

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

- Coloured covers/  
Couverture de couleur
- Covers damaged/  
Couverture endommagée
- Covers restored and/or laminated/  
Couverture restaurée et/ou pelliculée
- Cover title missing/  
Le titre de couverture manque
- Coloured maps/  
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black)/  
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations/  
Planches et/ou illustrations en couleur
- Bound with other material/  
Relié avec d'autres documents
- Tight binding may cause shadows or distortion along interior margin/  
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure
- Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/  
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.

- Coloured pages/  
Pages de couleur
- Pages damaged/  
Pages endommagées
- Pages restored and/or laminated/  
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed/  
Pages décolorées, tachetées ou piquées
- Pages detached/  
Pages détachées
- Showthrough/  
Transparence
- Quality of print varies/  
Qualité inégale de l'impression
- Continuous pagination/  
Pagination continue
- Includes index(es)/  
Comprend un (des) index

Title on header taken from: /  
Le titre de l'en-tête provient:

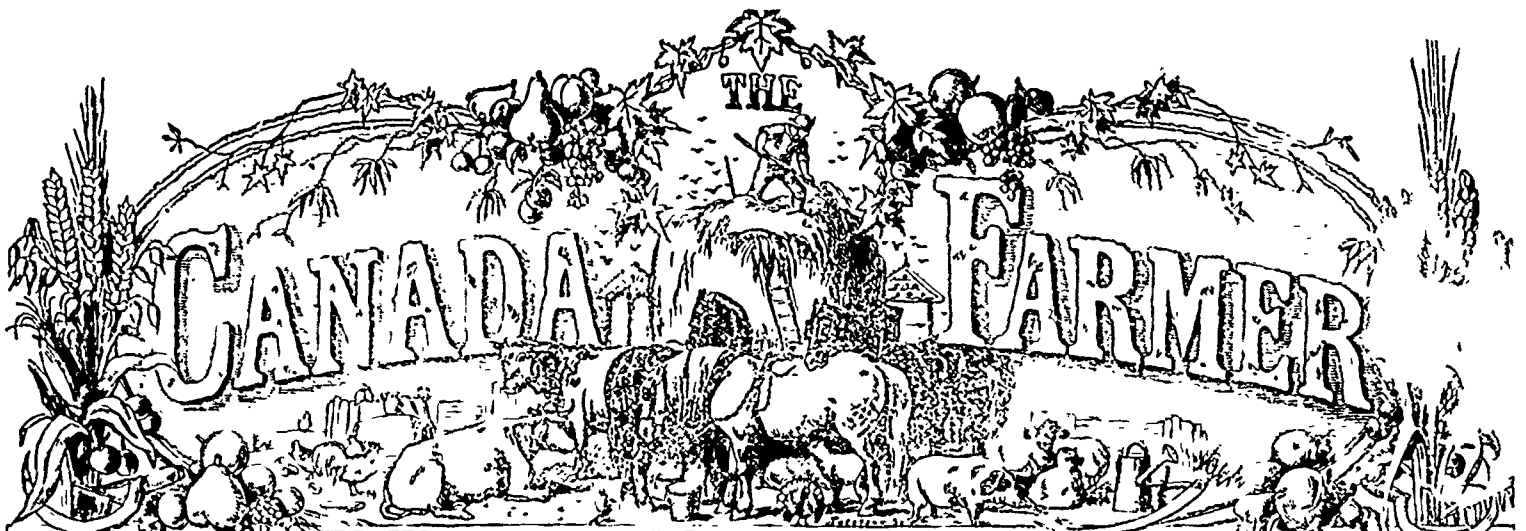
- Title page of issue/  
Page de titre de la livraison
- Caption of issue/  
Titre de départ de la livraison
- Masthead/  
Générique (périodiques) de la livraison

- Additional comments: /  
Commentaires supplémentaires:

Wrinkled pages may film slightly out of focus.

This item is filmed at the reduction ratio checked below /  
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	12X	14X	16X	18X	20X	22X	24X	26X	28X	30X	32X
										✓	



Vol. II. No. 10.

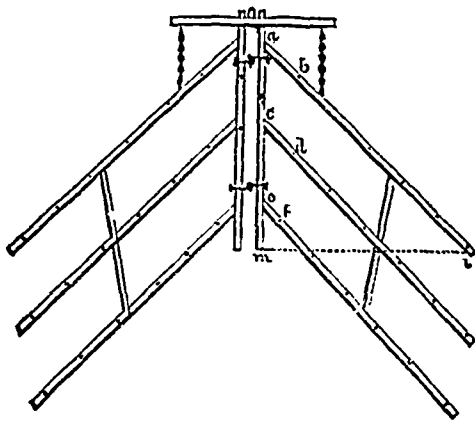
TORONTO, UPPER CANADA, MAY 15, 1865.

POSTAGE FREE.

### The Field.

#### A Couple of Harrows.

We have had on hand for some time sketches and descriptions of two harrows, which, in consequence of a large accumulation of correspondence and other matter, we have been unable to publish until now.

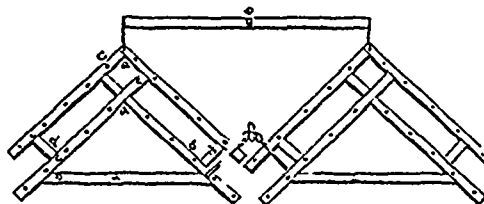


The first is furnished by Mr. M. Oliver Cole, of Orwell, East Elgin, who writes respecting the implement as follows:—

“As there is no pulverizer of more importance than a good harrow, it is decidedly to our interest to know and have the best. I herewith send you a sketch of one I made about eighteen months ago; and I am happy to say it has realized every expectation. As you recently gave a cut of Mr. Morton's, this may at first strike you as being similar; but by comparison you will see quite a difference. The teeth of this harrow cut about two inches apart, even to the extreme of the wings; and I have no doubt its work will be as superior to Morton's as is its simplicity of construction.”

#### DESCRIPTION:

From *a* to *b* 9 inches; *c* to *d* 6 inches; *e* to *f* 3 inches. The other teeth are all 9 inches apart: *a* *m* and *m* *l* should be sides of an isosceles triangle. Two teeth in the head pieces have their points inclined to the centre space—chains 3 in. spread at the whiffletree



The second harrow plan comes to us from Mr. Andrew Black of Warkworth, Percy, who thus writes in reference to it:

“I send you a sketch of a harrow which has some advantages. The great fault of the harrow shown in No. 21, volume I, is, it does not cover enough of ground, and if it were made to cover widely it would come hard on a team, as it lies so far behind. I have one of the same kind, and it was when making another to cover more ground that I hit on the plan of the one I now send. I have now the only one I ever made. I made it in the spring of 1859. In the fall of that year it took the first prize at the County show of East Northumberland, and although I have used it ever since, both among stumps and stones it is still good, in fact one of its great advantages lies in its strength and durability, for I should have used up two or three square harrows during the same time, doing the same work. Another advantage is its great ease of draught, which will be obvious to every farmer when he looks at its nearness to the team. But its great recommendation lies in the quantity and quality of the work done. It is equal if not superior to the best constructed Scotch harrow in clear fields, while on land only partially free from stumps it has no equal. It is also very simple in its construction, while the iron work is a mere nothing; both harrows can be ironed exclusive of teeth for about 60 cents, which sum includes the hinge which is of a peculiar and simple kind, invented by Mr. Robert Bell, blacksmith, Warkworth, about two years ago. It works admirably, and is easily detached by raising one of the harrows. A friend of mine, visiting from the States last winter, took a plan of it, had one made, and he wrote to me stating that it worked well. I have intended year after year to make a set to exhibit at some one of our Provincial Shows, but I always neglected it. Last winter I procured the material for a set of 3 for 3 horses so as to be able to cover a whole ridge at a time. I intended them for exhibition at Hamilton, but after cutting the scantling to the proper lengths, I did no more to it. I shall now leave it for some mechanic, and I have no doubt when this harrow comes to be known, it will soon get into favour.”

#### DIRECTIONS FOR MAKING.

Three of the outside bars are 3½ feet in length, and the fourth is four inches shorter. The inside bars are 4 feet 2 inches in length.

The joints marked *a* are half checked.

The joints marked *c* are mortise and tenon.

The pieces marked *b* are long enough to reach the mortise *c*.

The pieces marked *d* must be of the same size as the rest of the scantling, which ought to be not more than 2½ in. square, or 2½ x 2½ inches.

Teeth, ¾ in.; hinge, common horse-shoe iron.

The eveners *e* to be attached to harrow with a hook or clevis.

This harrow is made at right angles, and can be made to cut any width. For every foot long, it will cut 1 foot 5 inches.

### The Greystone Turnip.

Our attention was called the other day, by the Hon. David Christie, to this new variety of turnip, which, within the last two or three years, has become extensively cultivated in Scotland. Its produce is said to be one and a half times greater than that of ordinary varieties, and, in some instances, twice as much. This being the case, one naturally feels desirous of knowing the quality of this new accession, since that element is of essential importance in forming a correct estimate of its true value. The part just published of the *Transactions of the Highland Society*, contains an interesting paper on the composition of the Greystone, by Professor Anderson, chemist of the Society; the substance of which is subjoined.

Specimens for analysis were taken from the field, and consisted of different sizes, one weighing as much as 15 lbs. Their specific gravity was low, and, when cut across, their texture was found to be very spongy. They were grown upon two very different kinds of soil, viz., clay and sand. The results of the analyses were as follows:—

	Clay.	Sand
Water .....	93.84	94.12
O.I. ....	0.26	0.34
Soluble albuminous compounds .....	0.36	0.56
Insoluble albuminous compounds .....	0.20	0.18
Soluble respiratory matters .....	2.99	2.32
Insoluble matters, chiefly woody fibre .....	1.73	1.96
Ash .....	0.63	0.63
Nitrogen in Juice .....	100.00	100.00
“ in insoluble matter .....	0.053	0.090
“ “ .....	0.061	0.029
Total nitrogen .....	0.089	0.119

The ash was fully analysed, and gave:—

	Clay.	Sand.
Peroxide of iron .....	2.01	2.14
Lime .....	11.53	9.94
Magnesia .....	1.17	1.85
Potash .....	32.71	33.67
Soda .....	2.02	2.41
Chloride of sodium .....	7.20	7.28
Phosphoric acid .....	13.03	14.19
Sulphuric acid .....	2.19	2.72
Soluble silica .....	0.60	0.86
Sand .....	1.73	4.19
Carbonic acid .....	20.98	19.63
Charcoal .....	4.78	1.15
	103.60	100.00

The most striking fact of these analyses, is the small amount of solid nutriment contained in this kind of turnip, amounting only to about 6 per cent., the remainder being water. This is much less than what is afforded by the ordinary variety of Swede turnips, which will usually yield of solid matter, according to soil and seasons, and the kind of manure and cultivation given, from 8 to 10 per cent. The amount of solid nutritious matter in turnips is greater, per ton, in dry seasons or climates, than in moist ones; the latter, however, will generally produce a greater bulk. Our Canadian turnips usually contain a full average, at least, of nutritious matter. From the above analyses it would appear that, if the Greystone turnip will average one and a half times the weight of ordinary kinds, it is unquestionably the best

variety yet produced; but with less than this difference, it offers apparently no special advantage.

"In comparing the analysis of the turnips grown in clay and sandy soil, it is interesting to notice that those grown in the latter, though containing a somewhat larger percentage of water, are slightly superior to the others, as they contain a larger quantity of oil and soluble albuminous compounds. The difference becomes more conspicuous, when the composition of the dry matter of each is calculated at 100 parts, as done below:—

	Clay.	Sand.
Oil.....	4.02	6.78
Soluble albuminous compounds.....	5.84	9.52
Insoluble d.....	3.24	3.04
Soluble respiratory matters.....	43.53	39.45
Insoluble matters, chiefly woody fibre.....	24.15	33.15
Ash.....	10.22	9.01
	100.00	100.00

"It then appears that the total albuminous matters in the turnips grown in sand is greatly in excess of those in the sample from clay. Looking at the matter in this point of view, we have also an interesting comparison between the dry matter of the turnip and that of oil-cake, from which it appears that the former has nearly half the nutritive value of the latter; and hence 100 lbs. of the Greystone turnip should be equal in value to about 3 lbs. of good oil-cake."

We are not aware whether the Greystone turnip has yet been introduced into Canada; if it has, we should be happy to hear from those who have tried it. From all we can hear of its claims, it should certainly be fully tested in this part of the world. Fleming & Co., seedsmen to our Board of Agriculture, will be supplied with seed against another season. In the old country, we are told, that it requires to be sown early, and comes to maturity in time to be supplemented by wheat, or any other autumn crop.

### Description of the "Forest Cultivator."

SINCE the notice of this excellent implement appeared, in No. 8, of the present volume, we have received numerous enquiries from our subscribers respecting it. We have, therefore, obtained the following full particulars of its construction, mode of working, price, &c., from the patentee, Mr. J. A. Cull, of this city; and trust the information will be satisfactory to our correspondents who have sought it.

Until this implement was brought out, the clearer of new land had to depend on the A drag for scratching over the surface of the newly cleared forest, and burying the seed. Every root formed an obstruction,—the work was very hard on the horses and cattle, the surface of the soil was very imperfectly moved, and the grain was most inadequately covered. The consequence was (and is where drags are still used), that the grain came up very imperfectly and unevenly. In wet spots it vegetated at once; but in dry ones, it did not grow until after the first rain. The results at harvest, were an unequally ripened crop, and a sample, some of which was over ripe, and some shrunk from being cut too green. These evils were not so much felt while none but the best land was cleared, but now we are clearing that of an inferior quality, and such as in the first settlements was passed over. It was to meet these difficulties that the "Forest Cultivator" was devised. It consists, as will be seen in the cut on page No. 113 of vol. II, of a triangular frame, with three tines or shares, something like double-breasted ploughs, but the front shares made in the form of a sleigh runner. These are sharpened in front, and the weight of the frame, and the formation of the shares or tines, makes them penetrate the soil to as great a depth as the roots will allow. It thus raises all the soil that can be lifted, and throws it up in a very roughened and uneven state, full of holes and cavities, of sufficient depth to ensure the burying of the seed. On striking the roots, it glides over them without any serious shock, and re-enters again on the other side. As the three shares or tines are placed in a triangle, it (like

a three legged stool) adapts itself to any surface however uneven, and although one of the shares may be thrown out by a root, the other two are still at their work. The triangular frame enables the team to drag it close to the stumps, and the shares on leaving the ground, always carry soil close up to the stump, thus leaving a place for the growing of the seed, which is entirely missed where the drag is used. It is used first one way and then across, and leaves the surface of the ground covered with a loose tilth, of from 4 to 6 inches in depth. By a peculiar adaptation of the shares, they can be set as deep into the ground, or as shallow as is thought advisable, and the handles being long and powerful, enable the operator to guide it as he may wish. Although heavy to look at, a team of 2 horses, or a yoke of oxen drag it easily; and horses will go over 3 acres, per day, twice in a place, once and across. The grain is then sown, and a light harrowing buries it completely, leaving the surface of the land in far better condition than was heretofore attained by ordinary means.

The implement is equally useful in the cultivation of fallows, and of land which has been once or more times ploughed in new clearings: so that new land, after the first crop, instead of being laid down to grass, can be used for other crops, and thus a great waste of time and land avoided. It will not work on old sod, or thick stubble, where the sod or stubble forms a sufficient obstruction for the sleigh-shaped tines to ride over; but where the surface is at all broken by the plough, it works well, and completes that which the plough will only partially do. It is equally useful to work old fallows, the moveable tines enabling the operator to go deep or shallow, as he may desire. It covers three feet wide each time it goes over the land. This implement is now in pretty general use (or at all events it is well known), in Perth, Huron, and Bruce, and is gradually working its way in other parts of the Province. The price at which it is sold, is \$16. It is strong and heavily ironed, and seems likely to wear a length of time notwithstanding the rough usage it meets with amongst the stumps. It is not one-half as hard on the horses as the old drag.

### London Sewage.

The Metropolitan Board of Works, and a committee of the House of Commons, have approved and recommended a scheme, devised by Messrs. Napier and Hope, for the utilization of the sewage of the City of London. The leading features of this scheme are delineated by the *Fidd* as follows:—

"A culvert will be constructed ten feet in diameter, which will tap the northern main outfall sewer of the Metropolitan Board at Abbey Mills, three miles from London. This culvert will run for a distance of three and a half miles, with a fall of two feet per mile, to a point where the levels of the ground will require it to be lifted twenty feet. The discharge will then continue in a culvert of the same dimensions, sometimes in cutting, sometimes on embankment, until it reaches the head of the navigation of the river Crouch, at Battle-bridge, in Essex, twenty-eight miles from the commencing point at Abbey Mills. The sewage will be again lifted twelve feet by pumping at nine and a half miles. The object of these lifts is, besides increasing the velocity of the current, to cause the culvert to command as much as possible of the surrounding country by gravitation. At Battle-bridge the main culvert will divide into two smaller ones, running on the north and south sides of the river Crouch. That on the north will be eighteen miles long, terminating on the Dengie Flats; that on the south will be sixteen and a quarter miles long, terminating on the Maplin Sands. Both these places are extensive foreshores on the east coast of Essex, dry at low-water, and several miles in width, by about twenty miles of aggregate length. These vast plains are to be reclaimed from the sea by embankments (similar to those which are common in Lincolnshire, Holland, and other countries) to the extent of some eight thousand acres in the first instance; ultimately, probably twenty thousand acres will be included. There is scarcely any population at present along these dreary shores, which, however, will become, if the project is carried out, the most highly fertilized lands in Great Britain. The sewage will be dischar-

ged upon these flats, and made to cover the whole of them by gravitation. The effect of this discharge when these sands are shut off from the sea by the banks, and other arrangements which will presently be described, will be to convert the barren surface into a tract on which crops of grass as rich as those on Craightonny meadows may be grown. In the course of time, the gradual deposit of the particles held in suspension by the sewage will permanently increase the value of the sands.

