated upon by different chemical agents, and the results of these different actions are widely different, for instance the action of an alkali is twofold, first to unite with and neutralize any existing acid, and second to saponify a portion of the butter. The action of acids is to change the electrical state of the atoms of casein, from positive to negative, or from repellent to attractive, thus producing coagulation, and also by contact to change the sugar of milk to lactic acid, and this in turn acts upon the coagulum to further consolidate it, and this we call making cheese. The casein, being almost pure albumen, and very analogous to the white of eggs, is at certain temperatures, very susceptible to putrefactive influences, especially while in a state of solution, in the milk and before any lactic acid is formed, to cause coagulation. A natural consequence of putrefactive fermentation is the production of impure carburated hydrogen gas, one of the most fetid, and offensive smelling substances known; as well as being a very light gas, much lighter than atmospheric air, and consequently, if putrefactive fermentation should be going on in the casein at any time from the commencement of coagulation until the time when the cheese is completely cured, this gas, being entangled at its formation with the casein, and being so much lighter than air, of course exerts a powerful expansive force, forces the particles of curd from each other, and here we have a porous cheese.

Now if this view is correct it follows as a matter of course that putrefactive fermentation is the cause of porous cheese, and I think the experience of almost every cheese maker, when they examine the subject in this light will sustain this opinion, and consequently the preventive is found when we find how to prevent putrefactive fermentation, or know how to arrest it when already begun.

Putrefactive fermentation is easily induced by contact with putrid substances, and it is very readily perceived how small quantities of putrid matter may be left in milk pails, cans, strainers, curd knives, and in short all implements used about milk; how the action of heat may induce putrefactive fermentation in the milk, especially if excluded from the air when fresh from the cow, and perhaps already vaccinated by putrid matter adhering to the milk pail, from the filthy hands of the milker or diseased teats of the cow. When looking at all the chances for putrefaction, the wonder is, that milk does not all become putrid, or tainted as we usually term it, before we can get it manufactured into cheese—under favorable circumstances.

Salt, and a low temperature, will, in a great measure, prevent putrefaction; hence everything used about milk should be cleansed thoroughly with salt, through all the warm part of the season especially; and the milk should be kept as cool as possible, while it stands quiet, at all events.

Ozone, a peculiar substance, developed in the atmosphere by the action of electricity, exerts putrefactive influence in a powerful manner; and hence, during the prevalence of thunder-storms, or the electrical state of the atmosphere, peculiar to thunder-showery weather, milk is more liable to become putrid than at other times, and consequently greater precautions are necessary at such times, than at others.

The question now naturally arises whether, after putrefactive fermentation has already begun in the milk or casein, it can be arrested? and if so, how?

From my past experience, and close observation, I am of the opinion that after putrefactive fermentation has begun, and even after it has proceeded some time, it may be arrested; and the surest means I have discovered, is by increasing the amount, and hastening the development, of lactic acid. To effect this with safety is a nice operation; but by a judicious application of sour whey, I believe it can be accomplished, and a proper use of salt in the product will give a fine quality of firm, mild, sweet, cheese, when in the ordinary method of treatment, we should

have nothing but a very porous, rank smelling, strong cheese.

But when the lactic acid fermentation has not been sufficiently developed while the cheese was in process of manufacture, and putrefactive fermentation sets in after the cheese has lain on the shelf some days, or perhaps weeks, I know of no remedy; and I consider the only rule of safety is to be sure and have the acid developed to a sufficient extent while the curd is in the whey, and if this point is properly attended to, I apprehend but little danger from porous cheese.

A. BARTLETT,
Fowler's Mills, Granger Co., Ohio.

January 7, 1865.

Milking Properties Hereditary.

THE author of a valuable prize essay on Dairy Husbandry in the Bath and West of England Society's Journal, gives the following valuable statistics to show how the offspring of good milkers may fairly be depended upon to perpetuate this feature of excellence, and consequently as an argument why dairy farmers whenever practicable should breed the cows necessary to keep up their herds.

The Rose Family, Frocester Court Herd.

Old Rose gave 574 gallons in 1862; sold in 1863 on account of age.

Young Rose gave 734 gallons in 1862, and 830 gallons in 1863.

Dewberry gave 736 gallons in 1862, and 601 gallons in 1863; coming in two months earlier than last year.

Juniper gave 543 gallons in 1862, and 615 gallons in 1863; not dry, first calf in 1862.

Young Dewberry gave 509 gallons in 1862, and 545 gallons in 1863; first calf in 1862.

January gave 690 gallons in 1862; sold in 1863, supposed not in calf.

For 1862, 3776.—1863, 2591. Total 6367 gallons, which is equal to an average of 637.7 gallons per cow per annum.

The Amy Family.

Amy gave 707 gallons in 1862, and 782 gallons in 1863.

Apple gave 721 gallons in 1862, and 722 gallons in 1863; first calf in 1863.

Young Amy gave 385 gallons in 1862; first calf in 1863, at 2 years old.

Average of the two cows, 733 gallons per annum.

The Lemon Family.

Lemon gave 778 gallons in 1862, and 830 gallons in 1863.

Famous gave 662 gallons in 1862, and 760 gallons in 1863.

Finch gave 462 gallons in 1863, first calf. Average of the two old cows, 735 gallons per annum.

Cases showing the contrary cannot well be adduced, as the inferior milkers are sold off, leaving very few of any such families in the pack.

It is thus evidently the interest of the dairy-farmer to wean calves from the best milkers, and to weed out the bad ones.

It is very important, also to use bulls the produce of good milkers. The following is a list of the cows in the Frocester Court herd, got by "Herald," the son of "Honeysuckle," a pure-bred Short-Horn, which belonged to the late Colonel Kingscote, and was mentioned by Mr. Willoughby Wood in a letter to the *Agricultural Gazette* of June 16, 1855, as a remarkable milker:

	Gals 1862	Gals 1863
Handsome gave.....	552	615
Prettymaid do.....	752	710
Orange do.....	758	504
Gooseberry do.....	648	700
Lemon do.....	778	830
Blossom do.....	692	642
Peachy do.....	631	618
Brandy do.....	667	690
Fuff do.....	681	605
Beauty do.....	670	658
Lovely do.....	658	617
Scarlet do.....	655	690
Amy do.....	707	782
Victoria do.....	581	590
Tulip do.....	687	650
Dorcas 2nd do.....	609	628
Dewberry do.....	726	601
Lusty do.....	683	684
Dorcas 3rd do.....	6	540
Kate do.....	670	687
March do.....	646	648
	13,251	13,750

27,000

Or nearly 642 gallons per cow per annum.

The rearing of his own stock enables the farmer to improve his herd as milkers, and by care he may do this and at the same time increase their value when he turns them off to be grazed, as nothing is more marked at sales by auction than the decidedly increased value put upon animals that show a little breeding.

Sheep Husbandry.

SHEEP EATING TOBACCO.—We have heard it said that no creature upon earth, except man and one nasty-looking worm, would eat tobacco. We are very sorry to learn, from the following statement by Dr. Randall, in the *Rural New Yorker*, that the Improved American Merinoes are accused of so filthy a practice:

In the winter of 1864 we stated the seemingly wonderful and anomalous fact that several flocks of Merino sheep had been found to be fond of eating the small or damaged dry leaves left on tobacco stalks, and of peeling off and eating the dry bark or external skin, from those stalks. We do actually and seriously find that the cases we gave are the rule and not the exception—that it is a serious fact that all Merino flocks (so far as we have heard of its being tried), will thus eat tobacco thrown out to them in winter. They commence nibbling it at once, and soon consume it habitually and quite freely. We have received this statement from numerous reliable tobacco growers. Perhaps other breeds of sheep would feed upon it as freely, but our informants have all been Merino flockmasters. Not the least injury appears to accrue to sheep from actually eating this powerful vegetable narcotic, which contains a principle (*Nicotia* or *Nicotin*) so deadly, that a drop of it in the state of concentrated solution will kill a dog. Few human tobacco chewers can swallow much of it with impunity. We knew a case last winter where it was regularly fed to breeding ewes, (by Chester Baker, Lafayette, N. Y.,) and it produced no injury to the lambs. They came strong and were healthy. This corresponds with the experience of all the feeders of it whom we have conversed with. Most of these gentlemen regard it as nutritious food to sheep, so far as they eat it—and some fancy that their sheep are healthier for having it! We confess that, to us, this is one of the most paradoxical facts in natural history. Well, we hope our Merinoes won't take to smoking next, for if they do they will set all the barns afire. They are already accused, by their enemies, of setting a good many men's brains afire!

A SHEEP STORY—Clinton Willis of Charlmont, Mass., recently sold three yearling sheep the lambs of one ewe, at one birth, for \$35. The lambs weighed 370 pounds. The product of the ewe the past year, is as follows: Wool sheared from herself and lambs, 21 pounds, \$21—price of lambs sold, \$35—total, \$56.

Veterinary Department.

On the use of the Cautery.

CAUTERY is of two kinds *actual* and *potential*. By the first is meant the red-hot iron, by the second, any caustic application.

The use of the cautery, to the credit of our art be it said, is on the decline. The farriers of former days, had ever in their hands their cautery or firing-irons; with them they opened abscesses and penetrated tumors, introduced setons, stanchd hemorrhage, cleansed sores, and scored the skin over enlargements and lamenesses of almost all descriptions, indeed, even nowadays, we occasionally meet with some luckless wight of a horse that has gone through this ordeal, bearing marks of having been scored over almost every joint in his body.

This barbarous and unnecessary practice is, however, much diminished, the improvements of modern times have shown us that we can, in very many of these cases, afford the same relief in a much simpler, and more humane manner. Not that I am one of those squeamish or chicken hearted mortals, who would hesitate, as its medical attendant, to put an animal to any pain, short of actual torture, which I was thoroughly convinced was necessary for its cure or relief, at the same time, if I thought I could effect by mild means that for which were commonly employed harsh and painful measures, I should feel it my duty to adopt the former in preference to the latter, even though the process required a somewhat longer interval of time.

In fact, I hold it up as one of the proudest boasts of

modern veterinary surgery, that the red-hot iron—that terrific though potent remedy—is in many cases superseded by comparatively painless but equally efficacious measures; and let us hope the day is not far distant when we shall require its aid even less than we do at present.—*Percival on the Disorders and Lamenesses of horses*

Diseases of the Horse's Foot.

(CONTINUED.)

FRUSH or *frush*, a very common disease of the foot, consists in a muco-purulent discharge from between the clefts of the frog, arising from congestion or inflammation on the surface of the sensitive parts. Frush, although a very common occurrence, but seldom interferes with the horse's usefulness, and very little notice is taken of it. However, it is occasionally the cause of lameness. A frush is not considered an unsoundness, unless it produces lameness.

The most common cause of frush is continued exposure to wet and dirt, or the acrid moisture arising from dirty stables. It is absorbed by the horny frog, and therefore becomes an irritant to the sensitive frog. Disease of the internal structures of the foot, as navicular disease, also gives rise to frush, and cutting away the frog too much, as is often done, has a great tendency to produce it. So also has shoeing with high-heeled shoes.

Frush, in some cases, may be said to be constitutional, as young horses in high condition are sometimes disposed to it.

In the treatment of frush, unless it is causing lameness, it will not be necessary to lay the horse up from his usual work. The parts affected must be cleaned out, and all diseased horn removed. In bad cases, a poultice of luscad meal or bran should be applied for two or three days, and dressed daily with the sulphate or oxide of zinc. In slight cases, after cleaning out the parts, a mixture of Barbadoes tar and salt will often effect a cure.

CANKER is an exceedingly loathsome disease of the foot, and may be defined to be a diseased condition of that portion of the sensitive foot which secretes the horny sole, sometimes spreading to a great extent, and causing entire separation of the insensible sole. A fungus growth springs up somewhat of a cauliflower appearance, and from it exudes a thin and offensive discharge. Canker occurs oftenest in the coarse and heavy breed of horses, and particularly those that have much hair on their legs. The hind feet are oftener affected than the fore. A common cause of canker is the continued application of heat and moisture, as is the case with horses standing in foul, damp stables. The most frequent origin of this disease is a neglected frush, which, penetrating beyond the sensitive frog, sets up inflammation in the vascular sole, causing an unhealthy and abnormal secretion.

Canker is a very intractable disease, and both time and attention are required to perform a cure. Take off the shoe, have the sole thinned out, and remove all pieces of dead, as well as any living, horn, which may be in immediate contact with the cankerous parts, so as to lay open completely the diseased surface. All communication between the sound and unsound parts must be cut off before any dressing is attempted. After the cankerous parts are exposed to view, dress well with the chloride of antimony, which must be introduced into every crevice. After thus dressing, apply pledgets of tow and tar, have the shoe put on, and stuff full with tow, putting pieces of wood between the shoe and foot, so as to cause as much pressure as the animal can withstand. Any of the preparations of mercury, arsenic, zinc, or copper, may be used in place of, or alternately with, the chloride of antimony. The dressings should be repeated every two or three days, and except in very bad cases, it is not necessary the animal should be kept off work, as from the motion and pressure given to the foot by exercise, a cure often proceeds more rapidly.

The Apiary.

Bees and their Queens.

EXPERIMENTS were tried by Huber to ascertain how a hive of bees would behave to a strange queen, after they had lost their own. He removed the native queen, and after a few hours he introduced a strange queen into the hive. The bees which mount guard at the entrance of the hive, immediately seized her and made her a prisoner, precisely as they would have done if their queen had still been among them. They did this each time the experiment was repeated. An interval of sixteen hours was suffered to elapse from the time they discovered the loss of their queen, and then a stranger queen was introduced to the hive. She was treated precisely as the others had been, as were also her successors in similar experiments; but in some instances, where they survived the pressure, want of air, and hunger for several hours, they were allowed to assume the position of queen of the hive. Twenty-four hours were then suffered to elapse after their queen had been taken away, before a foreign queen was put into the hive, and instead of being made a prisoner she was welcomed with every sign of joy, and at once accepted as their queen; evidently they had arrived at the conclusion, that, from the length of time that had elapsed there was no chance of their own queen coming back. It must have been from the reasoning of this way, because it was always the case, that if twenty-four hours had passed since she disappeared, the new queen was received with respect and obedience. A very striking instance of this is related. The lawful queen was removed at a time when she was busily engaged in laying eggs. After a time the news spread through the hive and the usual consternation prevailed. They were left in this condition a great many hours, their agitation being the greater that no new queen was ready for release from her cell; in fact, none of the royal cells had been built. They therefore proceeded to enlarge some of the cells containing the eggs of workers. A stranger queen was then introduced, and directly she entered the hive, those who guarded the entrance, instead of making her a prisoner, received her with the greatest respect and satisfaction; they approached her, and touched her with their antennae, and gave her food. The news began to circulate through the hive that a new monarch had arrived, and the bees kept pouring in, all of which drew near in succession, and performed the same ceremony.—*All the Year Round.*

"Why did the Bees die in my Hive with plenty of honey?"

To the Editor of THE CANADA FARMER:

SIR,—The above is a question often asked me, and especially this winter, which has been one of remarkable severity, especially for bees wintered out of doors. I will therefore answer the question, with your consent, through THE CANADA FARMER, which should find a welcome in every household.

There are several reasons why bees die in a hive with plenty of honey. but the principal reason is this: their stores of honey, which are in the outside combs and outside edges of the combs, and especially at the top of the corabs, become frosted by the freezing of the vapor which arises from the bees. The bees are thus prevented from reaching their stores, and perish for the want of food; for they would as soon enter the fire as frosty combs.

Now this frosting of the combs takes place when the weather becomes very cold, and if it continues cold a length of time, the bees become starved for the want of honey and are easily frozen to death. Animal heat sufficient to keep them from freezing, can only be kept up by their having sufficient to eat. It will then appear clear why there are more such cases in this section of the country this winter than formerly. The cold weather has not only been very severe, but continuous, hence many colonies have perished. If occasionally there had been warm sunny days, the combs would have been cleared of frost by the combined heat of the bees inside and of the sun outside, and the bees would then have been able to reach their supplies often enough to have kept them

from starving. It may here be asked, if one colony perish from that cause, why not another that stands by the side of it? There may be several reasons. The colony that did not die may have been much stronger, and thus enabled to keep up sufficient heat to prevent the frosting of their combs to the same extent as the one that perished; and when the weather moderated a little, the great degree of heat inside caused the combs to be cleared of frost. Again the colony that survived may have been far better ventilated, hence much of the vapour would be carried off, that otherwise would have frozen in the combs. Even a crack at the top of a hive has saved the colony; and hence it is often remarked among bee-keepers, the cracked hive winters best.

This then suggests a remedy. Give ventilation sufficient to carry off the vapour. This is difficult to do in common hives unless wintered in a dark room; but in movable comb hives, properly constructed, the honey board may be removed, and after covering the bees with wire-cloth or net cloth, the cover of the hive may be filled with clean straw, or corn-cobs, which will absorb the moisture and keep the bees warm. There are cases, however, in which bees die in movable comb hives, when wintered out of doors, with plenty of honey, even though they may have been properly ventilated. The cause I conceive to be this: the want of centre passages. It must be recollected that in movable comb hives, the bees are not so apt to make centre passages as in common hives. In movable comb hives, the combs are not attached to the sides of the hive; hence the bees can more readily pass from one comb to another than in common hives, and for this reason, when fall comes, they neglect to make centre passages. In such cases, when the cold weather comes on, they are still necessitated to pass around the outer edges of the combs next to the walls of the hive in order to reach their stores, and if the weather is very cold they cannot make this journey without perishing. They therefore seem inclined to remain in the cluster, and die from starvation. Movable comb hives should be examined in the fall and winter, and passages made when the bees have neglected to do so. This may be done in a few moments with a pocket knife by cutting out a small piece of comb near the centre of the card, making a small hole for the bees to pass through.

In THE CANADA FARMER, Vol. II. No. 6, your correspondent H. P. H. thinks "a short history of the best mode of bee-keeping, and the cost of the boxes, would be very interesting and useful. I would say in reply, that a small work designed for the practical bee-keeper in Canada, will soon be published, price 25 cents. Also an article on the profits of bee-keeping may appear shortly. J. H. THOMAS.

Brooklin, March 20th, 1865.

Entomology.

Parasites.

There seems to be a penalty attached to the continual violation of the laws of life, which is not confined to man, but extends to the animal creation. Where food has been deficient, and cleanliness unobserved, besides the injury sustained in health, numerous parasites fasten themselves upon the victim, preying upon the already deficient vital energies, and not unfrequently hastening dissolution. There is scarcely any form of life but that has its parasites, needing only certain conditions to bring them into action. The very insects themselves are not free from the annoyance of still more minute creatures. Vermin on domestic animals sometimes become a source of vexation and trouble, spreading from animal to animal, before the farmer has become aware of their presence. The stock grow thin and weak without any apparent cause; at least a bountiful supply of fodder effects no change in their condition. It is then discovered that vermin or parasites have been sapping the vital fluids, and have spread among the healthiest animals of the herd.

It is a well known fact, that animals that have a generous allowance of food, and are kept clean, seldom breed lice. If they have become affected with these pests, it is from contact with some unhealthy or lean animal of the herd, from which the difficulty originated. Young animals, especially spring calves, in passing their first winter, are more liable to be affected with lice than older animals. This may be from the want of a robust, healthy condition of the animal when it goes into the stable, at the commencement of winter. The change from grass to hay, and the cold, operate still further to reduce condition and energy—the hair and skin become filled with effete matter,

producing a state of uncleanness, which seems to be a favourable condition for developing these creatures. To the want of care, generally, and for the most part, then, must be attributed this trouble among stock. There have been a great many remedies set forth for expelling lice from cattle, such as rubbing the affected parts with lard, and washing out the next day with soap, or dusting the hair with snuff, or the use of a decoction of tobacco, saturating the hair. These may be effectual for aught we know, but the first remedy is attended with considerable trouble, and the last is somewhat dangerous.

Generally, lice may be expelled from calves by anointing a woollen cord with the anguimum of the shops, and tying it about the neck. Another disease, probably a parasite, sometimes breaks out among young cattle known as mange. It is contagious, and is of the same character as the itch in the human species. It causes great irritation, and if not attended to, is apt to spread and give considerable trouble. It is easily checked and cured by the application of powdered sulphur, mixed with lard, to the diseased parts.

Clean, well-ventilated stables, with a good supply of nourishing food, and a fair degree of attention, will be generally found a preventive for these and many other troubles with which stock are sometimes afflicted.—E.

Early Insects.

To the Editor of THE CANADA FARMER :

Sm,—While walking through some woods on Wednesday, March 1st, a mild though dull and cloudy day, I observed, crawling on the snow, which was there about three feet deep, a large number of hymenopterous insects, apparently ichneumons. Not expecting such early manifestations of life in the insect world, I had neglected to take with me any boxes or bottles, and so was obliged to content myself with one or two specimens wrapped up in paper. These, unfortunately, became too much crushed in my pocket to enable me to identify the species, on my return home. On the 6th of March, I found, amongst some willows on the margin of a frozen stream, a specimen of *Ellychnia corusca*, (a black species of fire-fly), crawling rapidly over the surface of the snow, which there also was very deep.

On the 8th, a farmer in the neighbourhood (Mr. P. R. Wright), kindly sent me a bottle containing a number of insects, that he had caught alive, and crawling on the snow, in one of his fields that morning,—there appeared to be thousands of them, he said. It was a lovely, bright, frosty morning, but the night before, the thermometer had been below 20°, and thick ice had been formed. Amongst these insects, I found three species of *Hemiptera* (bugs); several small beetles, chiefly flea-beetles (*Haltica*); some tiny rove-beetles (*Staphylinidae*); and some Lepidopterous caterpillars. They were, unfortunately, brought to me in a bottle that had contained spirits of turpentine, a few drops of which remaining, soon killed them all, and causing the caterpillars to shrivel up, prevented their identification. I should judge them all, however, except the rove-beetles, to be injurious to vegetation—the flea-beetles particularly so. Harris, in his Treatise on Insects injurious to Vegetation, p. 126 (new edition), says that "these beetles eat the leaves of vegetables, preferring especially plants of the cabbage, turnip, mustard, cress, radish, and horse-radish kind, or those which in botanical language, are called cruciferous plants, to which they are often exceedingly injurious. . . . The flea-beetles conceal themselves, during the winter, in dry places, under stones, in tufts of withered grass and moss, and in chinks of walls. They lay their eggs in the spring, upon the leaves of the plants on which they feed. The larvæ, or young, of the smaller kinds burrow into the leaves, and eat the soft pulpy substance under the skin; hence the plants suffer as much from the depredations of the larvæ, as from those of the beetles, a fact that has too often been overlooked. They arrive at maturity, turn to pupæ, and then to beetles, in a few weeks. Hence there is a constant succession of these insects in their various states, throughout the summer." It is a consolation to know that these tiny pests made a great mistake in appearing so early, and probably perished immediately; for the next morning we had what is

called a "silver thaw," and everything was covered with about a quarter of an inch of ice. Since then it has been very cold, and over six inches of snow have fallen.

I may also mention, as being interesting to entomologists, that I observed in a house in Toronto, on the 13th of February, a live specimen of the Compton Tobacco butterfly (*Panessa J. Album*), a species that commonly hibernates; and another here, on the 10th of March, that flew about quite briskly, in a warm room. On Saturday night, a small, though perfect specimen of that rare and lovely moth, the Green Emperor (*Saturnia luna*), emerged from its cocoon; it had been bred in captivity, and kept in-doors during the winter. A fine specimen of the Belle moth (*Spilosoma virginica*), also made its appearance. C. J. S. B.

Crurg, March 13 1865.

Bural Architecture.

Re-shingling Roofs: Ventilation.

To the Editor of THE CANADA FARMER :

Sir,—With your permission I have something to say through your widely circulated journal, about roofing old houses, and ventilating bed-rooms and cellars.

In the summer of 1863 I had occasion to renew the shingles on the roof of my dwelling. Instead of taking off the old ones, I covered them with mortar, and then, with nails about half an inch longer than the common ones, I put on the new, a plan which makes a roof safer from fire, warmer and better every way than if I had taken off the old, as is generally done, or put the new upon the old without mortar between them. The idea of putting mortar between the old and the new shingles is not original with me, as I had the hint from a fellow townsman, but I was the first, so far as I know, to do it; and I would recommend it to all who require to renovate the roofs of their dwellings, as there is no other way that they can gain so much advantage at so little cost.

Now as to the ventilation of bed-rooms. One small room full of air, used by two or three pairs of lungs, for some eight or ten hours, is not so fit for breathing as it was, and any one going into it from the fresh air will at once notice the change, although the effect will not be so obvious to those who have occupied the room during the night. To keep up a supply of fresh air in my bed rooms, I have a hole in the stove pipes, passing through them, some two and a half inches wide by three and a half long, with a slide valve, on the same principle that the sliding cover is fixed to the opening of a powder canister. I have the hole about six feet from the ground on the side of the pipe next the bed, so that it can be seen when lying upon the bed. I do not find it necessary to close the opening at any time, although it is, I presume, best to have it fixed as above described, so as to be able to do it if required. Through this opening there is a constant current of air from the room into the pipe, as is seen by holding a candle to it, or a piece of rag or paper. The current of air is never reversed, and no sparks ever come out of the pipe, consequently there is no danger from fire, as some might suppose, from having a hole of this size in the pipe, and the effect is that a constant supply of fresh air is kept in the room, and I know of no way in which thorough ventilation can be so easily obtained.

I shall now describe the way in which I ventilate my cellar. It is under the kitchen, which is a one-story addition to the house. A lath and plastered partition crosses the floor above the cellar, which is of course hollow between the studs. I have two holes, two by twelve inches, cut in the floor between the studs, which lead into the hollow part of the partition, through which the air passes from the cellar and escapes by the roof through a small wooden pipe fixed for the purpose, and covered so as to keep out the rain without obstructing the passage of the air. In this way we avoid the unpleasant smell that often arises from cellars that communicate with the dwelling. W. A. STEPHENS.

Custom House, Owen Sound, March, 1865.



ADDRESS WANTED.—"E. H.," of Uter, is informed that his proposal will be acceded to, on his sending his address in full, along with the money.

HUNGARIAN GRASS AND CHINESE MILLET.—A correspondent wishes to know whether these grasses are good for milch cows. The millet is, but we are unable to speak positively as to the Hungarian grass.

UNCOPIED MANUSCRIPT.—"R. W. S.," sends a communication, respecting which he says:—"I intended to copy the manuscript, but am pressed for time."
ANS.—So are we.

BONE DUST.—"H. Sparks," of Millgrove, writes:—"Will you be kind enough to inform me through your valuable paper the best way to apply bone dust on barley ground. Is it best to sow and plough it in, or sow it and harrow it with the grain?"
ANS.—The latter method is the better one.

USE OF LEACHED ASHES.—"A Farmer, who has a large quantity of leached ashes, will be obliged if you or some of your correspondents, would inform him the best method of applying them,—whether to grass on arable land,—and whether as a top-dressing, or mixed with manure."

FOWLS WANTED.—"J. Martin" of Port Hope says, "I beg leave to make an inquiry of you or some of your numerous subscribers, or correspondents, as to where I can obtain a black Spanish Cock of pure breed, and at what price; also where I could get a pair of black Game Fowls, and at what price."

THE BEST HAND DRILL.—"R. J. J.," of Guelph, enquires:—"Which is the best hand-drill, where can it be had, and at what price?"

ANS.—The Weathersfield Seed Sower, which was figured in our columns about a year since, is the best hand-drill of which we know. It is for sale by J. Fleming & Co., of this city, price six dollars.

TO KILL LICE ON SHEEP.—"W. B.," of Cornabuss, Co. Grey, writes:—"I may just ask you what you would recommend to kill lice on sheep?"

ANS.—Make an infusion of tobacco in the proportion of one ounce of tobacco to six quarts of water, and apply about one quart of the infusion at one dressing.

BEE SUGAR.—In reply to a correspondent, we may state, that it is doubtful if sugar can be made profitably from the beet, on a small scale, while many, well qualified to judge, think its saccharine properties are diminished, when grown so far north as Canada. It does well in France, and we believe an experiment on a large scale, has been made in Illinois but we are not aware of the result.