This scheme is, in effect, an enlargement of the operation which has been so successfully carried out in the face of the whole public on the Craightonny meadows, near Edinburgh—the tangible result of which has been to convert land previously of little value into some of the richest soil in the country. It is a positive fact that, whereas part of the Craightonny meadows were once not worth 5s. an acre, they now bring in a rental of from 22l. to 40l. per acre; and though it is stated that these sands are of a different nature to those at Maplin, and it is pronounced by Baron Liebig that the latter are not calculated to absorb the sewage with advantage, yet the balance of evidence is in favour of the scheme. It is calculated that the cost of the works necessary to effect a similar transformation on the Maplin Sands and Dengie Flats will be 2,100,000l., and that the result will be to convert barren sands into 8000 acres of land, eventually worth 30l. per acre rent; or, in other words, a capital value of from 4,000,000l. to 5,000,000l. sterling. Nor is this all. Profit may be reaped and advantage gained to the land all along the course of the proposed culverts, by allowing the farmers to have the liquid sewage turned upon their fields at a price, and the area of cultivated land which such operations may be made to influence, is calculated at 80,000 acres. In addition to this, it is expected that, by the natural action of the tidal currents, the foreshore of the 8000 acres, so to be reclaimed, will shallow up gradually, and so, after a short period, it will be possible to reclaim at moderate cost another belt of sand of equal extent; and should the Government in time cease to require a tract of land at Shoeburyness for artillery practice, a further considerable area would be available for the reception of the London sewage on the north side of the Thames, and would be equally convertible into freehold land worth 400l. to 600l. per acre."

### Flax.

THE flax crop has taken such hold of the public mind that we find it necessary to revert to its cultivation now, approaching the eve of the proper time for sowing it. That it is a fully remunerative crop when properly managed, and markets for it available at a moderate distance, there can be no doubt, if cultivated in due proportion to the size of the tillage farm; but we by no means recommend its extension beyond that proportion, which cannot be, with safety, estimated at more than one-eighth or one-tenth of the area under cultivation. Some mistakes were made last year in sowing too great a breadth by many farmers, without due consideration, so that we are obliged again to recommend caution, both on the part of the tenant, the landlord, and the agent. It is better to be under the mark than over it, till, by practical experience, each cultivator becomes acquainted with its after management and manipulation; some samples of last year's production, though of first-rate quality up to the period of steeping, having been so spoiled in that delicate process as to be wholly worthless.

Such results as this take the "courage" out of a farmer, and give him such an indolent opinion of the flax crop as to make him resolve never to attempt it again. In other instances, though everything went on well, the want of a market has acted as a damper on future flax operations, and it was only this week that a gentleman produced a most excellent sample of scutched flax in this office, when making enquiry as to where he could get a market for it. We have only further on this head to recommend caution. Let each sow more or less according to the area under tillage; but avoid going too deeply into its cultivation till better acquainted with its management after pulling, and a market for it.

We have so repeatedly inculcated the necessity of deep autumnal cultivation of the land intended for flax that we must presume it has been attended to. If so, the spring tillage should be of a shallow but thoroughly pulverized description, and best performed by the grubber, harrow, and roller, so as to produce a perfectly fine tilth of 2½ to 3 inches in depth, to ensure the perfect and even braiding of the seed. Below that depth the soil should be of a close, homogeneous, compact texture; for, though the flax roots descend to a great depth in search of food, a loose, deep, friable soil is as inimical to the flax as it is to the wheat plant, causing both to fall at the root or "lodge." If deep autumn cultivation has not been attended to, it must, of necessity, be performed in the

spring. As a hard, impenetrable pan is just as bad as the other, causing the plant to get yellow, even in times of partial drought for want of sustenance, it must be filled deeply, the roller, and that a heavy one, must be called into requisition throughout the process, so as to produce artificially that consistency and consolidation which nature has performed during the winter when the land had been deeply ploughed.

When the surface has been brought to that state of pulverization required for the equal braiding of the seed, it should be evenly sown by a very careful, experienced flax-seed sower, so that it may not be too thick or too thin in patches; otherwise it will not be fit to pull evenly, nor will it scutch well, or with profit. The thin parts will branch, produce more seed capsules, and be of less height than the thick parts; while the latter will have more slender stems, be drawn up longer, and be weaker in the fibre than the thin portions of the crop. It, therefore, requires a very careful and experienced hand to sow flaxseed. When sown it should be harrowed with a short-tined harrow, first one way, then across, and a third stroke of the harrow diagonally, which three strokes will suffice to both cover and distribute the seed evenly, if by chance some spots may be sown thicker than another. To effect these operations in the best manner, the land should be in a dry, free working state—not too dry; and if so damp as to clod with the harrow, which would gather the seed in the clods, the sowing is better postponed for a few days, till the land is in proper working order, then proceed with it.

Early sowing is to be preferred to late sowing, for many important considerations—early sowings are fit to pull early, and the weather and water are in a better state of temperature for steeping than at later periods: the flax is, therefore, earlier fit for the scutching mill, and sooner marketable. The time for sowing must be regulated by the state of the weather. If sown too early, and that it brands, and is caught by frost, it will be highly injurious to the crop, and is best put off for a few days till there is a favourable change in the weather. The period for sowing ranges between the 8th of April to 25th May; but invariably the early sowing produces the best crop, and it is worth making a push to secure all its advantages.

There has been much disputation about the quantity of seed to be sown; some advocating as much as 4 bushels per Irish acre, some 3½ bushels, and some have come down much lower. The soil, the climate, and the aspect have much to do in this matter, and must be taken into account by the flax cultivator. As a general rule, we find that 9 pecks or 2½ bushels to the statute acre, or a little over 3½ bushels to the Irish acre, is about the proper quantity. It is better to sow a little too thick than too thin; in poor and exposed soils and aspects a little more seed will be required, and in rich, sheltered situations and aspects it will be prudent to sow a little less, which must be left to the practical judgment and experience of the farmer himself.—*Irish Farmer's Gazette*.

### The Cabbage as a Field Crop.

Among the profitable crops to be grown on the farm, cabbages hold an important place.

They are not so extensively cultivated as they deserve to be. We have reference now to their cultivation beyond a place in the vegetable garden where, of course, they are esteemed as indispensable for family use. About 10,000 plants can be grown on an acre. Throwing out the 900 plants as producing imperfect heads, we have 10,000 heads, which, at the low estimate of three cents per head, amount to \$300. But if taken from the field, and sold at that price there still remains the loose leaves and stalks, which afford a considerable quantity of nutritious food to milk cows, at a time when grass begins to fail, promoting and keeping up a flow of milk in the fall which is not easily obtained from any other food.

Last season we commenced feeding the loose heads and leaves left from a patch of cabbages, and found the increase of milk nearly, if not quite, paid for the cost of cultivation.

A part was fed from the field and the balance was stored in the barn so as not to be affected by frost. We believe the crop can be grown profitably for stock feeding. Where the soiling system has been adopted, they are one of the crops to be used in the succession.

The elder Mr. Quincy, of Massachusetts, in a letter written to us several years ago, places cabbages as among the most important plants for soiling purposes. They come in play at a time when the nutritive value of grasses has been injured by frosts, and when the food of stock is being changed from succulent grasses to dry fodder, and hence they are of important ser-

vico for the dairy. Some regard cabbages as a profitable crop to raise for feeding stock in spring, or during the latter part of winter. Properly stored, the heads may be kept without loss or decay. As a market crop cabbages have long been regarded as among the most profitable vegetables that can be grown. Sales are readily made in the fall throughout all our cities and villages, and at remunerative rates. In the spring, perfect heads of good sorts command very high prices, and, in view of this fact, it is rather singular that so few, beside market gardeners, go into their cultivation for supplying the spring markets. They can be grown on almost any soil that is adapted to corn, if an abundance of well rotted manure is applied to the land. That from the hog-pens produces the best results. Cabbages are not likely to do so well on ground that has been successively cropped by them for three or four years, but succeed best on fresh lands. For a very early crop the plants will be well on their way at this time in hot beds, but for a general crop, the seed can be sown now. And we have introduced the subject with the hope of inducing a more general cultivation of cabbage as a field crop.

There are a great number of varieties of cabbages many of which are inferior. The Winstedt we place among the first for excellence. It is a choice variety for the table, and taking all its good qualities into account, is scarcely excelled. The Wakefield, the Ox-heart, the Drumheads, the Red-Dutch, and the Sugar-loaf are popular varieties, all of which make good returns.

Some of the varieties of the Savoy are very desirable for cooking. The leaves are very much wrinkled and the variety is very much esteemed for its flavour and richness. Mr. Gregory of Marblehead, advertises a new early variety called the Cannon Ball. We have never seen the variety grown, and therefore cannot speak as to quality or as to its reliability in heading. It is said to be very hard-headed and heavy for its size, being round like a cannon-ball, and excelling in hardness every known variety.

In sowing seed for plants it is always well to sow plentifully in order to secure enough plants to meet every emergency. The seed costs but little, and surplus plants can usually be disposed of, or at least will often accommodate neighbours or friends, who have been unfortunate with their plants, or who have neglected to arrange for a supply.

We have known, some seasons, a great call for plants and great difficulty in obtaining them. Sometimes insects prove destructive to the plants while in the beds, before they are ready to transplant. An occasional application of ashes or soot sifted over the beds will serve as a protection.

The cabbage is a very nutritious vegetable. According to Johnston, the dried leaf contains from thirty to thirty-five per cent, of gluten, and is in this respect, therefore, more nutritious than any other vegetable food which is consumed to a large extent by man and animals. We do not know what amount of green food could be grown from an acre of cabbage by selecting the larger varieties; but it is larger than one, at first thought, would imagine. Supposing however, that an average of five pounds per head be obtained, the 10,000 heads would turn off 50,000 pounds or twenty-five tons, an amount which it would seem might induce their more extended cultivation as a field crop.—*Utica Herald*.

A farmer named Wells, living in Wethersfield, Mass., who owns a large tract of land, raised last year \$17,000 worth of onion seed, the profit from which was \$14,000! He produced, besides, a large quantity of potatoes and other vegetables. Such farming is not only worth money, but is worth mentioning.

AN IMMENSE CROP OF TURNIPS.—“We are indebted,” says the *Utica Herald*, “to Willard Hodges, Esq., of Rochester, N. Y., for a statement recently furnished him by John T. Andrew, of Cornwall, Ct., in reference to a large yield of turnips. The crop was raised by Mr. Andrew a few years since and is one of the largest that has been reported, viz., 2,102 bushels per acre. It shows what can be done by thorough cultivation, and forcibly presents the question whether the turnip crop cannot be made a source of profit. In England turnips are extensively grown, and the crop has added greatly to the wealth of the country, and it would seem they could be profitably raised on any farm where stock is kept. Mr. Andrew estimates the cost of raising at between two and three cents per bushel. At this rate calling a bushel sixty pounds, a ton of food could be produced, at most, for one dollar. His turnips stood ten inches apart in the rows, and the distance between the rows was eighteen inches. The largest weighed fifteen pounds each, but had the average been ten pounds each, it will be seen what an immense crop is capable of being produced to the acre.”

### The Breeder and Grazier.

#### Breeding and Management of Pigs.

We quote part of an article on this subject from the *Scottish Farmer* :—

“The farmers of Scotland, as a rule have no great affection for the porcine race. Not that they have any Judaistic repugnance to the animal, on the ground that “though he divide the hoof and be cloven footed, yet he cheweth not the cud.” All of them, so far as we have had any experience, can enjoy a slice of ham with their fowl, or a rasher of bacon with their eggs. But they object to pigs about their steadings, because in their opinion, they do not pay, generally speaking. Scottish agriculturists regard Paddy’s “rint payer” as a beast to be avoided except in a cooked state; and in their hearts, we are afraid, many of them believe that the costs attendant upon breeding and feeding, more than counterbalance all the premiums obtained at agricultural shows, and the high prices often realized for the prize-takers and their progeny.

This is no doubt an erroneous notion, arising from the fact that those sceptical about the profitability of pigs have never bestowed upon them the same amount of care and consideration which they devote to cattle and sheep. They have regarded pigs as an inferior sort of quadruped—a low, grovelling, dirty, besotted race—as far beneath the other occupants of the farm-yard as some Americans consider the woolly-haired negro below the lanky-haired white man. In fact, we have known some farmers, who have been induced to purchase pigs, in a moment of excitement declare their wish that the gospel miracle should be repeated—viz., that the whole herd should be suddenly possessed with Satanic agency and run violently down a steep place into the sea, or into any other place where fatality would ensue to them. But in such cases we are inclined to think the owners were themselves more to blame than the poor swine. They never attended to their comfort or their food, allowing them to wallow in dirt and mire, and to scramble for food in the cattle courts. And for such treatment, what other reward than loss could be expected?

They manage these things better in England. English farmers, or at least a considerable number of them, know well that the pig is an animal with no natural predilections dirtwards more than other four-footed beasts—that, in fact, it thrives and grows fat best when it is kept most cleanly. Thanks to a few humane individuals, there is now a prospect of better days being in store for the hard-wrought, much-abused, and long-enduring ass; we trust also that a brighter future is dawning for the despised and often ill-treated pig.

Mr. Stearn, of Brandeston, one of the most successful breeders of pigs in England, recently gave some very good advice to his brother farmers of the London Central Farmers’ Club on the subject. The first consideration, as Mr. Stearn pointed out, is to secure a pig of a good breed. Unless this is done, the chances are that the balance will be on the wrong side of the ledger. “I am often disgusted,” says Mr. Stearn—and his observations apply to Scotland more pointedly than to England—“as well as surprised, to see what a disgraceful lot of pigs are kept by many of our large agriculturists as well as by the small ones, such as I am sure, if kept to any great extent, will ruin any one, for they eat an enormous quantity of food, and will neither grow nor fatten upon it; but if farmers generally would pay proper attention to breeding, rearing, and feeding, I believe there could be double the meat raised at little more than the present cost.”

After having secured a well-bred pig, the next most important duty is to see it properly housed. The piggery ought to be roomy, dry, and well ventilated, and it ought to be cleaned out frequently. Dirt and bad smells are as productive of illness and disease to the swine as they are to human beings. Mr. Stearn, after thirty years’ experience, prefers an asphalted floor to any other, but over this in cold weather he places a false lattice floor for the young pigs. This is lifted weekly, everything swept from underneath, and the floor washed. “Every morning,” adds Mr. Stearn, “I have the beds attended to and fresh littered, for I find the cleaner a place is kept the better the pigs thrive.” Mr. Stearn, who deserves great praise for the frankness with which he makes public the whole system of his management, goes into considerable detail as to breeding; but the gist of it is, that the sow should be larger than the boar, and that the former should not be bred from before she is ten or twelve months old, or the latter before he is eight, and that the young pigs should receive

the most nourishing diet, such as new milk sweetened with sugar, and after a few days skim milk mixed with oatmeal, sharps, and Indian corn.

Many people may be disposed to think that pigs, treated after this fashion, would be more bother than they are worth, but Mr. Stearn and others have found it profitable, and there is no reason why like management should not be attended with similar results in all cases."

**TO START A BALKY HORSE.**—Fill his mouth with dirt or gravel from the road and he'll go. Now, don't laugh at this, but try it. The plain philosophy of the thing is, it gives him something else to think about. We have seen it tried a hundred times, and it has never failed.—*Ohio Farmer.*

**TO GO TO ENGLAND.**—We learn (says the *Illaca Journal*) "that Hon. Ezra Cornell has just sold to Chas. W. Harvey, Liverpool, England, his Short-Horn bull 3d Lord of Oxford, just 2 years old, for \$3,000. He was purchased of Samuel Thorne of Duchess Co., at \$1,000, when two weeks old. We learn that we are sending more bulls to England now than receiving therefrom."

**HORSE CHESTNUTS.**—The following item is just now "going the rounds:"

Tons and tons of horse chestnuts go to waste in this country every year, and yet on the Rhine horse chestnuts are used for fattening cattle, and for feeding milch cows, and 100 pounds of dried nuts are estimated to be equal in nutritive value to 150 pounds of average hay. Another authority makes them equal, weight for weight, to oatmeal.