ONION CULTURE.—"A Subscriber" asks.—Will you be good enough to give some information through the columns of your valuable paper as to the best way to raise onions; the best kind of seed; the time to sow; and the kind of land most suitable for their culture? A part of my land is creek flats, black loam with clay bottom;—would they do well in such a soil?"

ANS.—We will endeavour to comply with the above request in our next issue.

OWNER OF PRIZE LEICESTERS.—"Cheviot Hills" writes:—"In your issue of the 15th inst., I notice a correspondent who signs himself an 'Auld Herd,' enquiring the name and residence of the owner of the Leicester ram lamb and pair of ewes, which were awarded the first prizes at the Durham Show (County of Grey), last fall. The owner of the animals referred to is Mr. George Laidlaw, who resides about a mile to the east of the village of Hanover, township of Bentinck, County of Grey.

FILBERT TREES.—"S.," enquires:—"Are there any of our nurserymen who have filbert trees for sale? Some time ago I saw in THE FARMER, enquiries and communications about filbert trees, several people said that there was no difficulty in growing them in Canada, as they had them, and they thrive well. If any of our nurserymen have them, and would advertise them in THE FARMER, I think they would find a ready sale."

RYE AND GRASS SEEDS.—"An Enquirer" writes from Barrie:—"Will you inform me what time is best to sow rye, and how many bushels per acre; also the price of red-top, blue grass, and orchard grass, how much per acre ought to be sown, and when?"

ANS.—Spring rye should be sown sometime in April; quantity, two bushels per acre. If sown singly, about a bushel of each of the grasses named may be sown to the acre; time, early spring. Their price is as follows: red-top, \$1 25 per bushel of eight pounds; blue grass, 30 cts. per lb.; orchard grass, \$2 50 per bushel of 12 lbs. To be had of James Fleming & Co., Toronto.

CONDITION POWDERS.—"A Subscriber" wants to know "what are the best condition powders for a horse?"

ANS.—We do not recommend medicine for a horse when in perfect health. If recovering from any debilitating disease, such as distemper, &c., the desulphate of quinine in one drachm doses daily, combined with equal proportions of powdered gentian, and ginger, is found to be of great service in restoring the digestive power of an animal. There are many condition powders sold throughout the country, but not knowing the various constituents entering into them, we cannot recommend any in particular.

TWO QUERIES.—"Holly Tree" asks:—"Can you inform me by a line or two in the next number of THE CANADA FARMER:—

1. Whether you received a paper from me, posted in this town, on the 7th inst., on 'the aesthetic value of trees?'

2. What kind of grass seed you recommend for lawns or other ornamental turfing, to produce a soft velvet green sward?"

ANS 1 Yes We have been deluged with correspondence of late, and must ask the exercise of patience, in reference to all articles that will keep

2 A mixture of grasses is usually recommended for lawns. *Stolonifera agrostis*, white clover, and a little English rye grass do well together. J. Fleming & Co., of this city, supply lawn grass with the above ingredients ready mixed, at 30 cts per lb.

ITALIAN BEES.—"H. Holden," of Merrickville, writes:—"In answer to H. C., of Belmore, would say, in order to be sure of obtaining pure Italian Bees I obtained queens in 1861 of several parties who imported direct from Italy, and my experience with them is that they are more prolific, gather from one third to one half more honey, are hardier, and are better adapted to the climate of Canada than the common bees. I live thirty miles north of Prescott, in about 45 degrees north latitude, and the fact of their doing so well with me is perfectly satisfactory to my mind of their being adapted to any part of Canada, and in fact to any northern climate in which the black bees thrive. So well convinced am I of their superiority, in every respect, that I have banished the black gentlemen altogether. For a fuller description of Italian Bees, see an article written by me in THE CANADA FARMER of July 15th, 1864."

WILD PEPPERMINT, AS A RAT EXTERMINATOR.—"Alex. Robertson," of Bobcaygeon, writes:—"I have for the last four years proved to my satisfaction that the 'Wild Peppermint' is a sure and reliable exterminator of rats. In proof of the fact, I will state the result it has had with me. Four years ago my barn was re- ly infested with rats; they were so numerous that I had great fears of my whole grain being destroyed by them, after it was housed; but having about two acres of Wild Peppermint, that grew in a

field of wheat, after the wheat was harvested, the mint was cut and bound with it, and drove the rats from my premises. I have not been troubled with one since, nor am I at present, while my neighbours have any quantity of them. I feel confident that any person who is troubled with these pests, could easily get rid of them by gathering a good supply of the mint and placing it around the walls or base of their barns.

HOW TO CULTIVATE A BEAVER MEADOW.—"G. Bacon," of Cardon, writes for "some information on cultivating beaver meadows." He says:—"I have one of about 20 acres, that I wish to cultivate. It has a fall of about twelve feet, the worst kind of grass grows on it, the roots go down about seven inches, and it has a white clay subsoil. I have drained it, cut eighteen drains and cross drains. In 1863, after mowing it, I sowed red-top grass on it; it came up, and grew about two inches high, but in the spring of 1864, I could not find a blade, the frost had cut it off. The same spring, I tried some timothy and clover, which came up, but the most of it died through the summer. Believing this is the best land I have, I shall be grateful if any one who has had experience in the matter, will inform me what is the best and cheapest way to cultivate such a meadow, with the kind of grass most suitable for it."

COE'S SUPER-PHOSPHATE WITH GREEN CROPS, AND WITH GRASS.—"Jean Baptiste" writes from Lower Canada, as follows:—"Will any of your correspondents who have written in favor of Coe's Super-phosphate of Lime, be good enough to inform your readers what quantity they have made use of with green crops, and what with grass,—and in the former case when the crop is sown in the ridge, whether they have scattered the Super-phosphate with the farm yard manure previously to covering it, or on the top of the ridge before or after sowing the seed."

ANS.—We shall be glad to have any of our correspondents give their method of using Super-phosphate with the crops specified. Meantime we may state that from 200 to 400 lbs. per acre are applied, and we should prefer ploughing in the farm-yard manure first, and then applying the phosphate on the top of the ridges before sowing.

FAILURE OF DWARF PEAR TREES.—"Biddulph" writes:—"Some years ago I procured and planted what I supposed to be some of the best varieties of the 'Dwarf Pear;' the trees grew well, and I hoped to have some fine pears—but I was sadly mistaken, for just as they began to bear fruit they were attacked with some blight, like the appearance of 'rust.' They leaf every spring, and blossom very well, and about the time the pears form, the leaves become spotted with something like 'rust' and the fruit gets no further. It has been suggested to me that it is the absence of iron in the 'soil' which is the cause of the blight. The land is a clay loam, and sufficiently dry for any purpose. I wish you could give me some information through THE CANADA FARMER what is the cause, and how to prevent it.

ANS. The trouble complained of, is evidently the pear blight, a mysterious affection for which, so far as we know, neither cause nor cure have been discovered.

VETERINARY CASE.—"A Subscriber," at Belleville, writes that he had a colt castrated last spring; that the incisions in the scrotum have never closed; and that there continues a foetid discharge from the wounds. He desires to know what should be done in the case.

ANSWER.—We presume that the spermatic cord has become schirrous; that is that an enlargement has formed on the end of it, giving rise to a fistula of the scrotum, and discharging a purulent matter. Such an occurrence is not an uncommon sequel of castration, especially when the operation has been performed by means of the caustic claws. The colt should be cast and secured as for the operation of castration, and the openings in the scrotum enlarged. If the end of the cord is thickened, the enlarged part may be cut off, taking care, however, to secure the blood-vessels. If the cord is not much diseased, injecting the interior of the scrotum daily with an astringent lotion, composed of one part of sulphate of zinc to eight parts of water, will be attended with benefit, if the application is continued for sometime.

SCENING.—"Inquirer" asks:—"Do you consider it advantageous to subsoil light sandy and gravelly banks? If so, what kind of subsoil plough do you recommend for the purpose, and for clay loams, and where can they be had?"

Ans.—Light sandy soils, especially if they rest on gravelly beds, are generally porous enough to let moisture percolate freely through them, and it is often a matter of complaint that they "leach," as it is termed. There are, however, certain advantages obtained by stirring the soil, even though it is light, but the chief benefit of subsoiling is in the case of land which has a tenacious subsoil, or "hard pan" which impedes circulation, and forbids access to the roots of plants. Implement manufacturers in the United States, make subsoil ploughs for both light and heavy land, but such as are got up in Canada, are mostly suitable for heavy land, and generally speaking, are modelled after ploughs made in Britain, and meant to be drawn by three or four big farm horses. Subsoil ploughs made by George Bryce, of Mohawk; Atkinson & Brother, of Lambton, near Toronto; and Peter Malaby, of Weston, have been commended by correspondents of THE CANADA FARMER.

PURE FINE WHEAT.—"A Farmer" writes:—"In your number of Feb. 15th, I saw a statement respecting that valuable wheat called Fife wheat—that it was falling in its average number of bushels per acre, from what it has yielded in former years—and was considered to be degenerating on account of continual sowing. I think this can be remedied. I know that Mr. David Fife, the introducer of this wheat into the country, said in a company in Peterborough, that if the societies would pay his expenses, he would bring from the same place where the first came from any quantity the societies would need. The cost would be a very small item to each member of the societies through the Province. Now if some of our agriculturists would inquire of him through your columns, some information on the subject, might be gained for the benefit of the country. No kind of wheat has been introduced into the country, that has given better satisfaction generally, or been more remunerative than the Fife wheat. Its nature is suitable for low lands as it is free from rust; it yields a fair average, produces a good sample, takes the market and makes good flour."

THE DELAWARE GRAPE.—"A farmer's wife" writes from Nassageweya as follows:—"Will you tell me where I can get some Delaware grape vines, as I heard you say in your address at Milton, they were well adapted to our Canadian climate. I am very desirous to try grape growing on a small scale, but I cannot get my husband to believe that they will succeed here. Some of our neighbours got some grape vines two or three years ago, I do not know of what kind, and he says when I hear of fruit on them he will be willing to give them a trial. Now I do not like to be put off in this manner, so I have resolved to try them myself, and I think with the aid of your valuable FARMER, I can accomplish it. I can only get the best kind to begin with, I think the plan given on page 77 for this year, will be the best for me to pursue. But we are so far from any nursery, and the agents who travel through the country are not to be depended on to send the exact kind you may order, as I have proved by past experience in other things. So I thought I could get you to let me know through the medium of your paper at the earliest opportunity, where I can get them, what they will cost, and whether they will come best by mail or express; by so doing, you would greatly oblige."

Ans.—We should be glad if many of our farmer's wives were equally intent on grape-growing and other improvements with our correspondent. The Delaware grape is, we believe, the best single grape for general use in this country, but the Concord, Hartford Prolific, and Diana, are also recommended, and if "A farmer's wife" can afford it, we would suggest a trial with one of each. J. Fleming & Co., will supply the Delaware at 37½ cents per vine, post-paid. See his advertisement in this number. We hope our correspondent may soon sit under her own vine, and that we may some day have the pleasure of paying her a visit, and eating a bunch of grapes of her raising. Many attempts at grape-growing have proved failures, because improper varieties have been planted. Thus we have known the Catawba tried in some of the most northerly parts of Canada, where it is idle to expect that so tender a grape will ripen. We firmly believe that Canada will prove a grape-growing country, if such varieties as we have suggested are planted and well cared-for.

OIL OF LEMON.—"J. H. Thomas, of Brooklin, writes:—"Sometime since, I noticed an article in the FARMER, in which it was stated that a certain lady found, when she put too much oil of lemon in her cake that, after baking, it tasted like Spirits of Turpentine. Such is a mistake. No matter how much oil of lemon is put in, if it possess the flavour of lemon when it goes into the cake, it will have the same flavour after it is baked. The baking cannot affect a large quantity more than it can a little. The facts in the case are, that the oil of lemon used, had the taste of turpentine when put into the cake; and this taste it had acquired by long keeping. It may not be generally known, yet it is true, that oil of lemon kept in a common corked bottle will lose its flavour, and taste more like turpentine than lemon; and the same is true of essence of lemon. Merchants in the country that keep essences for sale, are sometimes censured for selling turpentine for essence of lemon. I was myself once censured for the same thing, when acting as clerk in a country store, a lady purchaser telling me that the "stuff" had spoiled her cake. Although I knew that I was innocent, yet at that time, I could not explain the mystery. I knew it was lemon when we purchased it; but from the lecture I received, I was fully convinced it was turpentine when I sold it. Even now I would not attempt to explain how the change is brought about, but simply state that such is the case, and leave the explanation for the chemist. As I have a quantity which has become changed, I will send you some as a specimen of that which lemon will become by keeping."

NOTE BY ED. C. F.—The sample forwarded by our correspondent, has the flavour of turpentine very decidedly.

The Canada Farmer.

TORONTO, UPPER CANADA, APRIL 1, 1866.

The Pungency and Permanence of Super-Phosphate.

Our respected contemporary, the *Genesee Farmer*, in his issue for March, questions the correctness of certain answers given by us to the inquiries of a correspondent respecting Coe's Super-Phosphate of Lime. His criticisms refer more especially to two statements of ours: First, "Care should be taken to incorporate the Super-Phosphate with the soil, as it is of so concentrated a nature that it ought not to come into direct contact with plant roots." On this piece of advice, our critic remarks:—"We have used Super-Phosphate for many years, and never knew of its injuring the roots of plants. It differs in this respect from Peruvian guano." In reply we would say, that our counsel was based partly on the manufacturer's directions for the use of this fertilizer, and partly upon the fact that injury has in certain cases resulted from a too intimate contact with the seeds and roots to which it has been applied. Mr. Coe says in his advertising pamphlet:—"It must be remembered that this is a powerful and active manure, and in the different modes of application it must not be allowed to come directly in contact with seeds or plants; it should be incorporated with the soil or scattered around growing plants." There has been, to our knowledge, great complaint in various quarters, among Canadian farmers inexperienced in the use of this fertilizer, to the effect that it has injured seed and even grass. Sir W. Logan purchased a quantity for use on his farm in Lower Canada, and instructed his foreman to mix it intimately with the soil before putting in the seed. The man, wise in his own conceit, said it could do no harm, and applied it directly to corn, &c., the result being the destruction of the seed. Prof. Buckland, of University College, applied a quantity to grass land without taking the precaution to harrow it in, and killed nearly every tuft.