**FISHER HOBBS ON PIGS.**—At a late meeting of the Central Farmer's Club, the Breeding and Management of Pigs being up for discussion, Mr. Fisher Hobbs stated that he considered "his breed of pigs better now than they ever were before." He had not been an exhibitor of late at Royal Shows, because, being prominent at them as a Steward and judge, it had been hinted to him that it would be better not to compete. His pigs were "originally descended from three families. For upwards of five-and-twenty years he had never gone away from his own breed, either for a boar or a sow, and he contended that by judicious selection of both the male animal and the female, the breed might be perpetuated in that way. Of course, this system required a considerable number of animals, and a very choice selection of the male for the female." The three families alluded to were Lord Western's, Neapolitans, and the old native Essex, respectively—out of which he had formed one distinct breed.

**HOG PENS.**—Every farmer knows how offensive a common sized hog pen or yard becomes during the hot weather of summer, and how during a rainy time it becomes in fact a swamp of mud. To remedy this, those who have abundance fill up with straw or other litter, ashes, &c., and yet the remedy is only partial. The smell is not disposed of, and the animals are full half the time wading in mire.

The following manner of building a pen we have known to remedy the evil completely:—Take two pieces of 6x8 timber each fourteen feet long; dress one end of each in form of a sled runner, then lay them parallel eight feet apart, with the six inch edge on the ground; now take 4x4 scantling and halve or tenant in crosswise one piece at each end, and one foot from the ends of the runners, leaving the four inch strips one and one-half inches below the level line of the upper side of the runners; next lay a floor of one and one-half inch plank over one-half of the surface, say eight by six feet. Next mortice in 4x4 scantling at each corner and mid-ways for posts on which to nail boards for the enclosing. Let these 4x4 posts be flush with the outside line of the runners; then nail inch boards on the inside, dividing the whole with a cross-fence or partition on a line of the floor. Roof over the floored part, form the trough across one end or side of the floored part, and with a slide door shut your hogs in or out of that part—and your pen is completed.

Now you ask, where is the benefit of this pen over any common one with posts set in the ground? We answer, you can hitch a team to it and move it to any part of your grounds, placing it from time to time where most convenient to feed, &c., besides enriching various spots of ground and leaving the animals a dry place and fresh ground to work in.—*Ohio Farmer.*

**ON KILLING ANIMALS FOR FOOD.**—In the *Gardeners' Chronicle* "Falcon" urges the humane treatment of animals intended for the shambles, as follows:—"The present system of depriving them of existence, whether by bleeding only, or by stunning first, if properly done is so rapid, that scarcely any other plan would answer the purpose so well. The blow given by either the poleaxe or knife is so quick and deadly, and the loss of sensation so rapid, a prolon-

gation of agony can only be caused by carelessness or barbarity on the part of the butcher. However, there are other matters connected with animals destined for the shambles which require to be looked into, and may be considered more cruel as producing a greater amount of suffering than their destruction by experienced men; take, for instance, the shameful way in which dumb brutes are beat about the legs and joints, to force them into trucks, where they have to stand for hours, crowded together, unable to change their position, with aching bones, and without a mouthful of water to quench their burning thirst. Into what disgusting places are they often thrust before slaughter! If means were adopted to mitigate these horrors, the last blow which releases them from misery, would be a trifle in comparison to the unnecessary rough treatment they are subject to, from the savage conduct of men and boys. Children are naturally inclined to torment insects and small animals: this wicked propensity, allowed to grow with their growth, is certain to produce hard, bad men and women. To suggest visionary plans to shorten the last moments of oxen, sheep, and pigs, already extremely limited in the hands of a skillful butcher, is useless. Would it not be better to teach all classes and all ages, and further make them understand, that "the merciful man is merciful to his beast?" and also that those who do not show mercy, even to animals, cannot expect to receive mercy hereafter?"

## The Dairy.

### New Cheese Factory.

We learn from the *Lagersoll Chronicle* that, "a meeting of farmers was held at the residence of Jas. Harris, Esq., in West Oxford, on Saturday, the 15th inst. for the purpose of taking into consideration the effecting of an organization to co-operate with and support Mr. Harris in carrying on his cheese factory now building. About twenty farmers of the neighbourhood met; C. E. Chadwick, Esq., being appointed Chairman, and F. Eldred, Esq., Secretary. After considerable discussion, it was resolved to appoint a committee of management for the sale of the cheese, and a list of certain rules by which to carry out the aim of the organization. The following resolutions were unanimously adopted:—

1. That we agree to form ourselves into an association for the manufacture of cheese in connection with Mr. James Harris, of West Oxford, and be governed by the rules and regulations adopted by a Board of Directors, to be appointed from among ourselves.

2. That the following gentlemen be the Directors of the Association, to sell the cheese and confer with Mr. Harris on the general business of the organization:—Messrs. H. S. Pendleton, James Harris, Wm. Grey, Thomas Hislop, C. E. Chadwick, Wm. Dutton, and Stephen Foster.

3. That we agree to adopt the principle of furnishing Mr. Harris with milk, and allow him to manufacture the same into cheese, at the rate of two cents per lb., allowing at the rate of ten lbs. of milk for one lb. of cheese, individuals supplying milk to furnish boxes for cheese, and also what vessels they may have."

We congratulate the dairymen of West Oxford on the above movement. There can be little doubt that, if the spirit of the resolutions is carried into the management and business transactions of the Society, its mission will be one of usefulness and success.

### Substitute for Cheese Bandage.

Mr. PITCHER of Martinsburg, N. Y., made the following statement concerning a substitute for the common cheese bandage, at the Watertown cheese convention. He said the high price of cheese bandage had induced him to make an experiment, to see if a substitute might not be employed for bandage. His dairy consisted of 80 cows; had made cheese for a number of years; had some boxes made, the hoop planed inside and outside, and had covers fitted to them in the usual way. The cheese was not bandaged, but when carried to the dry-room the hoop was slipped on and used in lieu of bandage. This hoop was half an inch larger in circumference on one edge, and was made an inch higher than the cheese. The cheese was turned daily; the hoop being higher and larger at one edge rendered it easy to be taken off

the cheese at any time. The hoop was removed occasionally in order to take off the mould accumulating on the rind of the cheese—it was easily removed. There was no trouble with the cheese—it formed a handsome, smooth rind, and cheese buyers were pleased with their appearance, etc. When ready to send to market the box was cut down even with the cheese and the cover fitted on, and all was ready. In eight or ten days the cheese are loose from the hoops; they are then taken off and the cheese greased. Do not grease the rind when the cheese is taken from the press, as it is apt to produce mould. Hoops are not so liable to produce mould as the bandage. Did not think the hoops would do for soft, porous cheese; do not approve of such cheese. When cheese are properly made, the use of hoops are preferred to bandage. Last spring contracted for his hoops, and paid one cent per inch.—*Country Gentleman.*

**A milkman may have a habit of stopping daily near the river and not excite suspicion; but when we find his little boy fishing for minnows in the milk pans, we begin to have our doubts.**

**RANCIDITY IN BUTTER.**—Among all your correspondents who have written upon the subject of rancid butter, I do not see that any has suggested a remedy which I have found efficient. I always when setting the milk put into each pan a pinch of nitre (refined saltpetre); also in winter put water just sufficient to cover the bottom of the pan, and in summer cold water. I have continued this system for many years, and my butter is, and always has been, excellent.—*G. A. E., in Cottage Gardener.*

**DEATH OF A COW FROM CRINOLINE.**—A few days ago a cow, belonging to Mr. Walmsley, residing on Yonge St., near this city, died from having attempted to swallow a piece of steel hoop, about 10 inches long, which had formed part of a lady's crinoline. The curved form of the steel prevented it from descending the gullet, where it lodged, and inflammation having ensued, death was the result.

**KINDNESS TO COWS.**—A correspondent writes on this subject, to the *Country Gentleman* as follows:—"Cows should always be treated kindly, and as far as possible always have the same milker. A fractious man should not be allowed to handle a spirited cow. Kindness and gentleness are always best; beating and pounding should not be tolerated. If a cow or heifer persist in kicking under kind treatment, take a small rope and quietly fasten around the opposite fore foot, thence bring it over the back to hang by the milker; when she kicks again, without saying a word, draw her foot up to her body. You can now handle her as you please. She will struggle to release her foot, but to no purpose, and will soon crouch to the floor. Now let her get up again, and pet her a little. If she kicks again repeat the operation as often, and you will soon find she will not move a foot while you are milking, unless there is some irritating cause like sore teats or sharp finger-nails."

The *Utica Herald* has the following remarks, on the same subject:—"One thing we regard as imperatively demanded for success in the management of stock. Never allow a cow to be kicked or in any way abused by hired help. Whatever good qualities a man may have, better part with him at once if found disobeying orders in this respect. State the case plainly at the time of hiring, and make as a condition a forfeiture of a part, or the whole of the man's wages, who is found guilty of kicking or beating cows. The practice has become common and should be broken up. The annual losses from this source are immense. If every dairyman would make it a rule that his milch cows must be treated kindly, and that no excuse can be taken for blows and kicks, and that no person would be employed who maltreats stock, the whole country would be greatly benefited. We have known of valuable animals being lost by a kick, and others rendered valueless for the season by an apparently slight thump with a milking stool, from bad tempered persons. Labourers of this kind are dangerous, and the sooner one is rid of them the better. Much can be effected in this matter by good example, for if the owner so far forgets himself as to abuse stock, he cannot expect the men in his employ to do otherwise. The business of the year is about to commence, and the start should be made with sound, healthy, and vigorous stock, and from such, reasonable results may be anticipated."

## Sheep Husbandry.

### The Wool Season.

To the Editor of THE CANADA FARMER:

SIR.—Ere the clip of this season is taken off, I would beg of you to insert the following remarks, for the purpose of showing farmers the injury they do themselves and this market, by their careless and slovenly mode of handling this important staple; which, since the comparative failure of our cereals, has ranged at a price for the past three years that has tended not a little to relieve them, and the country generally, from embarrassment. Toronto is the leading grain market of this Province; the prices of almost all the western markets are, in a manner, regulated by it; and if, by a little care in the handling, we could occupy the same position with regard to wool, why should we not? I do not deem it my place to take upon me to advise farmers how to raise wool; but I think without presumption, I can show them how to make the most of it, when it comes to market. Hitherto our Toronto wool has been a good deal below par, compared with that of the more Western markets, and a difference of 3 to 5 cents per pound, is noticeable in our relative quotations. The quantity of wool sold in this market by farmers and small dealers, exclusive of the large lots, was last year about 200,000 pounds; and the loss of 5 cents, per pound, on this quantity would be to the farmers, in this locality alone, in round numbers about \$14,000. Now, to show them how some part at least of this large sum may be "saved, and so gained to them," I would say that the first and most important point, and almost all the gist of the question, is to wash the sheep thoroughly before shearing; but, when that is accomplished, not to turn the sheep into a fresh clearing, full of charred logs and stumps, or some place similar, for then all the labour is lost, and the appearance of the wool looks blacker than before the washing. I know that in some places clear, nice streams are not within convenient distance; and that reason is alleged for carelessness in this respect, but be it known to your readers, that "tub-washed wool" proper, that is, wool which has been washed on the sheep, in a tub, is more valuable than even the ordinary "well washed fleece," and commands higher prices in the United States markets. The desideratum to the manufacturer, is to get wool in the fleece as clean, white, and free from "burrs," "tag locks," dirt, and all extraneous matter as possible, and to obtain this they will pay relatively higher prices than for superior wool, when so mixed with impurities. Farmers may think that they gain by the increased weight arising from imperfect washing; or after washing, by allowing the sheep to run until the wool is impregnated with the "yolk," so that it will weigh more. In this they are mistaken. The high prices paid for wool, during the past three years, 40 to 50 cents per pound, have made buyers much more particular, and they scrutinize the quality more closely, and reject more dirty and inferior than they did, when wool was bought for 20 and 25 cents per pound. So much for the cleaning process.

In shearing, the fleece should be taken off whole, which enables the stapler to sort the different qualities, of which there are generally five in each fleece, sometimes more, suitable for different fabrics. When the wool is broken, this is rendered difficult, if not impossible, so that the broken has generally to be used unsorted, and consequently in a mixed state, for an inferior and cheaper description of goods. The same remarks apply to what is known here as tub-washed, i.e., wool shorn from the unwashed sheep, and then washed in tubs. The washing breaks the fleece, and wringing the water out of it makes it stringy and clotted; generally we pay from 5 to 10 cents less for broken wool, and tub-washed, than for good fair fleece. This reduction then, could be saved by a little more care. On "unwashed" wool, it is customary to make a reduction of one-third. This is submitted to, but not without some disagreement; and to save contention, it would be better for farmers to wash all their wool. "Cotted" or "matted" wool is the subject of endless disputes, between buyer and seller; and because it is washed wool, the farmer thinks he ought to receive the same price for it as for

the sound free fleece, quite forgetting that the second growth which constitutes the "cott," is so brittle, that it breaks into small particles, when going through the "breaker" and carding machine,—add to this, the stapler's difficulty in sorting, and the inferior quality of the wool, and there is, I trust, a sufficient explanation for our taking so heavy an allowance, and that it is insufficient I would mention that the orders from manufacturers, usually are as little "cotted" and "unwashed" as possible, even at the reduction of one-third off.

The fleeces should be rolled up tidily and fastened to keep the wool together, which facilitates the handling, and keeps it clean. Wool packed loosely and promiscuously in sacks, or sheets, when being opened and examined, is always broken more or less, unless the fleeces are properly rolled up, and fastened. Hence I would say to the farmer, it is as much for his own advantage as that of the trade and the country generally, to wash his sheep well before shearing; to bring his wool to market as clean, and with as little "broken," "cotted" and "unwashed" as possible. He can use any such inferior wool with more advantage at home. By this means the character of our market will be established, and we shall furnish a grade of wool equal to any produced in this Province. A TORONTO DEALER.

Toronto, May 2nd, 1865.

**CLOVER HAY FOR SHEEP.**—Our esteemed correspondent, Mr. Fassett, says when he has well-cured clover hay, cut in blossom, he never feeds his sheep grain, unless it be to the ewes about lambing time, and they come out in the spring healthy and in excellent condition. With clover, if any grain is needed, feed oats: with timothy, corn is better. If he commences to feed grain late in the winter, he expects to lose much of the wool, but, as he observes, that is better than to lose the sheep. With plenty of well-cured clover hay, cut in blossom, sheep need no turnips or potatoes to keep them in good condition.—*Genevieve Farmer.*

**MONSTROUS TREATMENT OF SHEEP.**—We extract from the *Scottish Farmer*, the adjudication of the Tiverton magistrates on the following disgraceful instance of cruelty to those useful animals, and heartily concur in its approval of the punishment inflicted:—"Mr. W. Stoate, a wealthy and eccentric barrister, also a farmer at Upcotts Clayhanger, Devon, was charged with cruelty to a lot of 275 sheep and some Exmoor ponies, in so far as he failed to supply them with food, and as the winter advanced and the food became scanty, the shepherd who had charge of the animals wrote to Mr. Stoate, "requesting him to provide food, as the sheep were starving;" but he received only a supply of straw. The shepherd repeated his application several times with no better success, and he was ultimately discharged by Mr. Stoate in February last. Another shepherd was engaged for a fortnight, but since that date the sheep had been altogether uncared for, and about 130 of them, and an Exmoor pony, had literally died of starvation. One of the sheep had its eye picked out by a bird before it was dead, as it lay in a prostrate condition. The defendant pleaded that he had been buying straw through the winter to sustain the sheep, and that the present proceedings had been instituted through spite and malice. He conducted his own case. The bench sentenced the defendant to six weeks' imprisonment, with costs. We are glad the magistrates did not take a fine."

## Veterinary Department.

### Laminitis or Founder.

The disease known as Laminitis, consists in inflammation of the sensitive laminae of the horse's foot. In an acute form, this is one of the most painful diseases to which the horse is liable, as the tissues involved, are placed between two hard bodies—the coffin bone within, and the insensible hoof without. When the process of inflammation sets in, the opposition of these unyielding bodies, causing pressure on the nervous filaments, gives rise to the most excruciating pain. Laminitis proceeds from various causes, and in young horses in soft condition, a rapid drive of five or six miles will sometimes produce this disease. Another cause is continued driving upon macadamized roads, or on pavement; and those horses most subject to it, are such as have a high stamping action. It is also a common occurrence in horses

standing, for a length of time, upon any hard substance, as when on ship board. In transporting troops a great distance it often happens that a number of horses become affected with laminitis. Another common cause is by allowing a horse to drink a large quantity of cold water when in a heated state. It also supervenes upon an attack of gorged stomach, or from eating a very large quantity of oats, barley, or wheat. Acute laminitis is usually confined to the fore feet: it is rare that the hind feet are affected. The symptoms of acute laminitis are well marked. If the horse is standing, he is crouched up, and if you try to move him, he appears as stiff as if he was nailed to the ground. The pulse is quickened, and he breathes hurriedly; and he places his hind legs forward, so as to take the weight off his fore feet. If you force him backwards, he draws his fore feet along the ground: if made to move forwards, he places his hind feet still farther underneath him, and then either steps first with one fore foot and then with the other, or else with an effort lifts both fore feet at once, and makes a sort of timid leap forward. The feet are hot, and the pastern arteries are full and throbbing. His mouth is hot, the mucous membranes are somewhat reddened, and his whole body appears in a sort of tremor. In the treatment of laminitis, in the early stage, blood-letting is sometimes useful. The bowels should also be moved by a gentle dose of purgative medicine. The shoes must be removed, the sole thinned, and the toes shortened. Afterwards apply hot poultices. Sedative and diuretic medicine should also be given; and in very bad cases, it will be necessary to put the horse in slings, or throw him down, and he will lie quietly. He is much better in that position, as the weight is removed from the inflamed laminae, and the pain and fever are much diminished. The horse when lying for any length of time, should be turned from side to side occasionally, and fresh poultices applied twice or thrice a day. When the severe symptoms continue for several days, serum and lymph are poured out between the laminae, and an opening must be made at the toe to get rid of this accumulation. When effusion takes place to a great extent, the horny laminae lose their attachment, the coffin bone descends, and the sole becomes bulged out, constituting what is called pained foot. At the expiration of a week, cold poultices may be used in place of the hot; and recovery is often expedited by repeated blisters around the coronet.