Our contemporary admits that this result often attends the incautious use of Peruvian guano. Prof. Croft, in his analysis of Coe's Super-Phosphate, finds 10 parts of salts of ammonia in it, and we believe the best guano only ranges from 12 to 15. The Professor pronounces it "a valuable substitute for guano." We are therefore inclined to think that our contemporary must have either used a very weak article of Super-Phosphate in those cases in which its direct contact with seeds and roots did no harm, or he must have administered it in homoeopathic doses.

The other point on which we are taken to task by the *Genesee Farmer* is in reference to the permanence of this fertilizer. We remarked, "Super-Phosphate is a permanent manure (in a comparative sense) if really good, and its effects will be observed for many years after its application." Our contemporary thus animadverts on this statement:—"Now the fact is that Super-Phosphate, 'if really good,' is not a permanent manure. The better the Super-Phosphate, the less permanent it is." And he proceeds to remark that the mode of preparing this fertilizer renders its elements soluble, and so of immediate virtue. Of the fact that Super-Phosphate acts quickly, there can be no doubt, but it does not follow from this that its efficacy is at once exhausted. Our critic says:—"You apply it to a crop, and get the whole effect (if a good article) the first year." Now this is hardly reasonable in itself, nor does it accord with the experience of those who have used this fertilizer for years. Hon. Marshall P. Wilder, of Massachusetts, says of it:—"As a quick, and also as a durable fertilizer, I have seen many proofs in past years." Hon. Amasa Walker, of the same State, in describing a successful experiment with Super-Phosphate five years previously, says; "the good effects of it were as visible last year as ever." The *Boston Journal* says:—"We learn from our numerous correspondence, that the phosphate is not only quicker in its effects than Peruvian guano, but much more durable, lasting from five to six years." Our contemporary lays it down as a principle of universal application to manures, that the better they are, the less permanent will be their results. We confess our inability to see this. A manure that will both act quickly and enduringly, must be better than one of which you "get the whole effect the first year."

While on this subject, we may state that the accounts we get from various quarters tend to confirm the good opinion we expressed some time since, respecting Coe's Super-Phosphate. We were especially struck with an instance given by the *Montreal Gazette*, of March 3, 1865. Mr. Cochrane, of the firm of Smith and Cochrane, Montreal, has a farm at Compton, in the Eastern Townships, to which he has made additions by purchase; and last season, on a piece of worn-out ground, which had been cropped for many years with buckwheat, without manure, he determined to try for a crop of turnips, using Super-Phosphate as the only fertilizer. The experiment excited much derision, but the result exceeded his most sanguine anticipations. He got a yield of four hundred bushels to the acre. He had like success with potatoes and Indian corn. The *Gazette* states that Mr. Cochrane has purchased 200 barrels for use this year,—very conclusive proof of his estimate of its value. Manure is the crying want of Canadian farms. The soil, like the horse-leech's two daughters, is continually crying "Give! Give!" but, unlike them, it will yield a liberal return for all that goes into its greedy mouth.

Farm Accounts.

Among the many objections with which the farmer meets any scientific suggestion that of, "it may sound all very well, but it won't pay in this country," is one of the most prominent and constantly recurring. And it might be very naturally inferred, from the emphasis with which this dictum is generally pronounced, that farmers, as a class, possessed the exactest data for determining the precise source and

extent of their profits; and that the minutest items of the debtor and creditor, of any given process, had been accurately noted and balanced. Yet this is very far from being the case. Although no small tradesman ever dreams of carrying on business without a regular system of accounts, farmers are usually content to let things jog along as best they may, satisfied to leave the cause of a full pocket or an empty one, as the case may be, to the "bad season," or some equally vague conjecture. Yet, if our agricultural friends would carefully consider the subject, they would discover no argument in favour of the practice of book-keeping by the tradesman, which was not equally applicable to, and binding on, themselves. Independent of pecuniary losses, which the neglect of the habit entails, there is no other art whose practice is so variable, none whose details give rise to more controversy and discussion, and none which can boast of so little exact data, from which to form conclusions and give value to experience. The farmer, by neglecting to record observations and statistics, possesses no accumulated results of his experience; and is therefore unable to compare present circumstances with past.

But apart from the obvious advantage of enabling a man to understand his pecuniary position, and to ascertain by what crop he may have gained or lost, the practice of regularly recording his various transactions, exerts a considerable moral effect. The very consciousness that he has to make entries in his books of everything that he does, keeps his attention alive to what he is to do; and the act of making those entries is the best possible training to induce the formation of active and painstaking habits.

It may possibly be urged, that such a system requires more time than the farmer can conveniently spare; and more skill than he can generally command. Now, the question of time may be dismissed by remarking that half an hour a day would, in a general way, more than suffice; while the system can be carried out by any person that can write, and who is possessed of ordinary understanding.

In the first place, we would recommend a memorandum book, of pocket size, which should be the farmer's constant companion. Every transaction connected with the farm, and all moneys received and paid, with the date and nature of each transaction, should be clearly stated. Nothing should be trusted to memory. The time when each kind, and quantity, of grain is sown, reaped, and secured,—ascertained weights of produce,—manure applied,—and indeed any incident, of interest to the farmer—should be carefully recorded. The little extra labour, that this course would demand, is nothing compared with the satisfaction which will certainly be experienced, and the substantial benefits which will follow.

In transferring these memoranda to the Farm Ledger, which might be done during the long winter, if no other time were available, there need be only five entries used.

1. *Grain Crops* would receive all payments and receipts on account of Wheat, Oats, Barley, Peas, &c. 2. *Green Crops*.—All payments and receipts connected with the growth and consumption of Turnip, Clover, &c. 3. *Horses*; and 4. *Rent and Taxes*; would each receive its own special class of expenses to be divided afterwards between the grain and the green crop accounts. And 5. *Dormant Capital* would receive the account of those expenses, the returns for which are expected to extend over several years.

By thus keeping the condition of his financial matters before him, the farmer will increase his stock of information in the details of his profession; and at the same time encourage a spirit of definite and particular observation, which will materially add to professional improvement. Remember the Dutch maxim. "No one is ever ruined who keeps good accounts,"—and that he who keeps a correct record of his pecuniary transactions will always be first to discover any impending evil, and will thus be forearmed to adopt measures to provide against it.

Growing Timothy Seed for a Crop.

The following information (long sought for but never found in a reliable shape in any agricultural publication,) was obtained from a highly respectable and trustworthy person, who has, for many years past, grown timothy seed as a crop, owing to the failure of the wheat crop, both spring and fall, in his district. A correspondent being anxious to keep the knowledge of the matter at hand, sends it to THE CANADA FARMER, where he can not only refer to it, but may have the satisfaction of imparting the knowledge to others, which he has so long sought for in vain. This is a most commendable plan, and we hope that others who have the means of obtaining similar information on other subjects, will do likewise.

To grow timothy seed for a crop, it should be sown with fall wheat, in the fall,—but if you do not grow fall wheat, it may be sown with spring wheat. The wheat being harvested in due course, the land is not pastured, as the cattle and sheep greatly injure the timothy. The next spring, it must be allowed to grow up, still without pasturing in any way, and stand till the timothy seed is ripe. It is then cut, and threshed, either with a flail or machine, and cleaned through timothy seed sieves. The plant is most productive of seed near the borders of small creeks, and in wet places. It should not stand too thick, as when very thick, the seed is not so fine.

In threshing with a machine, you are apt to hull the seed, and this spoils the beauty of the sample although it does not injure the seed, for hulled seed grows as well as that which is not hulled. This is now understood, and merchants do not so much object to the hulling. In former times, it used to be condemned on that account, and was, therefore, then threshed altogether with the flail.

The average produce of cleaned seed, is from 5 to 7½ bushels per acre, which at the present price in Canada, \$2.00 per bushel, pays as well as a middling crop of wheat. It is sold by weight, 48 lbs. to the bushel.

Timothy seed is not subject in the northern parts of Canada, to any worm or grub. The party from whom the above information is derived, has grown it for 20 years, and never lost a crop by insects. This last year, our informant raised 45 bushels of clean seed, from 5 acres of land. He does not consider that timothy cut from old meadow yields as well, besides being infested with other grasses. There is no difficulty with what clover seed is amongst it, the sieve taking all the clover out.

Now, as we import large quantities of seed from the States, there is no reason why Canadian farmers should not grow more than they do. There is no fear of glutting the market. The hay from threshed seed is far better than straw, although, of course, not so good as from green cut grass. We have little doubt, that the hay from threshed timothy seed might be profitably used by the paper makers. It must have a tougher and better fibre than straw; at all events it is worth a trial.

Those who intend to grow timothy seed, must keep every kind of cattle, horses, and sheep from pasturing on it, at any time of the year. Timothy seed grown in this way, will yield a fair return. If the wheat crop is good, it then becomes a very profitable course, as there is no expense of any consequence, the second or timothy year.

Couch Grass as a Medicine, and as Food.

It is stated in the *Veterinarian*, that an infusion of the *Triticum repens*, couch, or twitch grass, in the proportion of one ounce of the dried and cut stem, to a pint of water, and given in the course of the day, has been found by Mr. H. Thompson, of the University Hospital, to be very beneficial in irritable conditions of the bladder. According to him, it is important that the plant should be gathered in the spring, shortly before the leaves appear; the stem is then to be slowly dried, without artificial heat, and cut into the requisite lengths for use.

Professor Burnett, in his excellent treatise on British plants, observes:—"The couch grass of the farmers, which is here regarded as a noisome weed, is collected on the continent as food for horses. Cattle of all kinds are fond of the underground shoots of this plant, which are both sweet and wholesome."

Sir Humphrey Davy found them to contain nearly three times as much nutritious matter, as the stalks and leaves. And it has been stated, on the authority of a French veterinary surgeon, that exhausted and worn out horses, are often speedily restored to strength and condition, by giving them daily one or two bundles of couch grass, of ten or twelve pounds each, mixed with carrots.

This plant is often a very troublesome weed to the farmer, on arable land especially, and notwithstanding the above report of its medicinal and feeding properties, it is the unquestionable interest of the cultivator to eradicate it, if possible. In case, however, of its accumulating, as it will sometimes do, in spite of ourselves, a knowledge of its peculiar qualities, may be turned to a good account. The ramifying underground stems, are usually collected in summer fallowing, and burnt in the field, the ashes possessing high manuring power. The modern practice in England, is to put them in heaps, with a little earth and quick lime intermixed, to hasten their decomposition; in this way their whole fertilising power is retained. We have known a few instances of the leaves and roots of this plant being used in Canada, for medicinal and feeding purposes, with decided advantage.

LOUTH AGRICULTURAL SOCIETY.—James W. Keating, President; James W. O. Clark, Vice-President; M. Y. Keating, Secretary; David Crow, Treasurer.

GOLDSMITH & Co's CATALOGUE.—We have received a "Catalogue of Seeds for the Garden and Farm," for sale by Goldsmith & Co., of St. Catharines, C. W. A good assortment is advertised; all imported direct from the best European growers, and warranted "true to name, and of last year's growth."

PARIS NURSERIES.—We have received from Mr. Chas. Arnold, of the Paris Nurseries, his Annual Descriptive Catalogue of Fruits. The list appears to be very full and complete. In order to clear off a piece of ground required for another purpose, Mr. Arnold offers, for this spring only, fruit and ornamental trees at one-half the usual price, and for ornamenting the grounds around places of Worship, School-houses, or Public Buildings, at one-quarter the usual price.

PROPER RIPENING OF PEARS.—To illustrate the importance of the proper ripening of pears, a story was told at the late session of the American Pomological Society about a gentleman's buying a crop of the Winter Nellis of a neighbouring farmer who said he had fed it to his hogs for thirty years. The gentleman bought the farmer's crop of pears, took them home, stored them in his cellar, piling potatoes over them. When ripened, he sent his farmer friend a half dozen of them, who was so pleased with their rich flavour that he soon came over to see Mr. P. and get grafts of that new variety of pears he had sent him.

MASSACHUSETTS CHEESE MANUFACTURERS ASSOCIATION.—The Boston *Cultivator* gives a report of the first meeting of the above Association, held on the 9th of February, in West Brookfield. Among the reports submitted was that of J. W. Powers, of the Hardwick cheese factory which was as follows:

Began manufacturing June 9th, and closed November 5th; used Ralph's vats; 658,687 lbs. of milk were received; \$8,865 lbs. of cured cheese were made; 1 lb. of cured cheese from 9 and 605-1000 lbs. of milk, a little over 9½ lbs.; average number of cows, 325; average pounds of cheese per cow, 275; in making the dividends the products of the season were divided into 4 lots; the 1st from June 9th to July 24th; 2d to Sept. 8th; 3d to Oct. 10th; and 4th to Nov. 5th, the time of closing; the average of milk for a pound of cured cheese on the 1st two divisions was 10 1-6 lbs.; the 3d was 8 3-5 lbs.; and the 4th, 8 2-5 lbs.; the average sales of cheese to Oct. 10th was \$22.92 cents per cwt.; the remainder not sold. Cost of manufacturing, including interest on stock invested, 1½ cents per pound; cost of bandages, boxes, salt, rennet, annatto, &c., 9 mills per pound; cost of freight and commission, 1 cent and 1 mill per pound.

The weighing of the milk at the factories was recommended, and also that a petition be sent to the Legislature for a law to punish such as are guilty of adulterating milk.

Miscellaneous.

Mr. Weld on our Monetary Affairs.

To the Editor of THE CANADA FARMER :

SIR,—W. Weld of Delaware, whose letter appeared in your issue of the 1st instant, seems to have got out of bed with the wrong leg first, and to be out of humour with himself and all the world. It is certainly true, that there is very little money in circulation, and hardly any bank accommodation. Crops have been bad, but I sincerely trust matters have not come to as bad a state as he tries to make out, and we should live in hopes of more prosperous times. When people get into difficulties, in most cases the fault lies at their own door, and is the result of their own improvidence.