When laminitis occurs as a sequel of superpurgation, or diarrhoea, or any internal disease, blood-letting is very injurious. The tincture of acetate may be given in doses of twenty drops every two hours. In cases of chronic laminitis a seton through the frog is often beneficial. When once the coffin bone has lost its attachments, and descended, it can never be raised again into its place. The sole is never again restored to its normal state, and therefore the laminitis arising from the tenderness of tread consequent thereon, becomes permanent and irremovable. In some very bad cases the bone protrudes through the horny sole, and when this occurs it is better to destroy the animal at once.

**COAL OIL AS A CURE FOR LICE.**—"Petro" writes to the *Prairie Farmer* as follows:—"Seeing many recommendations of coal oil as a remedy for lice, I tried it on a lousy colt, and can testify that it has taken the lice off where the oil was put on. N. B.—It took the hair off also."

**ANIMALS COOLING OFF.**—Men and horses are the only animals that have double means of refrigeration, and all others have but one. No other beings sweat like men and horses, and therefore, cannot cool themselves by perspiring through the skin. This will be found true throughout the whole range of practical anatomy, and applies to the largest, as well as the smallest beings. None of the thick skinned animals except the horse have pores in the skin to exhale heat by perspiration, it being only a secretory surface. All the cleft-foot species, including those with feet and toes rounded and unprovided with claws, the rhinoceros, elephant, bison, mastodon, buffalo, swine, ox, deer, lion, tiger, bear, wolf, fox, squirrel, dormouse, opossum, raccoon, all, like dogs, have no means of cooling themselves when heated except through the medium of respiration. Thus the ox, when very hot, thrusts out his tongue and pants, to exhale the heat generated by exercise; and if driven without time allowed for this, will die with the heat that accumulates within him. Hogs often die when driven too fast, because they cannot part with generated heat.—*Western Rural.*

## Poultry Yard.

### Poultry Houses.

The following remarks about poultry houses, by a correspondent of *Wilkes' Spirit*, are valuable and timely:

It is only of late years that poultry-houses have been much thought of. In large farmyards, where there are cart-houses, pig-styes, cattle sheds, shelter under the eaves of barns, and numerous other roosting places, not omitting the trees in the immediate vicinity, I do not think they are required, for fowls will generally do better by choosing for themselves; and it is beyond a doubt more healthy for them to be spread about in this manner, than to be confined to one place. But a love of order on the one hand, and a dread of thieves, foxes, or skunks on the other, will sometimes make it desirable to have a proper poultry-house.

The exterior is a matter of taste; but internally, the comfort and well-doing of the poultry must be the only consideration, and the higher the hen is, the less likelihood there is of disease or taint. Another advantage of having it lofty is, that the current of air through the building, being far above the fowls, purifies the air without interfering with their comfort. They do not like a draught, and if, while they are perching, an opening is made admitting one, they will be seen to rouse up to alter their position, and at last to seek some other place to avoid it.

The best guide in all these things is nature, and an observer will always find that poultry choose a sheltered spot. They also carefully avoid being exposed to cold winds. The poultry-house should not open to the north or east. The perches should not be more than twenty-four inches from the ground. None are better than fir or sassafras poles, about fourteen inches in circumference, sawn in half in the centre. They should be supported on ledges, fastened to each side of the house. This affords every facility for removing them for the purposes of cleaning, at the same time that it is very simple. All perches should be level, none higher than the others.

My reason for being thus particular in my description of the perch is, that, so mistakes in its construction and position many disorders in the feet of fowls may be attributed. For instance, it has been complained that large fowls become lame, and what we term hump-footed, more especially when carefully kept in poultry houses. Now, the reason for it is obvious—their perches are too high. In the morning the cock flies from the perch twelve or fourteen feet; the whole weight of his body, added to the impulse of his downward flight, brings him in contact with the ground. Often from the violence of his fall, small gravel stones are forced through the skin of the balls of the feet. They fester; and if that does not occur, they become so tender that the bird dare no longer perch; he roosts on the ground, and for want of the necessary exercise, his legs swell at the knees, and he will become a sleepy, useless fowl. This will be avoided by having low perches. Some well informed authorities deem high perches of no consequence provided the fowls have a plank with cross-pieces reaching them from the ground. But I believe these are only used to ascend; the descent is done by flight.

It is very necessary the house should be well ventilated; it may be done either by an iron grating or an omission of bricks in the building, but the ventilators should be considerably above the perches, and in severe weather may be entirely closed. It is an improvement to have a ceiling to the house; a very slight and common one will do, and it is not absolutely necessary. The house should be often cleaned out, and the walls whitewashed. The floor should be of earth, well rammed down and covered with loose gravel two inches deep. This is easily kept clean by drawing a broom lightly over it every morning, and if it is raked it is kept even and fresh. There should be an opening towards the west or south for the fowls to go in and out; and this should never be closed, as fowls are fond of rambling early in the morning, picking up such food as is to be found at break of day.

There should not be allowed any poultry to roost in the house but fowl—no ducks, turkeys, geese, or any other sort. Neither must there be too many fowl, lest the house become tainted and the fowl sickly.

The poultry-house should have three compartments; one, the largest, for roosting, another for laying, and another for sitting; though, if it is desired to curtail the accommodation, two compartments might suffice—that is, one for roosting and laying, and the other for hatching—taking care, however, that the nests for laying and hatching are not in too close proximity to

the roosting poles. In both the laying and setting room boxes should be placed round the house, but on the floor; all that is required is to fasten two boards against the wall, each being twenty inches high, the same length, and eighteen inches apart. This affords the hen all the privacy she requires. About eighteen inches from the wall a wooden head should be put, just high enough to prevent the eggs from rolling out.

It may not be out of place to mention, that, as no hen should be allowed to lay where the others are sitting—and a difficulty may be experienced with some, from their almost unconquerable repugnance to sit anywhere but where they have been laying—it may be done in this way:—move the hen and her eggs at night into the sitting-house, and cover her until morning, by hanging sacks, or old carpets, or matting over the boards forming her sitting-place, and she will remain quiet and satisfied. The door of the sitting-house should always be shut when hens are on their eggs; and it should therefore have a window, to open in the Summer, but to shut quite close in the Winter. When the window is, however, open, a wire frame should supply its place, to prevent laying hens from intruding.

There is one addition to a poultry-yard so advantageous to chickens that those who have once tried it will never be without it. I mean a covered run for them, to be used in wet weather. Any sort of roof will do, and it should be in a sheltered spot, running the length of the yard, and projecting ten or twelve feet or more from the wall or paling against which it is placed. It should be exposed to the sun and sheltered from cold winds. The floor should be raised above the level of the yard, and covered with sand or wood-ashes, some inches deep. The hens with chickens may be put here under their coops, in wet or stormy weather, and it affords at all times a favorite resort for poultry to bask and take their dust-bath, which is essential to their well-doing. The flooring should be higher at the back than the front.

There is nothing better for the bottom of a nest than a soil of grass. On this should be placed straw. A nest so made is healthier for the hen and chickens, as it admits of sufficient ventilation, and is always free from vermin.

It is essential that both doors and windows of roosting places should be open during the day for the purpose of ventilation. The floor should slant every way towards the door, to facilitate the cleaning, and to avoid anything like wet. It should be well cleaned every day, and it should be raised above the level of the surrounding ground; it should have no artificial floor, such as boards, bricks, tiles, or stones of any kind, but should be of good hard earth and loose gravel—not disposed to be muddy from the going in and out of its occupants in wet weather. It should open on grounds perfectly free for the poultry to run in; and if a high dry spot or light soil can be chosen, so much the better. The roof should be quite air and water tight.

Why does a duck go under water? For divers reasons. Why does the same duck come out of the water? For sun-dry reasons.

The old adage "that you should not count your chickens before they're hatched," has thus been rendered by a professor of etiquette:—"The producers of poultry should postpone the census of their juvenile fowl till the period of incubation is fully accomplished."

TO TEST EGGS FOR SETTING.—The *Rural American* gives the following directions to those who would have a chicken for every egg they set:—"Take eggs not more than three or four days old, and have a candle or lamp, hold the egg in one hand with the broad end upwards close to the candle; place the edge of the other hand on the top of the egg, and you will immediately perceive the incubation end. Some people can tell a pullet from a rooster. The mark for a rooster is crosswise, and a pullet lengthwise. Another way is to place your tongue on the large end of the egg, and you will find a strong heat if fresh and good, and the less heat if old and doubtful. Eggs put up for hatching should never be put in a damp cellar, as the dampness destroys this heat."

AN EGG WITHIN AN EGG.—A goose has just laid an egg of the remarkable dimensions of 10½ inches in circumference and 5 inches in length. The outer shell (which had been broken with a view to domestic purposes) contained within it another hard-shelled egg, each egg having a perfect yolk. Together they must have weighed above 1 lb., as I found that the inner one weighed rather more than 8 oz. The doer of this strange deed is a venerable bird of seventeen years, is a regular layer, and, I may mention as an amiable trait in her domestic life that, after five of her eggs had on one occasion been hatched under a hen, she readily adopted the young brood and brought them up.—*Cor. of Cottage Gardener.*

## Entomology

### "Our Enemies, how to expel them:—Our Friends, how to keep them."

An Essay with the above title was recently read to the Gardeners' Improvement Society, of this city, by Mr. George Vair. The lecturer remarked, in substance, "the enemies referred to were insects; and the friends were the birds that destroyed them. The rapid increase of insects in this country is so apparent, that it becomes a matter of serious consideration with the horticulturist how he is to protect his young plants from insect ravages. Chemical receipts for their destruction may be all very well in their way; but our friends, the birds, are by far the most certain and natural cure for these troublesome pests. It is much to be regretted that, especially in the vicinity of our towns and villages, birds are fast disappearing; and as surely as birds decrease will insects increase. It may be almost safely affirmed that, with the exception of birds of prey, all our birds do more good than harm. Some assert that the robin and cat-bird are injurious at times; it would, however, be much better policy to frighten them away, than to destroy them. The little of which they rob us, is probably but small recompense for the amount of service they perform. Boys should be taught to respect birds and their nests. A ready way of instructing children as to their usefulness, would be for the Government to have books containing suitable illustrations provided, and made a part of the education of the young, in every school throughout Canada. At the same time, many grown people require educating on this point, for, usually, on the Queen's birth-day—which happens when birds are pairing or building—numbers of deluded youths, and still more deluded men, may be seen roaming through our fields and groves destroying, or frightening them from their haunts. Nothing strikes a stranger on visiting this country more forcibly than the scarcity of birds. What can be more cheering and elevating than to listen, in the early morning, to the glad notes of the feathered warblers, or more touching than the fact that, by an instinct implanted by the Creator, they naturally frequent the abodes of man, and return, to propagate their species, to their old haunts each season? Some of you may have seen the common crow, in the city of Philadelphia, building its nest undisturbed on the shade overhanging the street. I mention this fact to show how birds can be domesticated, and become helps to man. Unfortunately nothing of this kind is to be seen in our city; and were a crow to attempt to build its nest in our fine avenue, its life would be imperilled by rifle bullets."

CURCULIO.—Mr. Cavanach stated his belief that curculio had been kept from plums by burning sulphur under the trees when the fruit is about the size of small bullets, as that is the time of the curculio's operations. After the pits become hard the fruit is safe.—*N. Y. Farmers' Club.*

TO FREE GARDENS OF ANTS.—We learn from the *Ohio Farmer* that M. Garnier has just announced an infallible method for getting rid of ants. In a corner of his garden, infested with legions of these insects, he placed four saucers containing sugar and water, with the tenth of its weight of arsenic in the mixture. A number of ants immediately invaded the saucers, but were soon after perceived staggering away, as it were, and some being even engaged in dragging their dead comrades away. From that moment they disappeared from the garden, and on the following day not a single one was to be seen.

LADY BUGS.—Whatever else you destroy in the insect line, never injure a lady bug; for in its larva, its pupa, (two stages of its metamorphoses), and its insect states, it feeds upon the aphid, (the plant-louse or "vire-freter") that is so pestilent in gardens and green-houses, and even in window-gardening among parlor plants. Every child knows the lady-bug as well as the zoologist, who calls it "coleopterous," that is, sheath-winged—having its wings under cover of a pair of shells running longitudinally. The wings are of various brilliant colors, generally between orange and deep red. It belongs to the same genus of insects as the beautiful cochineal.—*Genesee Farmer.*

The Apiary.

Profits of Bee Keeping.

To the Editor of THE CANADA FARMER:

Sir.—If people could be convinced that bee-keeping is profitable, I am certain that the so much dreaded sting of the honey bee would lose its terror, and there would be a far more general rush into bee-culture; and Canada would become, if not like ancient Palestine, "a land flowing with milk and honey,"—at least, a land flowing with milk, and not lacking for honey. Now, I do consider that bee-keeping is a profitable enterprise. It is not so in Canada, it certainly is with our neighbours, across the water. When it has been as well tried with us, as it has been with them, I believe that it will be acknowledged to be, not only pleasing and instructive, but, highly remunerative. Let us suppose that a young man at the age of fifteen obtains two stocks of bees, and commences bee-keeping—fully determined to make it profitable. Allowing that he doubles his stock every year, which every bee-keeper should be able to do, and that his yearly average of surplus honey, from each stock, is 15 lbs., which is a very low estimate, at the end of ten years his apiary account would stand thus:—

Dr.		
To 2 stocks, at \$10 each.....		\$ 20 00
" 2,018 moveable comb hives, including honey boxes, at \$3 each.....	6,244 00	
" 1,221 extra honey boxes, at 20 cts. each.....	244 20	
" \$104.78, per annum, for labour and incidental expenses, 10 years.....	4,047 50	
	\$10,516 60	
Cr.		
By 2,048 stocks at \$5 each.....	\$10,240 00	
" 61,550 lbs. surplus honey at 10 cents.....	12,270 00	
	\$22,510 00	
Debits deducted.....	10,516 60	
Profits.....	\$12,000 00	

A nice little sum with which to commence business, at the age of twenty-five. I do not expect that every young Canadian, who may commence bee-keeping, will realize profits to such an extent; yet, there are the figures which cannot be disputed, and which, at least, show that bee-keeping may be made profitable.

Perhaps it may be thought by some that 20 cts. per pound, for honey, is too large a figure for our Canadian markets, but it is well known that it may be realized by shipping to New York, or Chicago. Not only so, but, in the above estimate I have only allowed 15 pounds of honey from each stock as the average yield—whereas it might be stated at twenty, and still be a low estimate. Again, others may suppose that good moveable comb hives cannot be obtained for \$3 each; but, J. H. Thomas & Bros., of Brooklyn, C. W., will furnish any quantity at that price; or, for \$5, any person can obtain of them a hive and individual right to manufacture for his own use, which he may do, at a cost much less than the above. It will be seen, also, that stocks in the debit account are valued at \$10 each; while, in the credit account, they are estimated at the low rate of \$5 each. In order, however, to demonstrate still farther, that bee-keeping is a profitable speculation, I will give a few statistics, showing what enormous profits have been realized by certain individuals. A gentleman, writing from St. Albans, Vt., to Mr. K. P. Kidder, of Burlington, Vt., in August 15, 1863, says:—"From my glass hive, I have taken and weighed 130 lbs., and there are two boxes filled and nearly capped, of 24 lbs., each, making altogether from my glass hive 178 lbs. The hive is full, besides, and has cast one good swarm. I have other stocks from which I have taken from 70 to 100 lbs., and one young swarm from which I have taken 80 lbs." It will, however, be understood, that these were Italian stocks. In 1859, Mr. A. W. Lord, of Middleville, N. Y., from 130 stocks, received an increase of 170 swarms, and 6000 lbs. of surplus honey. He sold the honey at 20 cents per lb., and the swarms at \$1 each, making an income of about \$1,800. Bidwell Bros., of Minn., sent the following statement to the *American Agriculturist*, for January 1865:—"Last spring our apiary consisted of one Italian, and 58 stocks of black bees, all in frame hives. We have increased our one Italian stock to fifteen—our 58 stocks of black bees to 151, principally by artificial swarming. We have forced our old Italian stock five times, and the first new one once. The parent stock weighs to-day 49 lbs., (less hive), and we have taken out one frame for each new swarm forced. We have taken from the 1st new swarm, in boxes, 22 lbs. honey, 2nd 126 lbs., 3rd 88 lbs., 4th 74 lbs., 5th 29 lbs., making from the 7 hives 339 lbs. .... We shall Italianize our whole apiary next season..... The average weight of our

stocks, less hives, bees, &c., is about 68 lbs. of honey. We have taken off in glass boxes, 1,208 lbs. and 1,301 in caps." The honey from this apiary at 25 cts. per pound would amount to \$700. In THE CANADA FARMER for Feb. 1, 1864, "J. V." points to the proceeds of one stock in twenty years, in the shape of 219 acres of land, in a favourable locality. Such are the almost fabulous accounts of the profits of bee-keeping, coming from different, and yet well authenticated quarters; and taken in connection with my own observation, I believe that bee-keeping, in Canada, may yet not only become a source of pleasure and profit, but yielding for every household in city, town, or country, a luxury that would grace the table of a prince. Could our young men and young ladies, who now spend hours in idleness, or vain amusements, be induced to purchase a stock of bees and commence bee-keeping upon their own account, it would not only prove remunerative, but would lead them into habits of industry, and fit them for better citizens. Large amounts of delicious sweets, from every field and forest would then be gathered; saving to the country annually, thousands of pounds of pure honey, which for want of bees to gather, now perishes in the golden cups of the lowers that deck this brown earth. J. H. THOMAS.