Mr. Weld complains of a society offering money at 6½ per cent. and the borrower finding it amount to between 20 and 30 per cent. Now if he was able to make the computation at all he could have come nearer to it than a margin of ten per cent: and the farmer who he says has to pay double the sum represented to him for a loan of a few hundred dollars, "through some management of the Society," probably owes that to his own bad management in *not meeting his payments when they become due*. The Societies that profess to lend money at 6½ per cent. make no secret of the working of their plan, which is this; suppose a farmer wants a loan of \$1,000, the society advances it to him, to be returned to them in ten equal annual payments. Now \$1,000 at 6½ per cent. for ten years is \$650, which added to the principal makes \$1,650, and 1-10 of this (\$165) is the yearly payment for ten years, at the end of which period he is out of debt: of course in paying these instalments, the farmer towards the end of the term is paying interest on principal which he has already paid up, but this prepayment at 6½ per cent. is equal to an ordinary interest of 10½ per cent.; the advantage of borrowing from the society not being—and *not being held out to be*—a lower rate of interest—but enabling a farmer to free himself from debt by paying it off in moderate instalments, and knowing the exact amount he will have to pay.

Take this same \$1,000 in the ordinary way, for a term of ten [the usual term being five, but to give every chance, allow him ten] years at ten per cent. on which the borrower pays \$100 a year, and at the end of the time has \$1,000 to meet, and what has he to do it with? Grumblers say he has \$65 a year saved, equal to \$650 by which he is a loser of \$350; because if he has not put away these dribblets in an old stocking liable to be drawn upon at any moment he is pinched, he must either have kept it in the Bank at 4 per cent. increasing it \$117, still leaving him \$233 in arrear; or he has attempted to lend it out to his friends to pay him a higher rate, and expecting them to be ready with the money when he had to pay up the mortgage. Now if he could get some one each year who wanted that exact \$65, and who would *actually return it* when wanted, he would be all right, but I contend that this is a practical impossibility. Any one who does not agree with me, is welcome to try it and buy his experience. Some of the sub-borrowers will not be ready and he will either have an expensive suit brought against him, or to relieve himself he will have to go to the expense of obtaining another loan.

To insure punctuality, the society plainly tell all borrowers, that a fine of 2 cents in the dollar will be imposed on all payments for every month in arrear, and it is non-punctuality which increases the rate of interest. The borrower has just the choice of paying \$65 a year for ten years, or paying nothing and facing \$1,000 at the end of the ten years.

Mr. Weld cannot expect parties who lend out their money for the purpose of living on the interest, to wait any length of time till it is the convenience of some dilatory borrower to pay it; and those who expect such leniency, generally make that convenience at so far distant a day, that proceedings have to be taken to recover the amount lent; and the costs so incurred add considerably to the rate of interest.

Feeling that I have already trespassed too much on your space, I must leave other matters on which I should have liked to touch. AGENT.

Guelph, March 18, 1865.

The Provincial Ploughing Match.

To the Editor of THE CANADA FARMER :

SIR,—I notice through the columns of your paper that Mr. Hall of Oshawa, has offered to place at the disposal of the Board of Agriculture, a still superior prize to that of last fall, to be competed for at the coming Provincial Ploughing Match, being a combined Clover Mill, valued at \$300, which certainly is the most handsome prize ever awarded in Upper Canada for ploughing.

Now, Mr. Editor, the ploughing match last fall gave considerable dissatisfaction, so much so that few or no first class ploughmen would plough again on the same conditions. Very briefly I will point out a few of the chief errors. I will also notice some of the main objects in putting ploughmen to the test, and in securing justice, and if similar rules be adopted and made known in due time, I have no doubt but a goodly number of ploughmen, even from the Counties of York and Ontario, will prepare for the contest.

In the first place, 21 feet is too broad to prove whether a ploughman can shape a ridge or not, and only having the one, all had to report to the Secretary when he had gone the first six rounds, then start again, and throw out the remaining half between himself and neighbour, and again report. In both cases, considerable time was lost in finding the Secretary, which threw the majority out of time. According to the Judges report they had pretty nearly formed their decision by the time the men were done ploughing, a thing impossible till all had made their finish, and the work had been carefully gone over, which would take more than two or three minutes. Judges should be first class ploughmen, not only theoretical but practical, and they should not be admitted on the ground till after the work is completed. Each ploughman should have a lot about 25 feet broad, ploughing off two halves and gathering a 14 feet ridge in the centre, that being the permanent ridge. When the turnings are short, each ploughman should not be restricted to less than 14 hours per acre, and should have liberty to use feet and hands if required.—No restrictions should be made as to cut, for under all circumstances ploughing with a deep cut is preferable, provided it be firmly put together. If the above rules are complied with, I am sure that lookers on, and especially foreigners, will not have the satisfaction of saying that Canada is still in her infancy with regard to ploughing. W. R.

Markham, March 7th, 1865.

Where to get Cheap Cleared Land.

To the Editor of THE CANADA FARMER :

SIR,—As you court correspondence on matters of general interest to the agricultural community, I hope you will excuse my present epistle. I find the idea in the minds of emigrants and others, that cheap lands are only to be had in the far west, and bush at that, where the best of a man's years are gone ere the stumps can be eradicated. Now, what think you, Mr. Editor, of cleared farms selling in this county in some instances as low as \$9 per acre, and in many instances at \$12; these farms having 30 to 60 acres cleared and fenced, and log houses and frame barns thereon? No doubt your first impression will be that the land is almost barren, or in some way inaccessible. I must admit that our County Council have not made even a quarter of an amile of macadamized road. But nature has given us the Grand River, now navigable to Brantford; 30 miles from us is Lake Erie; and the best climate in Upper Canada. The Hamilton and Port Dover Plank Road passes through the county, North and South, and the Buffalo and Lake Huron Railway, East and West. We also have the double advantages of a Hamilton and Buffalo market.

Then as to barrenness, these same lands in 1857, before the midge attacked the wheat crop, sold at from \$30 to \$50 per acre, and were by all considered choice lands, and now produce excellent crops of Peas, Barley, and everything but wheat. Yet, strange to say, our farmers having their eye so set on wheat, can content themselves with nothing else, and instead of taking to stock raising, and the dairy business have

completely fouled their lands with weeds, endeavouring with wheat to steal a march on that watchful little pest the midge. Now, I can only account for these low prices from the fact that the outside farming world are wholly ignorant of the prices at which unimproved farms can be procured. Would not such farms (and 3 or 4 could be had in some instances adjoining) be much more suitable to English Capitalists desirous of embarking in stock raising, such men generally not being afraid of heavy, rich clay lands, than to risk their fortunes in the bush, where the clearing of every acre would cost them at the least \$10?

AGRICOLA.

Cayuga, Co. Haldimand, March 4, 1865.

The Provincial Agricultural Association.

To the Editor of THE CANADA FARMER :

SIR,—Between the attacks and raids committed on the Board of Agriculture, one is led to believe that it has a great deal to answer for. Now I do not wish to be called a belligerent, for I believe that some of their acts are worthy of commendation. Neither do I wish to observe a strict neutrality, and allow things to go on as they are at present. I will offer a word by way of intercession, through the medium of your valuable Journal, to try to remedy a fault, which I have had more than once cause to complain of. It is the manner in which delegates from the several societies are treated, when they meet to elect the officers of the Provincial Association. I spoke publicly on that subject, at the meeting of the delegates in Toronto, in 1862. I told the Board to their faces of the wrong they were doing, and I asked them to remedy the evil. All I wanted was to give the delegates an opportunity of knowing each other; so that they might not be left at the mercy of a few wire-pullers who could elect whom they chose. I was promised all I asked, but that promise was never fulfilled. I went to Kingston as a delegate to the meeting in '63, and inquired of the Secretary if there was any provision made so that I could know the men with whom I was to act. He said none whatever. I was then 400 miles from home, and it was not likely I had much of an opportunity of knowing who were the delegates from the other Societies. Under such circumstances, I made up my mind to leave before the meeting, as I did not wish to stop and vote for men I very likely knew nothing of. I think this is a fair cause of complaint and, as I said, I wish to suggest a remedy. It is this: As soon as a delegate presents his certificate of appointment, let him be furnished with an admission ticket, on the back of which will be printed the name of the place where the delegates can meet occasionally during the week of the Fair, leaving a blank to be filled up with the delegate's name, and the Society he represents, and give each one some kind of a badge by which he can be known, and I think by the time the vote is taken, you will find it can and will be done with much less wrangling and confusion than what took place at the meeting last year in Hamilton. DAVID WILSON.

Canata Cottage,
Township of Harwich, March 7th, 1865. }

Notes, Queries, and Observations.

BY A THINKING MAN.

I.—"I CAN'T AFFORD IT."

VERY recently—while in conversation with a neighbour, a man owning and farming over 100 acres of land, in the eastern part of the County of York, and moreover a person rather above the ordinary average of our farmers in point of intellect,—I asked him if he took THE CANADA FARMER—"It was only," I said "a dollar a year, and I thought it a most useful work." "I can't afford it,"—was the ready and brief reply, to which I rejoined; "Well, I can't afford to be without it." Now, I have since been thinking, can any farmer in all Canada afford to be without it? A farmer to be "up" in his proper business, should know what is already known, and what is being done and thought by others around him. If he omits all this, he is not only thrown on his own unaided resources, but he necessarily loses the benefits of the thoughts, observations, experience, and knowledge of other men. I repeat, no

farmer in Canada can, in justice to himself, afford to neglect taking in and reading THE CANADA FARMER! The information here given is no where else to be found. It is now the medium of communication between enquiring minds on every matter pertaining to the soil and rural affairs, in all parts of these Provinces. For my own part I can not only not afford to forgo the perusal of our own paper, but must, at yet further expense, likewise consult the journals devoted to kindred topics, not only in the neighbouring United States, but in Great Britain. No man can work but at a disadvantage without proper tools, much less without aids, methods, or helps of every kind. A thousand subscribers, I do not hesitate to say, is a matter of much less importance to the publisher than the disadvantage, the positive loss, to a man cultivating even a single acre of land—who, most mistakenly, thinks he saves a dollar a year—in refusing to subscribe to, and read, THE FARMER. What then is to be thought of a man farming 100 acres who affirms he "can't afford" to do so? I think the boot is altogether on the other leg:—"penny wisdom, and pound folly,"—hand and hand.

2.—COOKERY, "WASTE NOT, WANT NOT."

I have often thought of the national and individual loss entailed by bad cookery. I saw it stated the other day in an American paper, that a certain Frenchman was about opening an establishment in New York, in which he proposed to teach the art of cookery. All success to Monsieur' Cookery or the preparation of food is one of the most important and useful arts of life. Yet it is one which a very large proportion of our women are least versed in. The loss nationally and individually is beyond computation. Teachers, books, some labour, and some study, are all considered indispensable in the much less useful, but more fashionable accomplishments of crochet work, and bad music on the piano; but the preparation of food forsooth, may be learnt without aid, without study, without tuition of any kind! what but failure and disappointment can be expected? Let, therefore, every thinker do what he or she can, to bring about a better state of things. Why should not cookery and household management, become regular branches in our systems of national education for young women of all classes and positions in society? The French have always, nationally and individually been far ahead of Britain, in their knowledge and practice of cookery. It is to be hoped the worthy man about commencing operations in New York, will be abundantly successful, and soon have many imitators. There is plenty of room for profitable operations in the same line, over the length and breadth of nearly every civilized country in the wide world. I hope to live to see the day, when "high honours" at the academy of household management, and household duties, will be considered indispensable "accomplishments"—before a young lady can obtain a matrimonial settlement for life.

3.—SHELTER.

The benefits of shelter to growing crops of every kind, in this northern climate, are so palpable, that this is one of the first things anybody now thinks of, who proposes laying out a garden planting an orchard, or a vineyard. Nobody who has devoted any attention in this direction but will admit the importance of shelter, as a feature indispensable to success. I think it would be an admirable plan for every owner of land, whether of large or small extent, to plant around his lot a belt of timber from 12 to 72 feet wide, of good healthy sorts of forest trees. There might be part deciduous and part evergreens—beeches, maples, pine-spruces, balsams, ashes, oaks, and so forth. There would thus, in a few years, be abundant shelter, and the timber, before twenty years, would become at once useful and valuable in a money point of view. Every garden, orchard, and vineyard, for we shall in a few years have grape vineyards, should be surrounded in like manner with a high live fence, sufficient at once as a protective fence and a wind break. It is now a vexed question what forms the best plant for a fence. Some advocate the English hawthorn, others the buckthorn, the arbor vitae, the Norway spruce, the privet, the osage orange, and, more recently, the white willow has its supporters. I should like to find out in which of all these the roots would give the least trouble, for that is an important consideration. It is well known that poplars and willows generally extend ever where, and impoverish the soil for a considerable distance around. Which, then, of all these, or of what others, do the least mischief in this way? If any parties have noted this, the information will be at once acceptable and useful.



Grape Vine Culture, No. V.

BY W. S., OF WORKEN.

SYSTEMS—CONTINUED.

Another "system," much in use on the Hudson, is indicated by Fig. 23. The posts are set at any dis-

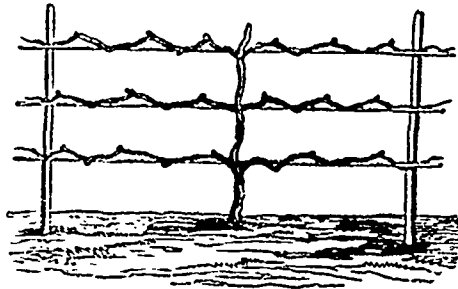


FIG. 23.

tance not less than sixteen feet apart. A wire is stretched from one to two feet from the ground, forming the lower or bottom wire, another at the top of the posts, and a third midway between. The vines are grown straight and upright, being first cut back until a strong cane is produced. Arms are then taken as they are grown, three on each side, making an arm for each wire, on each side of the vine. These arms are renewed from time to time as required, by cutting out the old ones, and leading a new shoot in their places. The fruit is produced from the wood springing from the eyes on the arms; the bearing wood being the present year's growth. This system we consider defective, but it is easy to bring a vine into this shape, and this is its chief recommendation.

Another system, indicated by Fig. 24, is much

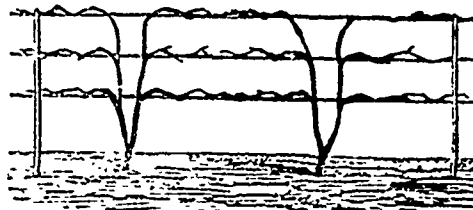


FIG. 24.

practised in the extensive vineyard of Dr. Underhill, growing principally Isabella and Catawba vines, at Croton-Point, on the Hudson. Our engraving precludes the necessity of further explanation.