Brooklyn, April 10, 1865.

Impressed Wax Sheets for Artificial Comb.

THESE, we learn from the *Gardener's Chronicle*, were first introduced to English apianians from Germany, and are said to be very useful helps to the scientific operator, in the management of the "bar" and "frame" hives. The following description of them is from Mr. Alfred Neighbour's book on "The Apiary":—"These artificial partition walls for combs are sheets of genuine wax, about the substance of thin cardboard. They receive rhomboidal impressions by being pressed between two metal plates, carefully and mathematically prepared, and cast so that the impressions are exactly the same size as the base of the cells of a honeycomb. An inspection of a piece of comb will show that the division of the opposite cells is made by a thin partition wall common to both; now, the substance of this is said to be only the 180th part of an inch, whilst the artificial ones we are recommending are between the 30th and 10th part of an inch, more than four times the thickness of the handy-work of the bees themselves. It would indeed be vain to attempt to furnish sheets of wax at all approaching their own delicate fabric; the impressed sheets are quite as thin as they can be to bear the handling which is requisite for fixing them in the hives. We find, however, that the thickness is no disadvantage; the bees speedily excavate and pare the artificial sheet so as to suit their own notions of the substance required; then, with admirable economy, they use the surplus thus obtained for the construction of the cells. After a sheet has been partly worked at by the bees, it is interesting to hold it up to the light and observe the beautiful transparency of that part of it contrasted with the opaqueness of the part not yet laboured upon. When it is considered, as writers tell us, that more than 14 lbs of honey are required for the secretion and elaboration of a single pound of comb, it will not be difficult to form a just estimate of the value of this invention, which thus furnishes cheap and excellent assistance to our industrious favourites."

HYGIER SWARMS.—A neighbouring townsman told me that his bees acted very singularly in the spring of 1863. He had a dozen swarms, and he had lost about half of them. He did not know what ailed them, "but they would keep swarming." When he lived them in the old hive, in a "short time they would come out again." Finally some of them went into other hives, and the rest went off, or he did not know what did become of them. The trouble was, probably, simply that his bees were out of stores—in fact they were starved out, and took this method in hopes of finding relief, but their owner through ignorance, failed to profit by their warning and lost his property. If he had fed them when he returned them to their home, and saw that they did not want until they could gather their own supplies from the field, they might have yielded him good returns. For early feeding induces early breeding, and they would have been likely to have been strong in numbers when most needed to have taken advantage of the best yield of honey. In feeding to induce breeding, the daily supply should be small, and not unlike the supply they would gather from the fields. A caution should be given. If you commence feeding early, a larger consumption will take place, and you must guard against the lack of food in the hive, or the bees may destroy their young, unable to supply their wants. On the other hand, if you feed too freely, the cells may be stored so that there will be no room for breeding. L. L. FAIRCHILD, in *Country Gen.*

The Household.

How to Make Hard Soap.

THE following recipes appear in the *Country Gentleman*:—"Five pounds of lime slaked in 12 quarts of boiling water, 5 pounds of sal soda dissolved in 12 quarts of water; mix it together and let it stand from 24 to 48 hours. Dip off all the water free from lime; add to it (the water) 3½ pounds of clean grease; let it boil up, then add 2 ounces of rosin, and boil the whole till it thickens, which usually takes 3 or 4 hours. Have ready a tub, or other convenient vessel, wet; pour in the soap, and when cold cut in bars, and dry well before using, and I will add that no one need be alarmed at the shrunken and shrivelled appearance it assumes during this process, or imagine that it has lost any of its good qualities because it does not look 'as good as new.' We make a double rule—weight when green 42 pounds, and it cost us this year just 2½ cents per pound."

"Pour 1 gallon of boiling water over 6 pounds of washing soda and 3 pounds of unslaked lime. Stir the mixture well, and let it settle until perfectly clear. When clear, strain the water and put 6 pounds of fat with it, and boil 2 hours, stirring it most of the time. If it does not seem thin enough, put another gallon of water on the grounds, stir and drain off, and add as is wanted to the boiling mixture. Its thickness can be tested by occasionally putting a little on a plate to cool. Stir in a handful of salt just before taking off the fire. Have a tub ready soaked, to prevent the soap from sticking; pour it in and let it settle until solid."

APPLE FLOAT.—One pint of stewed apple, strained, and the white of one egg. Beat them together until the mixture is as light as whipped cream, and fill in jelly glasses. A very handsome dish for dessert.

TO SOFTEN OLD PUTTY.—Having tried it several times, I know it is effectual:—Take a common poker, at a dull red heat, and move it slowly over the old putty, say at the rate of two feet per minute, and you can easily cut it off with a pocket-knife.—*Scientific American*.

SPIDERS AT HOME.—A friend of mine, who was in Australia some years, informed me he used to destroy all the large spiders he found in his house, until he discovered the nest of one of them surrounded by the remains of dead bugs, with which the house was sadly pestered. Since this I have told many people to allow the spider a location in their dwellings, in places where the eye is not offended by the sight of their webs. I follow this plan myself, and my house is free from other insects; only two bugs were found in my house the past twelve months on bedclothes, none in crevices of furniture; these two I suppose to have been brought from the places of amusement which had been previously visited.—*Thomas W. Brown*.

ABOUT POTATOES.—Some soils produce several hundred bushels of the white, commonly called the Irish potato, and there is such a general taste for them, that they are likely to continue to be a very common article of diet, although not as valuable, or any more healthful, than many other qualities of food. Three-fourths of the potato is water, so that of one hundred pounds only twenty-five pounds are nutriment; the rest is waste. Almost the entire nutriment is contained within a quarter of an inch of the surface, immediately under the skin; hence, by peeling, the very best part of it, and nearly all that is valuable is wasted. Only the outer skin should be removed, that which is disposed to peel off after boiling. The tendency of potatoes to sprout in the early spring is reported to be prevented in Scotland, and by so doing, their full edible qualities are preserved, and "mealy" potatoes can be had all summer from the previous year's growth. The experiment costs but little, and is worthy of being tested by every one who doubts its efficacy. Obtain from a druggist one ounce of liquor of ammonia (hartshorn), to a pint of water; let the potatoes be immersed in this mixture four or five days; dry them. Their substance is thus consolidated, and much of their moisture extracted without the slightest injury for all table qualities, but their vegetative power is forever destroyed. If spread out after immersion, so as to be well dried, they will keep good for ten months. Baked potatoes are easily digested, requiring only two hours and a half, but one hour longer if boiled. If baked in the ashes and eaten with butter and salt, they are sweeter and more healthful than by any other mode of preparation. The sprouts of potatoes uncovered with earth contain solanum, a powerful poison, the potato becoming green, and are then unfit for even animals. To have mealy potatoes for the table, boil them until the fork easily penetrates; pour off all the water; cover the vessel with a cloth near the fire until "steamed" dry.—*Hall's Journal of Health*.





**HORSE POWDERS.**—"Hank" sends the following recipe, and he thinks "there is none better":—"Equal parts of antimony, resin, saltpetre, liquorice-root, grains of paradise, sulphur and gellan pulverised very fine. Dose, one tablespoonful three times a week, given in a hot bran mash."

**A DOG-BITE IN THE EAR.**—J. Henderson, of Minto writes as follows:—"A dog in a playful manner, lately bit my boy in the ear. The dog has never been bit by any other dog. Is there any fear of the consequences to the boy?"

**Ans.**—As the dog had no rabid symptoms, there is, we imagine, no danger to be apprehended.

**MOONSTRUCK PEAS AND BARLEY.**—"J. S." of Monaghan, enquires, whether the moon has anything to do with the proper time for sowing peas and barley? Some people, he says, contend that peas should be sown in the decline, and barley about full moon.

**Ans.**—We are aware that the above idea prevails among many of our farmers, but we can only look upon it as a popular superstition.

**PREMIUMS FOR FAITHFUL SERVANTS.**—A Toronto correspondent suggests that at our next Provincial Exhibition, a premium should be awarded to male and female servants, for long and faithful service—He adds:—"In Great Britain, it is no unusual circumstance for a servant to remain 10 or 20 years in one place. There are advantages on both sides—to the master, and to the servant."

**Ans.**—In this country the men-servants quickly become their own masters, and the female-servants get married, and we are not quite sure about giving premiums for neglecting to do either the one or the other.

**ENQUIRY RESPECTING A FLOWER.**—"A Subscriber" writes from Orono, as follows:—"A perennial flower commonly named *Siney* is grown in the North of Devonshire, England. The leaf is willow-shaped but larger; the flower is white, resembles that of the double stock, and grows on stems 7 or 8 inches high. I have not seen any of the *Sineys* in Canada; but if there are any I should like to know from whom I could get them."

**Ans.**—We are not acquainted with the flower in question. The name given, is probably only of local application in Devonshire. Perhaps some of our correspondents may be able to supply the information required.

**WARTS ON COWS' TEATS.**—"John Kirke," of Hill-bury, writes:—"My cows are very much troubled with warts on their teats, and I would feel obliged if you, or any of your correspondents, would inform me what would cure them."

**Ans.**—A ligature of silk tied round their roots will remove the largest of them. This, however, is often a tiresome affair. Perhaps the best way is to have recourse to the knife and the cautery. The latter will destroy the root of the wart.

**DISEASED LAMBS.**—"A. D." of Markham, enquires how he is to treat his lambs from a week to a fortnight old, that have all at once become lame, lost the use of their legs, while their joints are much swollen.

**Ans.**—The disease is probably a rheumatic inflammation of the joints, brought on by exposure to the cold damp weather we have lately experienced. Give each lamb twice a day 5 grains iodide of potassium dissolved in water; and rub the affected parts with some stimulent like hartshorn or opodeldoc.

**FALL WHEAT PROSPECTS.**—"J. B. F." of Bond Head, Co. Simcoe, writes, on the 3rd inst., on this subject as follows:—"The fall wheat looks well, although killed in some places; and if nothing extraordinary happens, it promises to be one of the best crops we have had for years. The almost total absence of hard frosts since the snow left, leaves it, at present, of a healthy, green colour which is very encouraging to the farmer. The high winds during the past winter threw up heavy snow banks on the lee side of the fences, and in these places the wheat is nearly destroyed."

**DRAINING WET LANDS.**—A correspondent, who has tried the experiment of draining wet springy soil, is of opinion "that the increased yield of the first crop will almost pay the work and expense. Ground that is wet is generally very rich, so that when it is drained it grows better crops than dry land."

**RAISING AN ORCHARD.**—"W. J. D." thinks that "the best method to adopt for this purpose is to prepare the ground by ploughing and manuring, for two years before planting the trees. In order to get plenty of fruit, nothing should be planted in the orchard except the trees; and the ground ought to be kept quite free from weeds, as they absorb as much nutritious matter as a crop of potatoes. By following this course the trees will grow rapidly, keep healthy, and bear a larger quantity of better fruit."

**WHEAT TURNING TO CHESS.**—A correspondent from Paris, C. W., writes:—"I am in hope that the wheat turning to chess question will be decided now; all I can say is, it has puzzled me many a day, for we see it come up here wild, on the plains, long before they were touched by the axe or plough, and then we see it again in the ploughed field where the wheat has seeded itself, or has been winter killed; but I will say, that as the land becomes older or more worked, we see less chess, not because wheat winter-kills less than it did in the new land, but I think because farmers sow less chess. I am sure it was in the ground on the plains here, because, if you broke up new plains and did not sow anything on it, and let it be for a year or two, chess would come up, especially around the low places,—I do not mean marshy."

**HAND STUMP MACHINES.**—"F. F. P." writes:—"I have been requested by a farmer to enquire if there is such an implement in practical and successful operation as a 'Hand Stump Machine,' some slight report having reached him to the effect that a machine occupying a space of four or five square feet, and worked by 'hand,' was capable of pulling stumps, as well as the more ponderous machines worked by 'lever' or 'screw.' If there are any such portable machines, where can they be procured, and at what price?"

**Ans.**—We know of no such machine, and are inclined to think so small an affair would be unequal to the work of stump extraction.

**A THREE-FOLD ENQUIRY.**—"Learning to Farm" asks for information on the following points:—

1. How to treat a mare at the time of parturition?
2. How to graft pears on the hawthorn?
3. What a flax-pulling machine would be required to do?

**Ans.**—1. There is no particular treatment necessary. With careful feeding the mare may be lightly worked to within a few days of the time of delivery.

2. The process is the same as in other grafting operations, only the pear is somewhat more difficult to grow on the hawthorn than on the quince.

3. Pull up the ripened flax by the roots. The excellence of such a machine would consist in its performing the work in the quickest and best way, with least injury to the flax, and leaving it regularly arranged on the ground.

**FARMING EXPERIENCE IN CANADA.**—"John Hand" writes us from the 2nd Con., Brooke, as follows:—"A countryman of mine from Dawn, has given his experience of farming in Canada. As a contrast, I take the liberty of giving you mine. When I moved on my land, 4 years ago last March, it was paid for; I had got 23 acres cleared, and 10 more clogged ready for logging, with a yoke of oxen, two cows, a yearling steer, and \$120 in money. I have now 55 acres cleared and under crop, and 5 more ready for logging, with good log buildings, being dwelling house, barn, stable, and shed, and the usual farming implements, such as waggon, plough, &c. 16 acres of my land have been ploughed, and I have a meadow of 17 acres that has never been ploughed. The only loss I have yet sustained, was a three year old steer, of murrain. A few days ago, I sold a yoke of oxen for \$60. I have now 18 head of cattle, 29 sheep, and 22 lambs. Last year I had 86 lbs. of wool from 15 fleeces, this year I expect 170 lbs. from the 29 fleeces. My luck in lambs is most extraordinary, having had 25 from 12 ewes, 22 of which are alive and smart. Last winter my sheep got all the hay they could eat, and a bushel of oats, being rather more than a quart to each every day."

**FERNERY FOR A ROOM.**—A Brockville correspondent wants to know how to begin a fernery, the best sorts of ferns to gather, and the proper time for gathering them.

**Ans.**—There is much latitude for taste in the choice of your fern-case in the first instance. Presuming that to be provided, the proper soil is composed of peat, or bog earth, and sandy loam, mixed in almost equal proportions; and, in order to prevent the too close adhesion and consolidation of the particles, it is necessary to add a further admixture of clean white sand,—amounting to one-fourth of the whole mass. We believe there are no less than 75 Canadian ferns; but we would recommend you to confine your selection to the varieties found in your own locality, as in case of misfortune they could easily be replaced. Naturally ferns are propagated by means of spores, which are somewhat analogous to seeds; but by careful uprooting you may safely gather the plants any time during the summer. Under artificial conditions, a supply of pure water to ferns is a very essential matter; they must have constant moisture, or their delicate fronds will shrink as before a burning blast. A few specimens of choice rock may be judiciously introduced among the plants.

**THE INTEREST CHARGED BY LOAN COMPANIES.**—"A. H.," of Macnab, writes on this subject as follows:—"In your issue of 1st inst., an 'Agent' takes Mr. Weld to task on our monetary affairs, and as I think he has not fairly stated the case, I beg through your columns to shew wherein his statement is unfair."

1st. He says, "the societies that profess to lend money at 6½ per cent., make no secret of the working of their plan." And after stating what the plan is, he adds, "that the payments required by these societies, are equal to an ordinary interest of 10½ per cent., and are not held out to be a lower rate than 10½ per cent." I therefore submit that it is unfair to profess to lend at 6½ and actually charge 10½ per cent.

2nd. It is not fair to call the payments mentioned by him as required by these societies "equal to an ordinary interest of 10½," as an ordinary interest at that rate would only amount in the aggregate to \$1565, and not \$1650, the total of the payments required by these societies. A repayment of a loan of \$1000, in 10 equal annual payments, with interest on each payment at the rate of 12 per cent. per annum, amounts in the aggregate to \$1660, so that the professed 6½ per cent. is actually within a very small fraction of 12 per cent.

3rd. The comparison is not fairly stated when he says, "take this same \$1000 for a term of ten years at 10 per cent., on which the borrower pays \$100 a year, and at the end of the time has \$1000 to meet, &c." In order to make it a fair statement, he should have shewn what would be the position of the borrower at the end of 10 years, had he borrowed the \$1000 from a society professing to lend at 6½ per cent., and charging a monthly fine of 2 cents per dollar on arrears. Had he made the same annual payment of \$100, the borrower at 6½ per cent. will have at the end of the time, \$352 more to meet, than the borrower at 10 per cent."

**DISEASED COWS.**—"A Reader" writes to us from Ramsay, as follows:—"During my short experience in farming, my herd of cows has been annually visited by a disease, which I have never seen treated of in any publication; and, being ignorant of the means of prevention or cure, my neighbours and I would gladly get some information on the subject, from you or your correspondents. The disease, to a careless observer, first show itself by a weakness, on the part of the cow, in rising. She seems to have lost the power of the back, or hind legs. This increases, till by degrees it ends in death. On examination, the tail is found to be slightly swollen, and soft towards the end. The bone seems to be gone, and if laid open with a knife it will not bleed, and what moisture there is, will be quite watery, and the bone will present a black appearance."

**Ans.**—Our correspondent does not state in what condition his cows were at the time they were affected. We are disposed to believe that the weakness described, arises from insufficient nourishment.

**MUSTARD AS A FIELD CROP.**—"Albin Rawlings," of Pleasant, writes on this subject as follows:—"I sowed five acres, on the 21st of August last, on fall wheat stubble, and in six weeks the crop was eighteen inches high. I turned 80 sheep and 9 head of cattle on it in October; but it grew so fast that it was scarcely possible to see where they had been. While grazing it, my cows gave twice the quantity of milk they would have done on pasture. I approve of eating mustard off with sheep on light soils; and on heavy soils to plough it in, as it will make stiff clay quite mellow, and easy to work. If farmers would try it on their worn out land they would find it an excellent manure. It should be ploughed in when about fifteen inches high, and should be fed off as soon as the flower appears. If you have a piece of dirty land, you can clean it much easier by sowing mustard on it. It should be sown about the first of June to raise seed; and I consider August the best month to sow for food, or manure. If you put it on a summer fallow, it should be sown about six weeks before you want to ridge up for wheat. If you are troubled with wild mustard, I would advise you to sow a field of garden mustard for a trial. It will kill almost all the wild mustard. I sow ten pounds to the acre. If the land is fine when you sow it, the crop will be better. I ran the cultivator over my wheat stubble and then sowed and harrowed it. One team put in the five acres in one day and a half. I know a farmer in England who always uses it for manure on summer fallow, and he says he never had a bad crop of wheat after mustard. It is very easy to raise the seed. I intend to raise mine this year to sow all my wheat stubble. There is no fear of it lying in the ground to annoy you as the frost will kill it. Mr. Fleming of Toronto, could no doubt, furnish any one with seed who likes to give it a trial."

**LIQUID MANURE.**—"A Subscriber and constant reader" writes from Goderich as follows:—

"As I am aware that a large portion of a most valuable fertilizer (I mean liquid manure) is totally lost to our agricultural community, I take leave to call your attention to the wonderful results that have followed the application of liquid manure, in Great Britain, to lands previously looked upon as hopelessly barren. In Scotland, blowing sand originally not worth 2s. 6d., now lets at an annual rental of from £15 to £20 sterling, per acre, while in England, ten crops of Italian rye grass have been cut within the year on bad clay land. If this species of irrigation be found so profitable in the comparatively moist and cool climate of Great Britain, it ought to prove at least, equally so in Canada, where the cultivated grasses sometimes suffer very severely (as in 1864), from our dry hot summers; it can be applied at a moderate cost on all farms that do not require drainage, and where there is a good supply of water; and I would be glad to see the system largely in operation in Canada, believing that its general adoption by our farmers would enormously increase the quantity of their stock and the fertility of their lands. I will conclude by quoting a successful instance of the application of the system as stated in Dr. Gray's Pamphlet on sewage manure."

"He, (Mr. Barber of Muirdrowthood) had 27 acres of land before his house, and the land was so poor that it originally only fed two cows; he had 40 cows and 4 horses in the stable close to his house. He put the dung of 40 cows into a tank, and passed a rill of water through it and irrigated 22 acres. With the miscellaneous refuse of his house and scullery he irrigated, I think five acres. The produce was so large that on that same plot he has been enabled to feed the 40 cows and his 4 horses."

**THE "FARMER OF MONEY-MAKING OCCUPATIONS."**—"An Old Countryman" writes from Glandford as follows:—"I read your abstract of an address delivered by the Principal of the Royal Agricultural College, Cirencester, England, with reference to the above subject. That he should assume an innate gentlemanly bearing as inconsistent with that of a farmer, is directly op-

posed to facts that must daily have come under his observation. I was myself a student at the above College. Amongst my fellow students there were many very gentlemanly men. With finer specimens of the genus 'homo' I would never wish to live. Some of them, indeed, not only belonged to the first families, but had been educated at the most superior schools. Our Professors were all thorough gentlemen. Dr. Voelcker and Professors Coleman, Backman and Brown are men of refined education and superior abilities. The Principal considers that 'it may be questioned whether scholarship and polish are not to a certain extent alien from all money-making occupations.' Does he mean that the bona fide gentleman is the man whose bread has been made for him, to the exclusion of him who works with the hands which God has given him to support a family, and to give his children a fair start in the world? What are 'the money-makers' tools? Are they the hands given us to use the abilities with which we are endowed—in short, the talents entrusted to our care? Such are the views too often entertained by men who, as the expression is, have risen from the ranks, and are inclined, as money-made peevish, to look down upon the real natural gentleman engaged in manual labour, to sneer at his hardened hands and embrowned face. Money, or those tools which, when used in a proper way, make money, can neither make nor mar the character and deportment of the true gentleman. Surely a man educated at Cambridge should better appreciate the value of natural nobility of mind, and should know that an 'innate gentlemanly bearing' is not inconsistent with the deportment either of a tradesman, or a farmer."

## The Canada Farmer.

TORONTO, UPPER CANADA, MAY 15, 1865.

### The Sewage Question in Britain.

There is, perhaps, no subject attended with more practical difficulty than that which relates to the utilization of the sewage of large towns for agricultural purposes. Much attention has been given to it of late years, in many of the more populous towns in Europe, with a view alike to sanitary and economical conditions. The manuring value of sewage is, of course, very variable, depending in part on the quantity and quality of food consumed by the inhabitants of a town or city, but more on the amount of water, with which animal excrements are mixed. It has been estimated by competent chemists, that the ordinary town sewage in England contains, in its diluted state, only three or four pounds of solid manurial matter in a ton of the fluid. It is manifest, therefore, that in that state the material will not pay to transport, either by hydraulic presses or ordinary cartage, to any considerable distance. To deodorize and solidify town sewage, is a troublesome and expensive work, and the tendency of recent experiments is leading to the application of it in a fluid state. Within the last few years, numerous experiments have been made, and reports written, by men eminent in chemical science and deeply versed in practical agriculture, with a view of transforming a crying nuisance of towns into a profitable means of territorial fertility. The results, however, have not as yet been generally satisfactory, and much remains to be done before even a country like England can effectually and profitably utilize the immense amount of excrementitious matters that accumulate in the great centres of its teeming population.

A commission was appointed by the British Government two or three years since, to examine the effects of the sewage of Rugby, applied in its natural state to certain lands in the immediate vicinity of that town. From an elaborate paper from the pen of J. B. Lawes, F.R.S., F.C.S., in a recent number of the

Journal of the Royal Agricultural Society of England, the subjoined summary of results, as far as they have been determined at present, will be found interesting and suggestive.

1. By the application of large quantities of diluted town sewage to permanent meadow land, during the spring and summer months, there was obtained an average increase of about 4 tons of green grass, (which, owing to the lower proportion of dry substance in the sewaged grass, was equal to only about three-fourths of a ton of hay), for each 1,000 tons of sewage applied, until the amount of the latter approached the rate of about 9,000 per acre, per annum. The largest produce obtained, was about 33 tons of green grass per acre. The period of the year over which an abundance of green food was available was, with the largest amount of sewage, between five and six months.

2. Oxen tied up under cover, and fed on cut grass alone, whether sewaged or unsewaged, gave a far lower rate of increase than the average attained by animals fed on ordinary good fattening food; but when for a few weeks oil-cake was given in addition to the grass, they yielded a good average rate of increase.

3. Cows tied up under cover, and fed on cut green grass alone, after previously receiving oil-cake, fell off considerably in their yield of milk, and about equally whether the grass was sewaged or unsewaged. The cows on unsewaged grass, consumed more food and gave more milk, in relation to their weight, than those on sewaged grass; but the amount of milk yielded, for a given amount of fresh food consumed, was almost identical in the two cases; though, in proportion to the dry or solid matter which the food contained, the sewaged grass yielded considerably more milk than the unsewaged. Milk to the gross value of £32 per acre, was obtained where the largest quantity of sewage was applied. The gross value of the milk, from the increased produce of each 1,000 tons of sewage, was between £5 and £6.

4. The composition of the Rugby sewage-water varied very much during the course of the season, being much more concentrated during the drier months. On the average, over about seven months, 1,000 tons of sewage contained about 21½ cwt. of little more than one ton of solid matter; about 212 lbs. of ammonia, or about as much as is contained in 11 cwt. of Peruvian guano; and probably represented the excrements of 21 or 22 individuals, of a mixed population, of both sexes and all ages, for a year. This average composition agrees very closely with that which published analyses indicate for the sewage of London.

5. On the average, the sewage grass contained, as cut, a considerably lower proportion of dry or solid substance, than the unsewaged; but the dry substance of the sewaged grass generally contained a higher proportion of nitrogenous compounds.

6. Analysis shows very little difference in the quality of the milk yielded respectively from sewaged and unsewaged grass. The difference in composition, such as it is, is slightly in favour of the milk from the unsewaged grass, when grass was given alone, and slightly in favour of the sewaged grass when oil-cake was given in addition.

Mr. Lawes observes:—"I have no doubt that any attempt to apply the sewage of London in its present average state of dilution, or that of any other town similarly diluted, to crops generally, and in quantities of a few hundred tons per acre, will result either in great pecuniary loss to those who invest their capital in supplying the sewage, or in signal failure, and perhaps pecuniary loss also to those who may purchase it. . . . It is, perhaps, more probable that by a reduction in the water supply, or by a more effectual separation of the sewage from the rain-fall, town populations may succeed in producing, for the use of the farmer, a less diluted sewage. But, in the meantime, we must deal with the sewage as we find it; and the price which the farmer could afford to pay

tor it, would certainly offer no inducement to capitalists to invest their money in distributing it, in small quantities, over extensive areas. The only persons benefited by such a scheme, would be the contractors, and others, engaged in carrying out the undertaking."

Among the more recent pamphlets that have appeared on this subject, that written by Dr. Spencer Cobbold, the well-known investigator of intestinal worms in the bodies of living animals, deserves special attention, as it urges an objection, that is really new, against the use of town sewage as a dressing to our fields. Zoologists know that the common tape-worm of man, which may be taken as an example of the more generally distributed entozoa, is propagated by eggs, which must undergo the first stages of their development in the bodies of some of the lower mammals. In the present state of things, the ova of the creature, which may be computed for London, at some millions per annum, are yearly, ayedaily, washed away into the Thames, and are thus destroyed. "If, however," says Dr. Cobbold, "you spread the sewage over the country, you will supply the ova with the conditions favourable to their development. They will be swallowed by our domestic animals, will in them complete the earlier stages of their growth, and will eventually take up their abode within ourselves. Thus, by distributing the sewage over our farms, we will be literally adding fuel to the parasitic fire. This will go on increasing every year, till, in course of time, the whole population will become infested by these creatures, and then it will be too late to cry out for assistance." This is, no doubt, to some extent, the language of exaggeration, as in all probability the great bulk of the ova would perish before finding the requisite condition for their development; and an improved system of feeding cattle might do away with much of the liability to entozootic diseases. The indiscriminate distribution of town sewage in its crude state can not be unattended with danger. Some time ago Dr. John Harley discovered that one of the most formidable entozoa with which we are acquainted, the *Balharzia*, had been introduced into England by some colonists who had returned from the Cape of Good Hope. Now, this *Balharzia* is an awfully destructive entozoon, and commits dreadful havoc among the Egyptians: out of 363 *post mortem* examinations conducted in Egypt, by Dr. Griesinger, this parasite was found in 117 cases. It usually takes up its habitation in the blood vessels, and gives rise to most painful symptoms, followed, in the more advanced cases, by extreme prostration and death. We say it has been introduced into England; happily it has not spread over the country; but, writes Dr. Cobbold, "once let this distribution commence as a consequence of egg dispersion on any extended scale, and I know of nothing calculated to prevent the rapid spread of the endemic among us. Such a scourge would add yet another serious ill to the already formidable list of evils to which our British flesh is heir." Notwithstanding, we do not think that Dr. Cobbold's exhortation is likely to prevent the utilization of the sewage, but at all events it may lead to the adoption of some means by which the ova may be destroyed while in the tanks.

### Noting down Farm Experience.

It has been well remarked that, "experience is of value just in proportion as the facts it has witnessed have taught their lesson perfectly." This consideration is too frequently overlooked in our agricultural practice; and yet there is no profession where attention to it is more imperatively demanded. For, in spite of the practical science which has been introduced into farming pursuits during late years, there still remain a great extent of variety, uncertainty, and inexactness in this—the most ancient of all occupations under the sun. How long this unsatisfactory condition of things is yet to obtain, depends very much on farmers themselves; for, it must be remem-

bered, that every intelligent and successful cultivator, instead of hiding his light under a bushel, might lift up his lamp of experience, and help to illumine some doubtful point.

Now, that our Canadian farmers are again engaged in active field operations, we would earnestly suggest, for the advantage of themselves and the benefit of the whole community, that they carefully note, during the current season, their several experiences in the cultivating, manuring, and sowing, of their respective crops. Our pages are always open to communications of practical value to the agricultural interest; and we feel confident that, by a free interchange of observations, much trouble and expense might be saved to some; while others would be prevented from going over old experiments—which had been proved to be ineffective. The long winter, and the hazards of our climate are severe tests to the intelligence, temper, and skill of the farmer; and every contribution towards overcoming natural disadvantages, and rendering our tillage processes more certain, must be regarded as a valuable addition to our stock of knowledge. A wide field for careful observation and sound judgment is afforded in treating the diversities of soil—in contending with changes of condition—and in adopting necessary alterations of procedure to suit circumstances. The van-guard, in the agricultural march, will always be formed of those, who, in addition to the skill and tact indispensable to success, bring the most acute observation and the most active enquiry, to bear on the progress and result of their labours.

Experiments, conducted from day to day, can hardly prove dull or dreary to the farmer. Every spadeful of earth lifted—every furrow turned—every handful of manure and seed scattered—are, in point of fact, just so many questions you are asking kind Mother Earth. And although her replies may not be given so promptly as you could desire, yet, in her own good time, the answer will be forthcoming; and will be, moreover, indisputably correct, and to the point. We invite, therefore, our readers to register her replies, and communicate them to us, for the information and guidance of their fellow-labourers in the same interesting and extensive field.

### The "Genesee Farmer" on Superphosphate.

OUR valued contemporary again takes up the question as to the qualities of Superphosphate in his issue for the month of May, and narrows down the discussion between us almost to the point of agreement. With regard to the permanence of this fertilizer, he says:—

"To quote a familiar saying, 'You cannot eat your cake and keep it.' If you make the bones soluble, they will be readily taken up by the roots of plants and increase their growth, but after this has occurred, how much is there left for future crops? You have eaten the cake."

And then in reference to our observation:—"A manure that will both act quickly and enduringly must be better than one of which you 'can get the whole effect the first year.'" He adds:—"This is undoubtedly true, but it is begging the question. It is assuming that you can 'eat your cake and keep it'—that a pound of ammonia, a pound of phosphoric acid, or a pound of potash, or the three combined, can be applied to the soil in a soluble state, be taken up by the plants, in other words, 'act quickly,' and still remain available for the use of future crops. If a manure 'acts quickly,' it does so at the expense of its permanency, and if it is permanent, it is so at the expense of its immediate availability."

This sowing, though to some extent correct, assumes two things which we are hardly prepared to concede: (1) That the whole of the fertilizing material comprised in the superphosphate has been converted into a soluble state; and (2) That a single crop consumes the whole of the food applied by this means. You can both eat your cake and keep it, provided you are not so greedy as to want to eat it all at once, and the principle of rotation of crops is at least analogous to

what our contemporary has no doubt done in his boyhood, viz:—saved out the candied lemon peel and plums for a supplementary feast. To speak plainly, there are not only soluble ingredients in the fertilizer under consideration, but there is a proportion of animal matter which by its slow decomposition will yield for some time to come a supply of ammonia, and there are insoluble phosphates which will gradually be reduced to a state in which they can be used for plant food. We therefore still demur to the statement that you "get the whole effect the first year."