Another system in use for covering arbours, is, perhaps, among the best that can be devised for that purpose, being a kind of spur and renewal system, and consists in forming regular horizontal arms on the bottom bar or rail of the arbour, a short distance from the ground; then training canes from the eyes on these arms, at regular distances up over the arbour, about twelve inches apart as far as desired. When these canes require renewing, which will be in two or three years, a cane must be cut out, down by the arm, and a new one trained up in its place, and by care and attention will produce abundant crops in this way

THE OHIO SYSTEM

Is merely a modification of the methods pursued in France and Germany, and has been gradually introduced by vine dressers emigrating from those countries. Vines, and even vineyards, may be found around Cincinnati, trained differently, but the method is known as the Ohio system. The ground having been prepared, the vineyard is set out with cuttings

or rooted plants; generally the former. In setting the cuttings, holes about two feet deep are made, with a dibble shod with iron; two cuttings are inserted in each, filled in with sand, and washed into immediate contact by pouring in water. During the first season, the young vines are allowed to grow at random, care only being taken that the ground be kept clean, mellow, and clear, of weeds. In the spring of the second year, the vines are pruned back, and also all the roots which spring from the cutting within several inches of the surface lopped off. The second season the vines are treated nearly the same. The third summer, three or four are allowed to grow up, and are carefully tied to as many stakes, the laterals being pinched out, and the shoots stopped in September. During the fourth year, the vines are allowed to bear spurs, all produced by cutting back

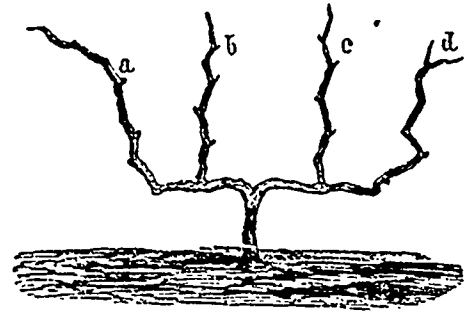


FIG. 25.

the shoots of the previous season to six or eight inches. Those spurs of course, throw out fruit-bearing canes, which, during the fifth season, are tied in bows to stakes. At the winter pruning, the bows are cut away, their place being filled the next season by a fresh cane, allowed to grow for this purpose, the previous year. Fig. 25 shows the vine in the fall of the fourth year. a b c d are the vines which bore fruit last year; b and c are cut off to one good bud, and a and d formed into bows, and tied to a stake, as shown in Fig. 26. This is the appearance of the vine

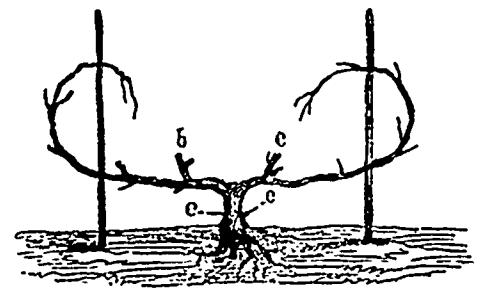


FIG. 26.

the fifth spring. The arms are wholly renewed every few years, so as to get rid of the unsightly gnarled spurs by training new shoots from the spurs c e.

THE THOMARY SYSTEM.

This is the celebrated system in use near Paris, in France. Where a very high wall is to be covered, it may be raised indefinitely to any height. Fig. 27

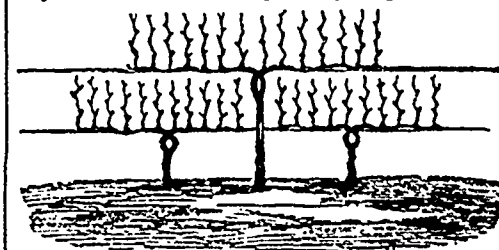


FIG. 27.

gives a good idea of what is meant by this system. It is much recommended by Dr. Grant, the celebrated grape grower, of Iona Island, on the Hudson, and is admirably adapted for a climate where the vines do not require to be laid down for winter protection.

CARE OF OLD VINES.

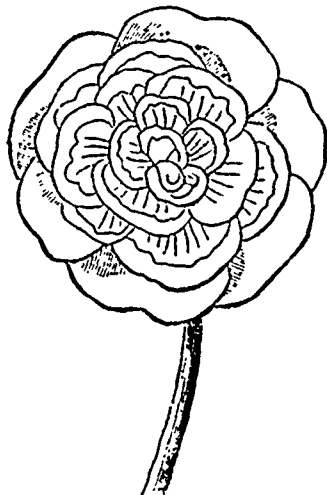
Throughout many parts of the country there are numerous old vines of considerable growth, many of

which have been allowed to degenerate into a long thick, tangled mass of wood, bearing little or no fruit, and which are at once unsightly and inconvenient. These are mostly to be seen about farm houses and the owner is generally found to be discouraged, declaring, "the grape had done no good with him, and that he is quite certain will never answer in this country." It is not likely it will with such treatment. Vines in this state, however, have generally strong roots, and may be trained into proper shape



FIG. 23.

with one or more vigorous canes, and in two years brought into abundant bearing. A part of the numerous canes, it is true, may be left, and the vine brought into shape and bearing gradually, but we think the better plan is to cut down the whole at once to one stem, see Fig. 28, and train up one or more canes the following year. Several strong shoots will spring up, but all but one or two must be pinched back. There will, of course, be no fruit the first year, but with ordinary care, if trained according to some of the methods previously described, in succeeding years there will be abundant results.



Double Bedding Pansy.

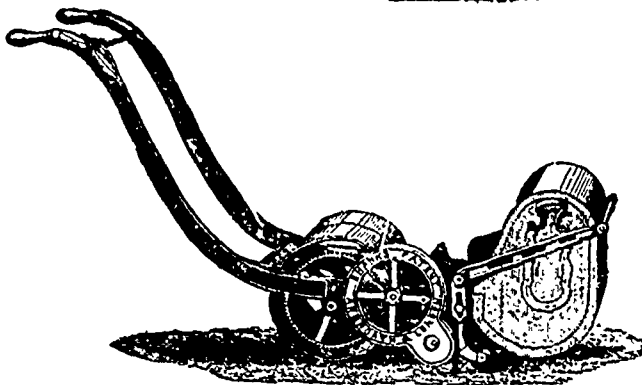
The *Cottage Gardener* thus describes this floral novelty:—

"The outer or guard petals of the flowers are about the size of a good pansy, and the inner gradually diminish toward the centre, forming a double flower. There can be no question that it will form a valuable plant for beds and borders, more especially as we understand that it has proved a profuse bloomer."

CRANBERRIES ON UPLAND PRAIRIE.—J. G. Scheffer, Albion, Iowa, writes the *Prairie Farmer*, and says he is satisfied that cranberries can be grown abundantly in the common prairie gardens, and of much finer quality than on the low lands. He received plants of the "Cape Cod Cranberry" by mail in the hot days of last June, planted them in his garden on high prairie land, showered them two or three times because of the drouth, covered them during the heat of the day with rhubarb leaves, and the first of August they commenced fruiting and are doing well.

GRAFTING THE GRAPE.—The Editor of the *Valley Farmer* gives a correspondent his mode as follows:—"We take the dirt away from the root to be grafted, to the depth of 5 or 6 inches. Then cut off the root 3 or 4 inches below the surface, and insert the cion in the root in any of the usual methods of grafting. Then wrap that part of the root receiving the cion with paper, and fill it with fine earth, pressed carefully about the root and cion, leaving one or two buds above the surface. Keep the ground nicely worked about the plant during the summer, and if you have a strong root you may expect a great growth."

Shanks' Patent Lawn Mower.



HEREWITH we present a cut of this pretty little machine for mowing lawns. It cuts, collects, and delivers the grass, leaving it in heaps ready for removal. It is made by Alex. Shanks & Son, of Arbroath, Scotland, and is adapted to either horse or hand power. The following are its leading peculiarities: The cutter is so constructed that in mowing the closest and finest turf there is no appearance of ribbing. The drums are loose on the shaft, but so geared, that in turning, the machine will mow as well as when going in a straight line. It will

mow on the most uneven lawn, without injury to the turf. It will turn into the most intricate windings of the flower garden, amongst trees or flower-beds, with perfect ease, and without the smallest chance of injuring the shrubs or flowers. The wheels are all protected by guards, which entirely prevent any particle of cut grass, shrubs, or flowers from getting into contact with the teeth. A scraper is introduced to keep the rollers clear of small stones or rubbish in crossing gravel walks, &c. The cutter works in brass bearings, and is made so very strong that breakage is rarely heard of. Malleable iron is always used for the handles or shafts, which are necessarily neater and much more durable than the usual cast iron ones. An important feature in this machine is the method of emptying the grass-box. In the spring, when the grass grows up rapidly, nothing is more annoying in working a mowing machine than the stopping and almost constant travel from the handles to the box, and vice versa, for the purpose of emptying the grass. This is completely obviated in Shanks' machine. A simple and efficient apparatus empties the box without the man being under the necessity of either leaving the handles or stopping the machine.

We saw one of these lawn mowers at work last summer on the grounds of the Hon. D. L. Macpherson, near this city, and were much pleased with the manner of its operation. J. Fleming & Co., of this city, have some of these machines on exhibition and for sale.

ORCHIDS IN VINERIES.—There are but few orchids worth growing that might not be cultivated under vines, and that too in cool houses which in winter, are not allowed to go below forty degrees, and where in summer the temperature is allowed to go as high as the sun will raise it. This can be done without injuring the grapes either in colour or flavour.—*Gardeners' Chronicle*.

WATERING PLANTS.—The following methods have been successfully adopted for watering garden vegetables:—Place a vessel containing water near the plants, from which extend a piece of old cloth to the roots. By this means water will be conveyed, slowly, from the vessel to the plants, keeping the ground all the while in a good degree of moisture.

Cucumbers are sometimes grown as follows: Set a headless barrel half way in the ground, and fill partly with manure. Plant the cucumbers around the barrel, on the outside. Pour water on the manure in the barrel and it will reach the roots from beneath, keeping the soil both moist and rich.—*Rural New Yorker*.

TRANSPLANTING AT NIGHT.—"A friend in whose power of observation," says the *Working Farmer*, "we have confidence, and who is an exact experimenter, informs us that last spring and summer he made the following experiment:

He transplanted ten cherry trees while in blossom, commencing at four o'clock in the afternoon, and transplanting one each hour until one in the morning. Those transplanted during daylight shed their blossoms, producing little or no fruit, while those planted during the darker portions maintained their conditions fully. He did the same with ten dwarf pear trees after the fruit was one third grown. Those transplanted during the day shed their fruit; those transplanted during the night perfected their crop, and showed no injury from having been removed. With each of these trees he removed some earth with the roots."

A GOOD CROP OF ONIONS.—W. R. Tatem, formerly with a Shaker Society in Pennsylvania, gives an account of his success with onions. The bed 20 x 40 feet, had been ploughed deeply the previous autumn. In spring it had a shallow ploughing, after which three horse loads of fine old manure were spread on, and thoroughly harrowed in. The bed was then covered with straw, ten inches deep, which was burned. The seed was sown in drills 14 inches apart, and rolled. As soon as the seed was up, the bed was sowed over with one bushel of a mixture of 3 hen manure, and 2 ashes, which application was repeated three times during the early part of the season. The onions were carefully hoed and weeded, and when as large as one's thumb, they were thinned to two inches in the row. The result was 30 bushels of large onions, equal to about 1,000 bushels to the acre.—*Agriculturist*.

SUBSOILING—ROOTS OF PLANTS AND TREES.—There are many statements in your valuable paper, in relation to light and shallow ploughing, that are not in accordance with my views of good farming. I believe in deep ploughing and even subsoiling on all but clayey land, when the clay comes near the top of the ground; in that case I think subsoiling injurious.

In excavating into the earth, I have found the roots of clover and herdsgrass to run from three to four feet deep, when the ground has been dug over to that depth and made rich with dressing. Corn and potato roots go quite as deep under like circumstances. The roots of many of our tallest trees are longer than the whole trunk of the tree. I have often found this to be the case with elm, oak, yellow birch, and white maple.—S. Poot, in *Maine Farmer*.

KEROSENE DESTRUCTIVE TO FRUIT TREES.—J. W. Cook makes a statement, in the *Grand Haven News*, to the effect that Kerosene has proved destructive to plum trees when it has been placed in vessels on the trees for the purpose of saving the fruit from the curculio, and by this means got on the branches and trunks of the trees. He says, "the Kerosene failed entirely to keep off the curculio, while it proved fatal to the trees." If Kerosene has any such destructive effect on trees it would be well for those in the habit of using it indiscriminately, to bear the fact in mind. We have never seen much good result from placing liquids in vessels on trees in order to catch and destroy the curculio. He is a tough customer, and must be followed up persistently and destroyed, or the fruit is pretty sure to suffer.—*Ulca Herald*.

ACCLIMATISATION IN ENGLAND.—In the sixth century wheat was first sown in England. Up to the sixteenth century, Englishmen grew few fruits and vegetables. What they consumed were imported. Their chief food consisted of bread, beef and mutton. Nearly all the favourite flowers in England are exotics. The rose came from France, Flanders, and Italy; the honeysuckle, hawthorn, and passion flower from America; the lavender, rosemary, and mignonette from the south of Europe; the laburnum from Hungary; the laurel from Portugal; the bay tree and daffodil from Italy; the weeping willow from the Levant; the fox-glove from the Canaries; broccoli, beans, and cauliflower from Greece; peas from Spain; carrots and celery from Flanders; asparagus and kidney beans from Asia; lettuce, artichokes, and cabbage from Holland; parsley from Egypt; and potatoes from America. The mulberry is from Italy; the apple and plum from Syria; the grape from Portugal; the nectarine and peach from Persia; the gooseberry, cherry, and strawberry from Flanders; the currant and apricot from Greece; the quince from Austria; the pomegranate, orange, and lemon from Spain; and the raspberry and walnut from America. The hop plant came from the Netherlands.—*Australian Paper*.

Poultry Yard.

On the Turkey.