As to whether superphosphate will injure the roots of plants, our contemporary thinks what we stated may be true of Coe's Superphosphate, but replies that he was talking about superphosphate in general, and not Coe's superphosphate. Perhaps we were not sufficiently explicit in the remarks which led to the *Genesee Farmer's* criticisms, but it was the article manufactured by Mr. Coe that we were discussing at the outset. We are glad to find our contemporary expressing so favourable an opinion of Mr. Coe's fertilizer in his concluding paragraph:

"The addition of salts of ammonia, or of animal matter capable of forming ammonia, greatly increases the value of superphosphate, and this we believe is done in the case of Mr. Coe's manure. It certainly contains ammoniacal salts, which is not the case with simple superphosphate of lime. The latter, as we stated, will not injure the seed, as thousands of tons are annually drilled in with turnip seed in England, not only without injury, but with the greatest benefit. We think Coe's superphosphate is an excellent article, much better than a simple superphosphate which contains no ammonia, and it would be well to indicate in its name that it contains ammoniacal salts, and then all intelligent farmers would know that it should not come in immediate contact with the seed or with tender roots."

THE late Duke De Morny's stud at Chantilly has been sold. There were six four-year olds, eighteen three-year olds, and thirteen two-year olds, which realized in all £13,518, or upwards of £365 each. The highest sum obtained was for Lelia, (by West Australian), a three-year old, which brought £2,000.

"THE SCOTTISH FARMER."—This valuable British agricultural journal, commenced a new series with its issue of April 12. It appears in a new dress of antique type, has a most elaborate pictorial heading, and announces itself as not only a journal of "rural economy," but of "field sports." Several of its articles are illustrated by excellent engravings.

PRESENTATION TO THE SECRETARY OF AN AGRICULTURAL SOCIETY.—We learn that the members of the County of Haldimand Agricultural Society recently presented a testimonial to their Secretary and Treasurer, Jacob Young, Esq. The presentation was made by E. S. Martin, Esq., and consisted of a beautiful Tea-Set, including a Tray, Tea-pot, Coffee-pot, Sugar Bowl and Cream Jug, on the Tray of which was an appropriate inscription.

CROP PROSPECTS IN ENGLAND.—The *Mark Lane Express*, of April 17, gives a favourable account of the weather and crops. The spring, though unusually late, cold, and backward, had given place to weather almost warm enough for summer; the face of the country had wonderfully changed for the better; the wheat plant was looking well; and unless night frosts prevented, there was a prospect of "a good ite of grass before May Day."

COST OF DOGS IN THE U. S.—The *Working Farmer* in an article on this subject debits the dog tribe, in the United States, as follows:—"Suppose dog rations be computed at less than a cent per meal, and the general average throughout the land at ten dollars per year; then the keeping of three millions of dogs of the loyal States would be \$30,000,000. The loss of sheep by dogs is estimated at \$1,570,167; while an equal, if not a larger, item may be reckoned for sundry damages, such as, cost of litigation occasioned, cattle bitten, hogs worried, fowls killed, eggs eaten and gardens injured. Hence the entire cost of dogs to the loyal States may be safely put down at \$33,000,000."

**Gleanings from the British Agricultural Press.**

**ROASTING POTATOES FOR PIGS.**—This is recommended by some of the English journals, and *Paxton's Cottager's Calendar* states that a kiln for the purpose may be erected for £3, to provide for twenty pigs.

**CIDER DRINKING EXTRAORDINARY.**—A writer in *Once a Week* is responsible for the following statement:—"It may be thought an exaggeration, but I have known a Somersetshire labourer drink 16 quarts of cider in a day. I asked this man what he would do if he were to become suddenly rich. He replied, 'I'd sit and drink zider all day, and when I could na' zit, I'd lie.'"

**SERVED HIM RIGHT.**—A farmer, named Birley, living at Barlow, in Derbyshire, has been charged before the Bakewell Magistrates with starving his stock. It was stated that he had left four cows and a calf without food or water for several days, until they became quite emaciated. At the time he had two stacks of hay upon his premises. He was committed to prison for two months, and ordered to pay £2 11s. 6d., or be further imprisoned for a month with hard labour.

**THE CORN TRADE.**—The average price of corn per quarter, imperial measure, in England and Wales, for the quarter ending Lady-day, as issued by the statistical and corn department of the Board of Trade, is as follows: Wheat, 38s. 4d., barley, 28s. 9d., oats, 19s. 10d. The average price of Wheat per imperial quarter in the week ending April 1, 1865, was 38s. 11d.; for the corresponding week in 1864, it was 39s. 11d.; in 1863, 45s. 4d.; in 1862, 58s. 11d.; thus showing a fall of 20s. per quarter during the four years.

**NUTRITIVE QUALITIES OF THE BEAN.**—The *Mark Lane Express* says:—An acre of beans—averaging 30 bushels at 66 lbs. per bushel—gives the following amount of nutritive matter in feeding material: Nitrogenous, or flesh-forming material, 460 lbs., starch 970 lbs., woody fibre 198 lbs., mineral matter or ash 67 lbs., water 285 lbs. Compared with other feeding materials, the feeding value of beans has been thus stated: Wheat 74 per cent., barley 63 per cent., oats 58 per cent., rye 70 per cent., beans 68 per cent., peas 75 per cent., French beans 84 per cent.

**TEACHING HOGS TO DESTROY THISTLES.**—We copy the following from an Irish journal:—"Tramp on the buds of a goodly number of the largest plants in the spring, and place on the buds a teaspoonful of salt; then turn your hogs on them. They will eat the roots of the salted plants first, and will thus acquire a fondness for them, and will continue to eat them daily as long as they can be found. If but one hog be educated in this way, he will teach the whole herd to eat them, and they will exterminate all on the farm."

**BIRD MURDER.**—We learn from the *Gateshead Observer* that the President of the Naturalists' Field Club (the Rev. G. C. Abbs) stated, at the anniversary meeting of the Club, that he had been calculating the number of caterpillars which the 6,000 sparrows, killed by a member of a "Sparrow Club" in Essex, and for which he had actually received a prize of 10s., would have eaten. The amount was 6,307,000. While the cloud-hoppers of Sussex are killing sparrows by the thousand, the Australian colonists are importing them at a considerable expense from England, to act the part of protectors of the crops.

**HONOUR TO HORSE DEALERS.**—A banquet was given to the Messrs. Tattersall on the occasion of their removal from the famous "Corner" to more commodious premises. The chair was occupied by Admiral Rous, President of the Jockey Club, who was supported by the Duke of Beaufort, the Earl of Shrewsbury, Lord Bateman, &c. The room presented a very brilliant spectacle, which was greatly enhanced by a magnificent display of cups, vases, and groups in silver, illustrating the different styles of racing plate manufactured since the year 1770 down to the present period. About 50 of these splendid trophies, won at Ascot, Goodwood, Doncaster, and other places, and representing an aggregate value of nearly £20,000, had been lent for the occasion by their owners.

**SALE OF SHORTHORNS.**—The following sales of short-horn stock have taken place lately: Lord Spencer's herd at Althorp—some of the animals realized very good prices; among the heifers and cows, Crocus, a roan, calved Aug., 1863, by Champagne out of Snowball, £64; Wine, a roan, calved May, 1861, by Wolfsbane out of Enjour £55 13s.; Rose of Bushey, calved July, 1860, by Great Mogul out of Rosa Bon-

heur, £17 5s.; Start, red-and-white, calved Dec. 1863, by Skipper out of Hopeful, £13 1s. At the sale of Sir Charles Knightley's herd, the following cows and heifers sold at good prices: Polytent, calved Oct. 1856, £45 2s.; Maidenhaw, roan, calved July, 1862, £64 1s.; Lactea, white, calved, Jan., 1858, £54 12s.; Nymphalia, roan, calved, Sept., 1863, £53 11s.; Hyampea, roan, calved Feb. 1863, £50 8s. The bulls did not realize very high prices; Bulls Run, roan, calved May, 1861, bringing only £31 10s.; Skampedo, white, calved May, 1861, £28 7s.; Skeddadle, white, calved, June, 1861, £27 1s.

**DOGS IN IRELAND.**—In the House of Commons, Sir F. Heygate, in moving the second reading of the "Irish Sheep Protection Bill," observed, that "great loss was occasioned to the owners of sheep, by the immense number of dogs which were at large in that country. From early morning to the latest period of the night, parts of the country swarmed with dogs. The dog has been called the friend of man, and, in that sense, Ireland would never want friends. Allowing only one dog to each house—which was a very low average indeed,—the result would exceed a million of dogs in the country. Now, comparing that number with the amount of live stock in Ireland, as stated in the published Agricultural Statistics, we find there is nearly one dog to every 3½ head of cattle, one dog to every sheep, and one dog to every pig."

**STORING AND PRESERVING ROOTS.**—On this subject Alderman Mechi states his opinions as follows:—"It is the greatest possible mistake to store roots in a dry condition, and free from soil; they die and then rot, the same as ourselves should do when vitality has departed. They are never in better condition to store than when the sticking clay comes up attached to the roots of the bulbs—the more clay the better; you will find this clay full of fine white living fibres, proving that the vitality of the plant still remains. Your great object should be to keep this earth and these fibres in a moist condition by preventing evaporation, and nothing will do this better than soft barley straw, not loosely and carelessly thrown on the clamp, but laid straight as thatch; the additional cost is only about 9d. per acre, or 7d. on a clamp, and it may save many tons of roots from rotting. Having thatched a clamp, then cover it well with earth that has been ploughed up round the clamp, leaving some pipe-holes at the top."

**PREVENTION OF THE RED WATER IN CATTLE.**—A correspondent of the *Banffshire Journal* makes the following statement:—"Without entering on a discussion of the subject, I may simply state that cows that are regularly supplied with food exhausted of the saccharine element are almost free from attacks of red water, such as draff, dreg, &c., or, as they may be called, brewers' grains; but as these cannot be got by every farmer, a substitute may be found in ground corn and linseed meal, or linseed cake; and these are not only good for fattening, but also increase the flow of milk; the milk yields more butter, and the butter has a finer flavour and better colour. Two pounds weight of linseed cake, and the same quantity of ground corn should be given to every cow daily for six or eight weeks before the time of calving, and after parturition, and until they get plenty of grass. If this were regularly attended to, there would be far fewer losses, and much less complaint of red water."

**WHAT IS AN INCH OF RAIN?**—The late weekly return of the British Registrar-General gives the following interesting information in respect to rainfall:—"Rain fell in London to the amount of 0.13 inches, which is equivalent to forty-three tons of rain per acre. The rainfall during last week varied from thirty tons per acre in Edinburgh, to two hundred and fifteen tons per acre in Glasgow. An English acre consists of 6,272,610 square inches; and an inch deep of rain on an acre yields 6,272,610 cubic inches of water, which, at 277,274 cubic inches to the gallon, makes 22,622 5/8 gallons; and as a gallon of distilled water weighs ten pounds, the rainfall on an acre is 226,225 lbs. avoirdupois; but 2,210 pounds are a ton, and consequently an inch deep of rain weighs 100,993 tons, or nearly one hundred and one tons per acre. For every one hundredth of an inch a ton of water falls per acre." If any agriculturist were to try the experiment of distributing artificially that which nature so bountifully supplies, he would soon feel inclined to "rest and be thankful."

**VALUE OF LAND IN LONDON.**—On this subject, the celebrated agriculturist, Alderman Mechi, writes to an English exchange as follows:—"Land everywhere in the city is dear, but especially so in the neighbourhood of the Bank of England, the Royal Exchange,

and other commercial points. I shall astonish some of my country friends when I assure them that the last cheap thing I heard of in Lombard Street was sold at two millions and a quarter per acre! say 70l. per superficial foot, or 630l. per superficial yard! and still the price is rising. Imagine paying an annual rental of 25l. odd for a space not much larger than a full-sized tea-tray! The old idea that London is paved with gold becomes literally realised, when one must place seventy golden sovereigns on each superficial foot. Well may citizens choose to live out of town, and only do business in the city, when one first floor in Lombard Street lets for 4500l. annually, and another for 2800l. Vast indeed must be the transactions whose concoction and completion take place on these costly floors."

**EDUCATION OF FARMERS.**—This subject is at present attracting very general attention, and eliciting much discussion in "the old country." In the columns of a recent exchange we find "G. Wilkins" writing, somewhat whimsically, on the aspect of the question in Essex. He says:—"A divine, barrister, lawyer, physician, surgeon, &c., must undergo a severe training before he commences to practice on his own account. But all the preparation a young farmer receives is to follow in the track of his father, who had followed in the track of his father, and so on until you get back to when Adam delved and Eve span, or to that enlightened period when we are told gorillas and not men cultivated the earth, and when the pre-Adamite drag was the improved machine wherewith cereal and pulse seeds were put into the ground. But to give an example or two between the training of manufacturers and that of farmers, if you ask a boy of the former soon after he has left school how many threads there are in a square foot of cotton or woollen cloth which his father makes, he will at once inform you; but if you ask a young farmer how many seeds of any kind of cereals or pulse, you might as well ask a young man-milliner, for the boy had never thought about it, and all he knows is that his father puts in bushels or sacks of seed an acre, but how many seeds these bushels and sacks will put into each square foot of ground, the young farmer again knows no more than the young man-milliner, or the gorilla farmer did, whose forefathers, according to the development theory, were the only husbandmen the earth possessed until accident rubbed off their tails and reduced their feet into hands and they became men, invented the pre-Adamite drag, which until lately was a tool in great vogue in a certain part of Gloucestershire, and by which a man is enabled to get into the ground seven times more seed than men of common intellects had found to be necessary and better than more."

**AN IMMENSE ESTATE.**—Prof. JOHN WILSON has lately published an account of the estate of the Duke of Northumberland, the facts for which were derived directly from headquarters. This estate comprises:

In Woodlands, .....	3,000 acres.
Hill Pastures, Grass-lands, &c., .....	116,200 do.
Tillage Occupation, .....	33,900 do.
Waste land, rocky, sea shore, &c., .....	4,700 do.
Total, .....	162,800 acres.

The hill grazing lands are mainly let in farms of about 3,500 acres each—the largest single farm, however, being of 8,000 acres. The rents vary from 1s. 6d. to 6s.—say from 35 cts. to \$1.50 per acre. On the tillage lands, the farms average about 250 acres each, renting for from 10s. to 60s. per acre, (\$2.50 to \$15.) "All permanent improvements to the estate—as farm buildings, cottages, roads, &c.—are done at the sole cost of the Duke; for draining an annual charge of 5 per cent. on the outlay is made, the tenant also undertaking to lead the tiles. No less than 35,203 acres have thus been thorough-drained at an average cost of about £5 per acre. Liming is usually done by the tenant, except when any special arrangement is made for an allowance from the landlord in the shape of material or money. The same understanding also exists in reference to laying down land to permanent grass." The books of the estate, from the time the late Duke assumed possession in 1817, up to Dec. 31, 1863, show the following vast expenditure during that period of about 16 years, for the purposes named, excluding all expenditure upon the Castle itself, and other residences, churches, parsonages, &c.:

For Roads, bridges, &c., .....	£ 39,600 0 1
do. Buildings, cottages, &c., .....	268,336 12 9
do. Draining, .....	176,582 4 0
Total, .....	£524,007 16 10

Or, for draining alone, nearly \$900,000 laid out by one man in 16 years!



## The Advantages of Horticulture.

We learn from a contemporary, that the Rev. Dr. Osgood in addressing a public meeting on this subject, in substance, observed, that horticulture is one of the best pursuits to follow for mental culture, inasmuch as gardening is at once a school, a workshop, and a parlour.

As a school, it begins with the earth, or mineral kingdom, and rises through the vegetable and animal world. Even a small clod of earth is a fit subject for study, exemplifying the truth that "wisdom is oftentimes nearer when we stoop than when we soar." Through all the gardens of vegetable life, from the minutest plant to the tallest oak, there is a world of study and of wisdom. Botany is an interesting study, pursued through the laws of vegetable growth, particularly when illustrated by the familiar plants around us. The gardener, while labouring to obtain the greatest yield, should combine the beautiful with the useful, instead of striving to separate them. We may hold up an apple as a thing of use, and point to a flower as a beautiful object; yet these, if not brother and sister, are, at least, first cousins. Besides a school of learning, the garden should be a school-house of Divine faith.

As a work-shop, the garden is one of the very best places to develop bone and muscle. Let a lady take a hoe or rake, and in a few hours every muscle will find its exercise. The garden is a pleasant place in which to see our wives, our sisters, and daughters engaged—the best of all gymnasiiums. Flora and Pomona were called by the ancients feminine divinities. Why may we not class gardening among the fine arts? The gardener is a painter of no mean order, using the colours which nature furnishes, and it is for him to apply them with fitness. Our education would be much more perfect were we to unite the study of gardening with that of books; and how very little, too, it takes to surround one's place with flowers compared to the sums paid in needless luxuries.

The garden is a parlour with pleasing associations. We want something when we come together to unite us socially and bring us into affinity, which the garden is eminently calculated to do. Are not the strawberry and grape ministers of civilization, if not of evangelization? In enjoying the lovely tints of a flower we exhaust nothing, and rob no one; while, at the same time, we are brought out of our own selfishness.