It is intended that translations from the writings of foreign authors, whose works discuss topics relating to the farm, shall appear occasionally in the *Journal of Agriculture*. The January number contains two of them. The first, "On the Turkey," is by M. le Docteur Sacc, Delegate of the Imperial Society of Acclimatization, Barcelona. After touching upon the history, habits, and colours of the turkey, the paper proceeds to comment on the popular but erroneous impression that turkey hens are bad layers, and defends especially the grey variety against the charge of infertility. The secret, however, of productiveness is said to depend greatly upon the care exercised in selecting constantly as breeders the best layers, so as to fix ultimately in the kind the power of abundant fecundity. With regard to the weights of turkeys, one is mentioned (a prize-winner at the Paris Exhibition) which weighed above 43 lbs. Directions similar to those in most of our poultry-books are given concerning the period of incubation. We are told that "the hatching-place should be sheltered from draughts, from noise, and from direct and powerful lights." The diet of the brood should be as follows:—"During the first eight days the little ones are fed on eggs boiled hard and minced; during the second we add to this bread-crumbs chopped with nettles, parsley, and onions. During the third week we keep back the eggs, and only continue the bread and vegetables; then, instead of the bread, we give moistened bran, boiled peas, and, above all, millet, of which the young turkeys are very fond." They are said to be easily cared, when sickly, by being made to swallow a pepper-corn, or "better still, a spider." The writer of the paper having lost many of his young birds by letting them out during fine weather, has latterly adopted the plan of keeping them in garrets until they "put forth the red," which usually happens when they are from six weeks to two months old. Under this system, he says, he has never lost one; the number of spiders they there obtained no doubt contributing in a large measure to their healthfulness. Dr. Sacc's concluding observations refer chiefly to the fattening of turkeys. Among the various descriptions of food, rotten cheese seems to hold a pre-eminent place for its excellence; and walnuts are found to be of great value. These, swallowed whole, "however hard their shells, soften rapidly in the gizzard, in which not a trace of them can be found after 15 or 20 minutes. In a chemical point of view," Dr. Sacc remarks, "this speedy disintegration of one of the hardest and most compact of woody substances is equally strange and inexplicable."

GOOSE FARMING.—"Off with their heads! Away with the filthy things! They eat all before them and kill what follows after." Such are frequently the invectives from those of passing good sense, on most farm economies, but not entirely "sound on the goose." Many an intelligent farmer will pay forty to sixty dollars for a bullock, to secure one hundred to one hundred and fifty pounds increase from summer grazing, who would hoot the idea of growing as much meat with less pasturage and the agency of an old goose, costing perhaps, fifty cents. March goslings, with access to grass and a trough of water, will eat their way without much trouble up to six or eight pounds by Michaelmas. Extra trouble in marketing is amply compensated for with pickings. *D. in Country Gentleman.*

The Household.

Choice Household Recipes.

Apple Jelly.—Let the apples be washed and all the specks and bruises removed, then cut them up, skin, core and all. Cook them in just enough water to cover them, till reduced to a pulp. When cool, strain it, not very closely, and add the rinds and juice of three or four lemons. Measure a pint to a pound of white sugar, and let it boil half an hour and turn into forms.

Cup Cake.—One cup of sugar, one of butter, three and a half of flour, four eggs, half a cup of cream, and half a teaspoonful of saleratus.

Cure for Warts and Corns.—The bark of the willow tree burnt to ashes applied to the parts, will remove all corns or excrescences on any part of the body.—*Western Rural.*

Closing the Bread Pores.

THE housewife who would bake her bread or biscuit without a dry, hard crust, can do so very readily. Just before placing her bread in the oven, she has only to rub its surface with butter or lard. This will close the pores, preventing the escape of the gas, which is produced by the yeast, and the escape of the steam, which is produced by the moisture of the heated loaf. Bread thus baked will be almost crustless. Indeed, so long as the moisture is confined, it will be difficult to burn the loaf to any great depth. The large vacuities in the bread will be less numerous, though, as a whole, it will be more porous and therefore lighter. Yeast bread, when two or three days old, becomes crumbly, and in appearance, though necessarily not in fact, dryer than when it was first baked. This apparent dryness arises, not from a loss of moisture, but from a chemical change in the arrangement of the bread molecules. Put the bread into an oven, heated to a point slightly below boiling water, so that the moisture of the bread may not be turned into steam and escape, and its original softness will at once be restored. If, however, the surface of the loaf be touched with lard, its moisture will not easily escape, though the heat be carried far above the boiling point of water. Such is the result of hermetically sealing up the expansive elements of dough. The principle allows of many very simple applications.—*Boston Journal.*

DANGER OF EATING UNCLEAN WATER-CRESSSES.—In cresses prepared for the table I have noticed portions of frog-bit [*Hydrocharis morsus-ranae*] and other weeds. These vegetables have often small mollusks and other aquatic animalcules adhering to them, and if the former are eaten in a perfectly unwashed state, it will consequently happen that the latter are swallowed during the meal. Small mollusks are known to harbour larval parasites in prodigious quantities, and therefore it is not unreasonable to conclude—bearing in mind the extent of our knowledge of the transformations which these parasites undergo—that they are at least the source of one or more of the fluke parasites which occasionally invade our frames. The following case will best illustrate my subject:—A young girl, the daughter of a shepherd living at Kaplitz, in Bohemia, was in the habit of eating water-cresses and drinking the stagnant water of ditches in the locality where she lived. After a while her health failed and her body became much enlarged. A medical man, Dr. Kichner, saw her only three days before she died, and by a post-mortem examination he ascertained that no less than forty-seven specimens of a small fluke [*Distoma lanceolatum*] had taken up their residence in this inappropriate "host." I say "inappropriate," because the parasite species in question has only three times been detected within the human "host," its proper habitation being apparently, the liver of the ox and sheep.—*Popular Science Review.*

A HINT ON CARPETS.—Of all the expensive things in a modern English house of the ordinary class, perhaps carpets are the dearest. In case of removal, they become almost useless, and have to be sacrificed at any price that can be got for them, because, having been cut and measured for one room, perhaps of a peculiar shape, they are useless in any other, for if the pattern could be matched, which it often cannot, a bit of blue new carpet, sewn on to a bit not so new, would be out of harmony, and tell a story which the pride of poverty would rather were concealed. The Persian and Turkish system of carpeting rooms is infinitely better and prettier than ours. The Persian carpets, especially those from Rosht, are exquisitely beautiful. Their colours are brighter, the designs prettier, and they are far more durable than European carpets. They are made in strips usually between two and three yards long and about one yard in breadth to go round the sides of a room, with a square carpet of any size preferred for the centre. They do not require to be nailed or fitted, and a sufficient number of them will, of course, carpet any room, however large or small. They have a very rich and grand appearance, too. In summer they are easily taken up, beaten, rolled, and put aside by a single man-servant; and in the hot weather, why should we not more generally imitate Continental custom, by painting or polishing our floors? Floors painted or polished, look far prettier in July sunshine than carpets, which are the mere dusty traps to catch dust, harbour insects, and retain bad smells. Everything has its use and its season. The use and the season of carpets are not in the summer time. Where it is impossible to paint or to polish the floors of a house, the employment of oilcloth will be found good economy in summer, and far cleaner. Oilcloth, too, in charming patterns may now be bought very cheaply, and it keeps a room delightfully cool and fresh.—*All the Year Round.*

Poetry.

Enoch Arden

BOILED DOWN

Phillip Ray and Enoch Arden
Both were 'spoons' on Annie Lee,
Phil did not ful-ful her notions,
She preferred to mate with E

Illm she wedded, and she bore him
Pretty little children three,
But, becoming short of rhino,
Enoch went away to sea,

Leaving Mrs. Arden a widow
Of a well-stocked village shop,
Selling butter, soap, and trowels,
Bees' wax, whiteport, lollipop

Ten long years she waited for him,
But he neither came nor wrote,
Wherefore she concluded Enoch
Could no longer be afloat.

So when Phillip came to ask her
If she would be Mrs. Ray,
She, bellowing she was widow'd,
Could not say her sutor "Nay,"

And a second time was married,
Cave up selling bread and cheese,
And in due time Phillip nursed a
Little Ray upon his knees.

But alas! the long-lost Enoch
Turn'd up unexpectedly,
And was sadly disconcerted
By this act of bigamy.

Yet reflecting on the subject,
He determined to atone
For his lengthened absence from her,
By just leaving well alone.

Taking to his bed, he dwindled
Down to something like a shade,
Settled with his good landlady,
Next the debt of nature paid.

Then, when both the Rays discovered
How poor Enoch's life had ended,
They came out in handsome style, and
Gave his corpse a funeral splendid.

This is all I know about it,
If it's not sufficient, write
By next mail to Alfred Tenny.
So, P.L., the Isle of Wight.

—Melbourne Punch.

BAKED BEANS.—Few people know the luxury of baked beans, simply because few cooks properly prepare them. Beans, generally, are not cooked half long enough. This is our method:—Two quarts of middling sized white beans, two pounds of salt pork, and one spoonful of molasses. Pick the beans over carefully, wash, and add a gallon of boiling hot soft water; let them soak in it over night; in the morning, put them in fresh water, and boil gently till the skin is very tender, and about to break, adding a teaspoonful of saleratus. Take them up dry, and put them in your dish, stir in the molasses, gash the pork, and put it down in the dish, so as to have the beans cover all but the upper surface, turn in boiling water, till the top is just covered; bake, with a steady fire, four or five hours. Watch them, and add more water from time to time, as it dries away.—[The foregoing is a first-rate receipt. Those who don't like the idea of the molasses, may omit it, though it adds to the perfection of the dish.—*Germantown Telegraph.*

HAPPY CANADA.—At the present moment we are a happy and enviable people. We are agitated by no political discord; we are torn by no factions; we are exempt from the horrors of war; we have perfect liberty; wholesome laws, which are well honoured and kept; perfect religious toleration; a press as free as the air, yet far removed from licentiousness, and well conducted, a high tone of morals; commercial prosperity; exemption from heavy taxes; general health and universal contentment. We afford a good home to the industrious emigrant; a place of safety to the hunted refugee; a neutral ground to bitter enemies at war with each other in their own land; and perpetual freedom to the once down-trodden and enslaved. Happy country! may we realize our blessings, and seek to have them perpetuated by humble dependence upon God, and by a resolution to live and die under the British flag!—*Brandon Courier.*

Markets.

Toronto Markets.

"CANADA FARMER" Office, Monday, March 27, 1865.

The prospects of spring for the last two weeks have been favorable, being a continued season of good weather...

Flour steady; No. 1 superfine at \$4 05 to \$4 10 per bbl. extra, \$4 20 to \$4 50, superior extra, \$4 55 to \$4 75, fancy, nominal, at former quotations.

Fall Wheat steady, firm, wanted, not much doing, selling at 93c to 96c per bushel.

Spring Wheat—Wanted for shipment and advancing, at 90c to 95c per bushel.

Barley steady and in fair demand, at 70c to 76c per bushel. Oats at 45c to 47c per bushel, from teams and in store.

Rye 60c per bushel. Peas unchanged and steady, at 50c to 90c per bushel.

Hay—Market well supplied at \$14 to \$18 per ton. Straw in poor supply at \$14 per ton.

Provisions—Butter—Froth, wholesale, per lb., 15c to 21c; retail, per lb., 18c to 23c; in tubs, wholesale, per lb., 15c to 17c.

Eggs—Wholesale, per dozen, 15c to 17c; retail, per dozen, 19c to 23c.

Hams—Wholesale, per lb., 9c to 10c, retail, per lb., 10½c to 11½c.

Pilch Bacon—Wholesale, per lb., 8c to 9c, retail, per lb., 11c.

Cheese—Wholesale, per lb., 10½c to 11½c, retail, per lb., 14c to 15c.

Lard—Wholesale, 11½c to 12½c per lb.; retail, 14c to 15c.

Beef in poor supply at \$4 50 to \$6 50 per 100 lbs., 6c per lb., wholesale; 5c to 10c per lb., retail.

Calves \$4 to \$5 each; few in market. Sheep, by the car load, \$4 to \$5.

Lambs, by the car load, \$2 50; very good bring \$3 60.

Pork \$6 50 to \$7 25 per 100 lbs, small supply.

Hides (green) lower; per 100 lbs., \$3 00, \$3 50 to \$4 40; dry hides, 6c to 8c per lb.; cured and tanned, 4½c to 5c.

Tallow 8½c to 9½c per lb.; rough, 5c per lb.

Wool, 36c to 40c.

Calfskins (green) 7c to 8c per lb.; dry, 10c to 18c.

Sheepskins (green) \$1 to \$1 80 each; dry, 16c to 19c.

Lambskins 8c to \$1 50 each.

Coal, Lehigh \$9 25, Scranton \$7 75, Bituminous \$7 50 to \$8.

Wood \$4 50 to \$5 50 per cord.

Salt \$1 80 to \$2 per lb.

Water Lime \$1 50 per bu.

Potatoes in good supply at 20c to 35c per bushel retail.

Apples, \$1 75 to \$2 00 per bbl.

Ducks, 35c each.

Chickens, 30c to 35c each.

Turkeys, 75c to \$1 each; \$1 50 asked for primo birds.

Geese, 35c to 50c each.

Oil Cake, \$32 per ton, or \$1 75 per cwt.—Very fair demand.

Hamilton Markets, March 27.—Flour—superfine No. 1, \$3 75 to \$4; fancy, \$4 to \$4 12½; superior extra, wholesale, \$4 60 to \$5.

Brantford Markets, March 24.—GRAIN—Fall Wheat, 90c to 95c; Spring Wheat, 85c; Oats, 45c; Barley, 65c to 70c; Rye, 65c.

Chatham Markets, March 24.—Flour, per 100 lbs, \$2 60 to \$2 63.

London Markets, March 25.—GRAIN—Fall Wheat, 90c to 95c; Spring Wheat, active, at 86c to 89c; Barley, 70c to 72c; Oats quiet at 42c to 45c.

Guelph Markets, March 27.—GRAIN.—Fall Wheat, per bushel, 88c to 93c; Spring Wheat, do., 80c to 85c; Oats, do., 40c to 43c; Barley, do., 60c to 68c.

Peterboro' Markets, March 27.—Flour, per bbl., \$4 60 to \$5; Fall Wheat, per bushel, 90c.

Montreal Markets, March 24.—Flour, per bbl. of 106 lbs., superior extra, \$5 to \$5 20; extra, \$4 85 to \$4 93; fancy, \$4 70 to \$4 80.

Detroit Markets, March 24.—Flour dull and lower, at \$7 75 Corn dull, and about 10c lower, at 10c begged and 9 1/2 on track.

Buffalo Markets, March 27.—Flour very dull, at \$7 25 to \$10 75 and \$11 GRAIN.—Wheat dull and drooping, at \$1 07, in gold.

New York Markets, March 27.—Flour—Receipts, 3,292 barrels, market quiet and without decided change.

Advertisements.

TORONTO NURSERIES.

THE Stock of Fruit and Ornamental Trees, Small Fruits, Flowering Shrubs, Grape Vines, Roses, &c., &c., will be found unusually large and fine this spring.

THE CANADA BRANCH AGRICULTURAL SOCIETY

WILL sell, by auction, at Mount Drydges, County of Middlesex, on SATURDAY, April 15th, 1865, at 1 P.M., TWO THOROUGH-BRED DURHAM BULLS.

FARM TO RENT

ABOUT Six miles from the City, on the Kingston Road, containing about 120 Acres, with building thereon.

SOMETHING NEW UNDER THE SUN!

IMPORTANT TO CHEESE MAKERS. The undersigned is prepared to fill any amount of orders for CHEESE BOXES and SETTERS, at a very low rate.

FOR SALE.

YOUNG HIGHLAND BLACK HAWK CHIEF. IS a Dappled Black Horse, stands 16 hands high, with great action, and good qualities.

FLOWER SEEDS!!

ALL the newest and best varieties. 20 packets, postage free, for One Dollar.

VEGETABLE SEEDS.

THE best, and most useful varieties, just imported. 20 packets, postage free, for One Dollar.

SEEDS AND IMPLEMENTS.

THE undersigned beg to inform their customers and the public generally, that their stocks of

GARDEN, FIELD & FLOWER SEEDS

Is very extensive and complete, embracing all the FIELD SEEDS Required for the Farm, all the choicest varieties of VEGETABLE SEEDS

FLOWER SEEDS,

Embracing all the novelties of the season, a catalogue of which is now being published. In addition to our general catalogue of Seeds and Implements, both of which will be forwarded free on application.

THE CELEBRATED CLEVELAND BAY HORSE, "ANGLO SAXON,"

WILL leave his stable in Delaware, near London, on MAY the 1st, and will be in London on that day; at Stratford on the 3rd.

TERMS OF SERVICE.—To ensure, if the mare should have a horse colt, \$100; if a mare colt, nothing.

Certificates of service furnished for pedigrees. His stock are admitted to be the best ever shown in London.

"ANGLO SAXON" is one of the surest stock-getters in the country, and considering the value of the horse, the cheapest Stallion traveling.

Groom's fee 25 cents for showing the horse. Time of exhibiting the horse 2 o'clock each day.

FRESH GARDEN AND FIELD SEEDS,

Great Britain and France. CROP 1864.

LINSEED OIL CAKE,

FOR STOCK FEEDING.

FLAX SEED.

IMPORTED RIGA, AMERICAN, AND SELECTED CANADIAN, FOR SOWING.

CHOICE HARDY GRAPE VINES.

THE following one-year-old Vines (splendid roots), viz: Concord, Hartford Prolific, Diana, Rebecca, and Delaware, will be sent (post free) to any Post Office in Canada on receipt of \$1.50.

AYRSHIRES AT AUCTION.

WILL be sold, on TUESDAY, April 11th, at Southboro', Worcester County, Mass., my entire herd of PURE-BRED AYRSHIRE CATTLE,

comprising sixty-five head of Cows, Heifers and Bulls, including several valuable imported animals and the choicest stock of my own breeding.

My farm is located three miles from Southboro' Station, on the Boston & Worcester Railroad.

Sale to commence at 10 A. M. Catalogues ready March 10th; will be sent on application.

1865.  1865.

NOTICE.

THIS YEAR'S IMMIGRATION.

IMMIGRANTS of the classes so much needed in Canada. Domestic Servants, Mechanics, Farm Laborers, &c. are now beginning to arrive and may shortly be looked for in increasing numbers. It would therefore be very desirable that parties in Canada wanting any of the above classes, should signify their wishes (the kind of person wanted, wages, &c., &c., and the best mode of reaching the applicant), and address any of the following Government Immigration Agents:—

- HAMILTON, . . . R. H. RAE.
- TORONTO, . . . J. A. DONALDSON.
- KINGSTON, . . . J. McPHERSON.
- OTTAWA, . . . W. J. WILLS.
- MONTREAL, . . . J. H. DALEY.
- QUEBEC, . . . A. C. BUCHANAN,

CHIEF AGENT.

A record of such applications will be kept, and no pains spared by the various Officers of the Department to supply all wants. Proprietors or Agents having improved farms or lands for sale or lease are invited to forward printed descriptions of same for the free inspection of immigrants and distribution.

A. C. BUCHANAN, *Chief Agent*
GOVERNMENT IMMIGRATION OFFICE, Quebec, 1st April, 1865. v2-7-61

GRAPE VINES

BY MAIL, PRE-PAID.

Choice, Hardy, Sweet, Early New Varieties, with good Roots, Four for \$1.



WINE for sickness and Sacrament, at wholesale price, \$2 per gallon. Kegs \$1 each. Orders for 10 gallons—keg free. 20 gallons, keg free, and freight paid to any part of Canada. Money to Registered Letters at my risk. Address as per card. v2-7-11

COE'S

SUPER-PHOSPHATE OF LIME

FOR

FIELD AND GARDEN CROPS.

The following Testimonial from Shefford Co., O. E., speaks for itself:—

WE, the undersigned citizens of the Township and County of Shefford, have used Coe's Super Phosphate of Lime upon field and garden crops, and have witnessed its effects upon the crops of others, and we are satisfied that it is a most efficient and valuable manure; that it imparts a very vigorous growth, causes crops to ripen earlier, and gives them a superior quality. We intend to use it more in the future.

- DAVID FROST,
- DANIEL CLARK,
- W. O. LAWRENCE,
- MAJOR MARK WITHCOMB,
- REV. D. LUNDAY,
- R. W. MOFFATT,
- HON. L. S. HUNTINGTON,
- P. H. CURTIS

Sold by James Fleming & Co., Toronto, O. W., and in all the principal towns throughout Canada. v2-7-11

HEDGE PLANTS.

BUCKTHORN, White Cedar, Berberry, Norway Spruce, Privet, &c. A large Stock of Dwarf Box Edging.

GEO. LESLIE, Toronto Nurseries, Leslie P. O.

v2-7-21

HAMILTON NURSERIES.

I HAVE for Spring Sale a large supply of Standard and Dwarf Fruit Trees of best sorts, together with all the small Fruits and Esculent Plants; also, a few thousand Apple, Cherry and Pear Trees, from 8 to 10 feet high, fine trees, which will be sold at reasonable rates. Packing done in the very best manner. v2-7-11

W. HOLTON.

ORNAMENTAL TREES.

I HAVE a few of those beautiful lawn trees, the Rosemary leaved, Kilmarock, and American Weeping Willows, Purple leaved Beech, Small Weeping Cherry, Weeping Ash, Weeping and Oak leaved Mountain Ash; also, of large size, Evergreens, Horse Chestnut, Mountain Ash Silver and Sugar Maples, Abies, Lindens, American Chestnuts, Lombardy and Balsam Poplars, European Larches, &c. W. HOLTON. Hamilton Nurseries. v2-7-11

HALSTED'S PATENT IMPROVED HORSE HAY FORK,

PATENTED MARCH 7, 1865.

PRICE, WITH PULLEYS AND HOOKS, \$14.

THE thorough test and extensive use into which it has already been brought give the most perfect guarantee of its STRENGTH, DURABILITY, LIGHTNESS, and SIMPLICITY. Made entirely of Iron and Steel. Warranted in every respect. Send for a circular. Town, County, and State rights for sale. Agents wanted. Address, A. M. HALSTED, 67 Pearl Street, New York. v2-7-21

ONE DOLLAR PER ACRE.

The Canadian Land and Emigration Company (CAPITAL £250,000 STERLING.)

ARE at present selling at the above price their excellent Lands in the rapidly-improving settlement in the

TOWNSHIP OF DYSART, CO. PETERBOROUGH.

For information, apply to the Secretary, C. J. BLOMFIELD, Esq., Toronto; or to C. R. STEWART, Esq., P.O. Haliburton, Co. Peterborough. v2-6-61
March 15, 1865.

GROUND BONE MANURE.

REDUCTION IN PRICES.

FINE BONE DUST, 60 CENTS PER BUSHEL; Half-inch Ground Bone, 50 cents per bushel.

On all orders over \$25, a discount of 10 per cent. will be allowed.

PETER R. LAMB & CO.

P.S.—Delivered at the Railway Station free of charge. March 1, 1865. v2-5-81

THE TENTH ANNUAL PUBLICATION

OF

J. A. SIMMERS' Catalogue of Seeds,

OR

CULTIVATORS' GUIDE,

IS NOW READY.

GIVING this Year's Prices of all the Vegetables and Farm Seeds suitable and in use in this country, with their mode of treatment, together with accurate descriptions of everything of merit in Flower seeds, illustrated by numerous Artistically Executed Engravings, and a great variety of Information, useful alike to the professional Gardener, Farmer, or Amateur.

A COPY OF IT MAY BE HAD AT THE WAREHOUSE, WEST MARKET PLACE,

[GRATIS]

BY EVERY PURCHASER OF SEEDS,

And will be sent to any person remitting two cents (postage free) to the address of

J. A. SIMMERS, Toronto, O. W. v2-6-21

PRUSSIAN BLUE, EARLY KENT.

AND

MARROWFAT PEASE

WANTED.

ANY parties having PRUSSIAN BLUE, EARLY KENT, or MARROWFAT PEASE for sale delivered at the nearest railway station or shipping port, by sending samples by parcel post, prepaid, and communicating with the undersigned, will find a purchaser.

GEORGE LAIDLAW, Box 393, Toronto. v2-3-61
January 30, 1865.

BRANTFORD FAIR.

THE DIRECTORS OF THE

WEST BRANT AGRICULTURAL SOCIETY

WILL HOLD A FAIR

ON

Wednesday, the 5th day of April next, ON THE SOCIETY'S GROUNDS,

WEST BRANTFORD,

for the exhibition and sale of Horses, Cattle, Sheep, Pigs, Seed, Grain, Roots, and Farming Implements, &c., &c.

All parties desirous of purchasing, selling, or otherwise exchanging farm productions, would do well to give their attendance, as no fee will be charged for admission. The Grounds will be open at 7 o'clock, A.M. The Fair to commence at 10 o'clock, A.M. By order of the Board of Directors.

DUNCAN McKAY, Secretary. v2-6-21

Brantford, March 15, 1865.

IMPROVED PREMIUM IRON CYLINDER

GRAIN DRILL,

MANUFACTURED BY

JOSEPH HALL, OSHAWA, C. W.

THE past winter having demonstrated beyond a doubt the great advantage of sowing winter grain with Drills over broadcast sowing, and the fact being clearly established, that in dry or otherwise unfavourable seasons, all grains do much better when sown in drills, I have been induced to commence the manufacture of these valuable implements.

In our wet springs it is almost impossible to get the grain properly covered with a harrow, so as to prevent injury from dry weather following. Aside from these reasons, the amount of seed saved, and the increased crops raised by reason of having the grain evenly deposited in the ground, makes the GRAIN DRILL an indispensable requisite of every well regulated farm.

I am happy to say I can now offer to my customers the most perfect GRAIN DRILL in use in the United States or Canada. It will sow all grain equally well, in quantities of from one-half to four bushels per acre. It can be furnished with either eight or nine tubes as desired.

When wanted, a GRASS SEED Attachment can be furnished, which will sow any grass seed in connection with the grain or alone, in quantities of from four quarts to half a bushel per acre.

All orders for these Machines, Horse Powers, Thrashers, Reapers and Mowers, Clover Mills, Sawing Machines, Mill or Job Castings, or Machinery, will receive prompt attention.

Drills can be furnished with tubes in one row or two, as desired. For rough lands two rows is recommended.

ALL MY MACHINES ARE WARRANTED. For further information address JOSEPH HALL, Oshawa, C. W. v2-6-31

SEEDS! SEEDS!

NOW is the time to secure your supply of SEEDS for the coming season. Every variety for the Garden or the Farm, warranted new stock, may be obtained of the Subscribers. Send for a Catalogue.

GOLDSMITH, & Co., St. Catharines, C. W.

v2-5-31

RED CEDAR POSTS WANTED.

ANY parties having RED CEDAR POSTS eight feet long, and three inches through at the small end, will find a purchaser by communicating with

GEORGE LAIDLAW, Box 393, Toronto. v2-3-61

January 30, 1865.

LANDS FOR SALE.

TWENTY THOUSAND ACRES OF LAND, both wild and improved, and at all prices, for sale in various townships throughout Upper Canada, cheap and on easy terms.

For lists and particulars, apply to the proprietor, T. D. LEDYARD, Barrister, &c., South west cor. of King and Yonge-sts., Toronto. Toronto, March 15, 1864. 5-17

THE CANADA FARMER is printed and published on the 1st and 15th of each month, by GEORGE BROWN, Proprietor, at his Office, No. 26 and 28 King Street East, Toronto, U. C. where all communications for the paper must be addressed.

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CLUBS will be furnished at the following rates:—

- TEN COPIES for..... NINE DOLLARS.
- TWENTY COPIES for..... SIXTEEN DOLLARS.
- FORTY COPIES for..... THIRTY DOLLARS.
- ONE HUNDRED COPIES for..... SEVENTY DOLLARS.

To Agricultural Societies order; more than 125 copies, the FARMER will be sent at SIXTY CENTS.

THE CANADA FARMER presents a first-class medium for Agricultural advertisements. Terms of advertising, 20 cents per line of space occupied—one inch space being equal to 12 lines. No advertisement charged less than \$2, being ten lines of space.

Communications on Agricultural subjects are invited, addressed to "The Editor of the Canada Farmer," and all orders for the paper are to be sent to GEORGE BROWN, Proprietor and Publisher.