Elihu Burritt discourses on same theme as follows: "The garden is a bound volume of agricultural life, written in poetry. In it the farmer and his family set the great industries of the plough, spade and hoe in rhyme. Every flower or fruit-bearing tree is a green syllable after the graceful type and curse of Eden. Every bed of flowers is an acoustic to nature, written in the illustrated capitals of her own alphabet. Every bed of beets, celery or savory roots or bulbs, is a page of blank verse, full of belles lettres of agriculture. The farmer may be seen in his garden. It contains the synopsis of his character in letters that may be read across the road. The barometer hung by his door will indicate certain facts about the weather, but the garden, lying on the sunny side of the house, marks with greater precision, the degree of mind and heart culture which he has reached. It will embody and reflect his tastes, the bent and bias of his perceptions of grace and beauty. In it he holds up the mirror

of his inner life to all who pass; and with an observant eye they may see all the features of his intellectual being in it. In that choice rood of earth he records his progress in mental cultivation and professional experience. In it he marks by some intellectual sign, his scientific and successful ceremonies in the cornfield. In it you may see the germs of his reading, and you can almost tell the number and nature of his books. In it he will reproduce the seed-thought he has culled from the printed pages of his library. In it he will post an answer to the question whether he has any reading at all. Many a nominal farmer's house has been passed by the book agent without a call, because he saw a blunt, gruff negative to the question in the garden or yard."

## The Portulacacae.

The portulacacae, though one of the most common, is still one of the most showy and beautiful annuals, admirably adapted to our climate, growing freely and flowering abundantly under conditions of soil and treatment where many other flowers would scarcely make any display; the old orange and scarlet, when planted out in large patches, vie in brilliancy and decorative effect with the showiest verbenas.

For a long time there were but two or three shades of red and orange, but with the skill of cultivators they have been crossed and fertilized till we have nearly a dozen different sorts, some scarlet, some crimson, some yellow, orange, white, &c., with a mixture of the two colors. These have hardly become well known before we have another improvement, obtained by the German florists, in double flowers, as double as the rose.

These double varieties are in fact charming objects, and may well claim a prominent place among the novel things of recent introduction. The flowers are perfectly double, about the size of a twenty-five cent piece, and a bed of them in full bloom presents a gay appearance, not unlike that of the beautiful ranunculus, or the little Burgundy rose, so that the Germans call them "Portulacacae roses."

The portulacacae love a warm and rather light soil, and a dryish situation, to flower well. They need not be planted early, unless in a frame or hot-bed, as the seed will not grow freely till the ground is warm. About the middle of June the plants begin to appear in the open ground, and grow with great rapidity, soon covering a large bed, and making a dazzling display with their many-hued flowers, from July to frost.

The double varieties, like all other double flowers, cannot be relied upon with certainty to produce all double flowers, but the larger part of them will be double, and the single sorts may be pulled up and thrown away, or transplanted, unless it is desired to retain them in the same bed with the double kinds.—*Lovey's Magazine.*

## Common Ivy.

Ivy is not a parasite as commonly supposed, but has its roots in the earth, and simply adheres to the trees or other props by which it is elevated into the air. If the thick stems, which may always be observed at the base, be cut through, it usually dies like any other plant. The diameter of these stems near the ground is often 10 or 12 inches, and many are often found standing side by side. The age attained by ivy is probably to be reckoned by centuries, for though often found trailing weakly upon the ground, bordering sylvan walks, and entangled in hedges, its true place is the time-worn and roofless abbey, and the crumbling middle-age castle, from the romance of which it is inseparable, and with the history of which it descends, making antiquity picturesque, and affording at the same moment a powerful physical protection. Some of the largest ivies in England are probably those at Brocley Hall, Somersetshire, where they brace up the old trees with their friendly clamps, rendering them at the same time, as is the wont of ivy, cheerful in winter; and for beauty there are none to be found grander than those of Kenilworth. The lower walls of this famous ruin they ornament with green and shining arabesque; and from the upper ones they roll out magnificently in rich and massive cornices. The variety in the leaves of ivy is often thought to indicate a difference of kind. But it is a variety connected merely with different stages of growth. While young, and as long as the stems have a wall or tree to attach themselves to, that is to say, closely, as if they were glued, inch by inch, the leaves are angular and three to five-lobed in innumerable variety; at this time also they are often beautifully variegated with red or purple, or veined with white, or wholly yellow,

especially on the terminal and zigzag branchlets that run like vegetable centipedes up trees and over the surface of damp walls and rocks. Mounting upwards by means of their root-like suckers, which are thrown out abundantly from the surface, the stems in due time reach the top of their support. They now elongate but little, becoming woody, and forming large bushy heads, which produce flowers and fruit, and the leaves of which are all ovate or elliptical, but still possessed of the characteristic polish, and with long petioles. Such leaves are produced only upon the branches that float into the air, when the plant is attached to trees or buildings; or that form a kind of edge along the top, when growing against an old wall; and it is only upon these, literally the very tops of the plants, that flowers and fruit are found. If the stem have suckers upon it, there are neither. Examples are known of ivy ascending to the height of 100 feet before it becomes disengaged enough to blossom.—*Grindon's British and Garden Botany.*

## New Plan of a Grape Trellis.

A CORRESPONDENT of the *Maine Farmer*, gives the following account of a novel style of trellis for grape-growing.

"I can perhaps best give an idea of the plan by describing as near as I can, the one I have commenced on my own grounds. The west line of my lot is seventeen rods in length, on which I want a secure fence. On this line I set cedar posts as if intended for making a common perpendicular board fence. To the top of these, which may be five or six feet high, I secure the end of planks two inches thick, eight inches wide and nine or ten feet long (according as I want the inclination of my trellis), with the other ends resting on, or in the ground inside. Having proceeded so far, I have a near representation of one side of the frame of a roof of a building. This frame, I board on the under side of the rafters, and upon the upper side stretch wires, or nail strips of board to complete the trellis, thus giving ten or twelve inches perpendicular height between the trellis and the boarding, which is sufficient room for the grape clusters to be suspended without resting on the boarding. The vines it will be understood are planted near the feet of the rafters and trained on the trellis. This structure painted with coal tar, into which is stirred a quantity of sulphur, I think besides answering the purpose of a perfectly secure fence, will afford me the best possible mode of cultivating grapes in the open air. By it I have shelter from the cold winds, secure the greater amount of heat, am guarded against the attacks of insects and mildew, and save the expense of laying down and putting up my vines. Doughs may be placed on them without removing them from the frame.

This plan, it will be seen, can be adopted in any locality, by the side of hills, by placing the structure on, or near the ground. In the latter it will be found much better than training on the ground, as the difficulty of keeping out weeds and grass is obviated, and greater heat gained.

Let it be remembered, that in attempts to ripen grapes in our climate in this or any other manner, it is important to have the trellis so placed as to take the morning sun—better to be deprived of the sun the whole afternoon than two or three hours in the morning. On the opposite side of the street to where I sit, is an Isabella vine covering the whole south front of a dwelling, with several branches trained round the corner upon the east side. The part of the vine on the east front, is entirely in the shade after half past twelve o'clock, still the grapes on that part have uniformly been the earliest and finest for the last seven years, during which I have observed them. A directly eastern front is preferable to one directly southern, but probably an eastern, inclining a little south would be preferable to either.

This plan may be varied as to height and inclination. My choice is to have it not above six feet high, and to keep the vines cut back to the limits that height would afford. By this means the pruning, thinning, gathering, and all necessary work is within reach."

CURIOS INSTINCT OF PLANTS.—Hoare, in his *Treatise on the Vine*, gives a striking exemplification of the instinct of plants. A bone was placed in the strong but dry clay of a vine border. The vine sent out a leading or tap-root, directly through the clay to the bone. In its passage through the clay, the main root threw out no shoots; but when it reached the bone it entirely covered it by degrees with the most delicate and minute fibres like lace, each one sucking a pore in the bone. On this luscious morsel of a bone would the vine continue to feed as long as any nutriment remained to be extracted.

### Laying Out Grounds.

Residences of all descriptions are greatly dependent on their surroundings. A costly dwelling may be quite destitute of an air of neatness and comfort, for

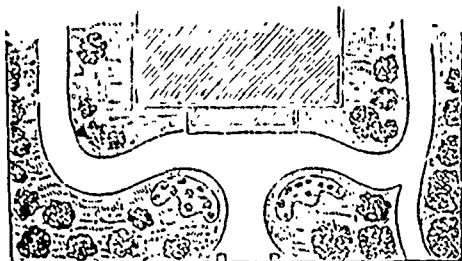


FIGURE 1.

want of a little taste in arranging and planting the adjacent grounds, while an ordinary and even uncouth-looking house may be made very home-like in appearance by a skilful ordering of things out of doors. Our limits do not admit of any lengthy exposition of the principles and rules of landscape gardening, but we propose to lay before our readers a few plans and hints that may prove suggestive and useful. Nothing is easier than the improvement and decoration of a small frontage such as most private residences have in our towns and villages; yet it is very rarely that you notice anything attempted beyond a stiff, straight walk, two or three shade trees in

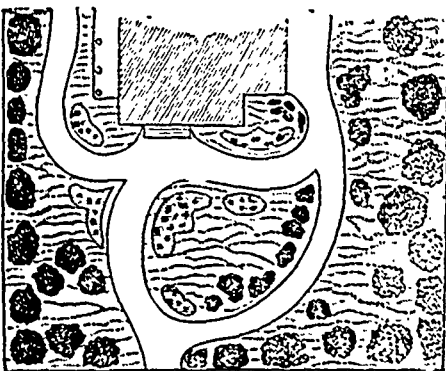
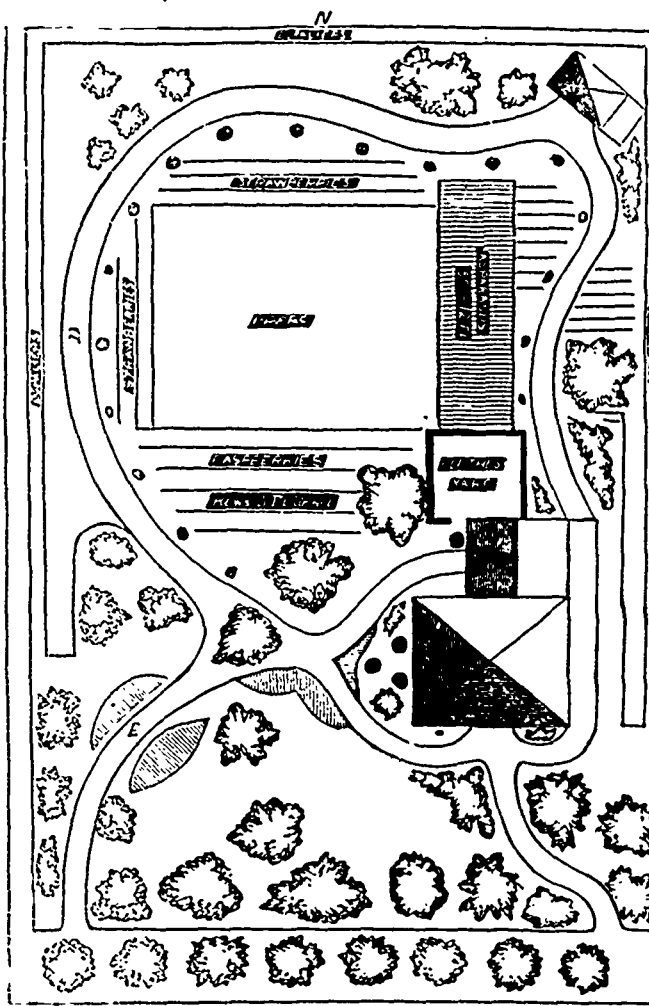


FIGURE 2.

front, and a square or circular flower-bed. In many instances not even so much is to be seen. Our first illustration, for which we are indebted to the *Rural Register*, shows how a narrow lot may be made to look very tasteful and inviting. Curved outlines are adopted as less formal and stiff than straight ones. Two walks are provided on this plan, one leading to the kit-

viates enough from the straight line to avoid all appearance of stiffness and formality. The paths should be well made, of gravel, or some hard material; the turf should be smooth and even; the soil rich; and the shrubs and trees varied and choice. Of course evergreens will have a conspicuous place assigned them, as nothing surpasses them, whether for ornament or concealing unsightly objects. On a comparatively small piece of ground, all this is feasible without much outlay or labor. Sometimes there are facilities for laying out a lawn, shrubbery, and flower garden, in the rear of a dwelling. In such a case, the next plan, Fig. 3, (taken from the same source as the preceding ones), will be found useful as a study. The exterior is devoted to shade trees, and to a diversified shrubbery, while the centre is almost wholly devoted to flower beds of various devices, which are cut in a smooth, well-kept lawn. Even the most uneducated eye must see beauty in such a scene as this. The view from the house across the flower garden to the summer-house *b*, is quite unobstructed, so that the entire sweep of the little estate is taken in and enjoyed at once. Of course such a plan admits of various modifications to suit the taste, or meet the requirements of the proprietor. The next illustration is copied from *Copeland's Country Life*, a valuable publication in which many useful hints about landscape gardening may be found. It represents a village lot of about half an acre, but it might also be adopted as a plan for the home grounds of a small farm. The piece of land supposed to be thus laid out, is about 125 by 175 feet. No minute explanation of this cut is needed. The house stands a little distance back from the road or street, and there are trees enough to give it an air of privacy and seclusion. The walk in the rear passes round the whole of the kitchen garden. The buildings at

and furnishes warm exposures for the sowing of early seeds. In this climate, shelter from high winds is very important, not only as a defence against cold, but as a preventive of trees and plants being broken down by high winds. A hedge of evergreens is pre-



STREET

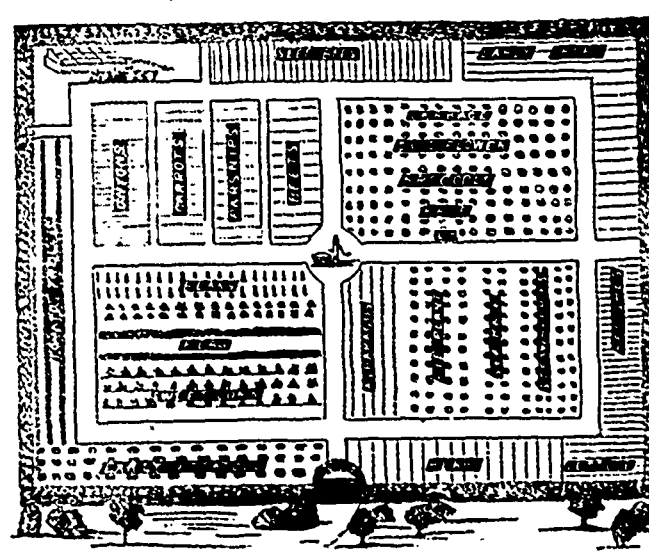
the far corner may be a hen and pig house. If this plan formed part of a larger estate, the orchards, barns, &c, would of course be arranged at the side and back. We add a charming plan for a kitchen garden, which appeared in a recent number of the *Country Gentleman*. It may be of either large or small size, but was originally designed to embrace about an acre of land. It is a square or parallelogram,—the best shape on the whole for a kitchen garden. The outside boundary

is enclosed by a tight board fence, which can be covered with currants or other fruit trees, trained as espaliers. Such a fence, though somewhat expensive at first, forms a most useful protection to a garden. Further description of this plan is unnecessary as it explains itself. At a future opportunity we may find room for other plans of a similar character to those now given.



FIGURE 3.

chen entrance, and the other to the garden in the rear. Fig. 2, also from the *Rural Register*, is adapted to a somewhat larger lot of land. The main entrance walk, without any unnatural or inconvenient curve, de-



KITCHEN GARDEN.

Further description of this plan is unnecessary as it explains itself. At a future opportunity we may find room for other plans of a similar character to those now given.

Why is a soldier like a vine? Because first he's 'listed,' then 'trained,' then has 'tendrills,' and then 'shoots.'

Mr. Hammond, of West Liberty, Ia. says that by planting a few seeds of hemp in each hill of squash or cucumber vines, the striped bug will be effectually kept away. Let the hemp plant grow until the vines are out of the way of the bugs, then pull them up like other weeds.

**THE FRUIT CROP IN MISSOURI.**—Up to this time (April 1), the prospect of the fruit crop is very flattering. Some few of the fruit buds of the peach have been killed—but if many more had been destroyed, it would have been better for the fruit. People will not take time to thin it properly, and if Jack Frost will do it, he deserves great credit. He generally, however, makes a wholesale business of it, which of course we object to—but if he will always act as prudently as he has thus far this season, we shall bestow nothing but praise upon his labours. Apple, pear, and cherry trees are all loaded with live fruit buds, and we have every prospect of an abundant crop of all kinds of fruit. The season is backward, which is also favourable.—*Rural World.*

**DEUTIA CRENATA FLORE PLENO.**—This beautiful, flowering, deciduous shrub from Japan promises to be as hardy as a Lilac, and seems likely to become more robust in habit than either *D. scabra* or *D. gracilis*, while the flowers are produced in great abundance on small plants. The habit of the plant, however, is more straggling than that of *D. gracilis*, and it is, therefore, not so well adapted for producing a nice compact object for pot culture, but this possibly may be overcome. As a plant to cover a wall it has, I should think, few equals, as the shoots ripen to the points, and mostly flower there. As a new plant it is one of the prettiest in its way we have had for some years, and I trust that it is the forerunner of others equally useful.—*Cor. Cottage Gardener.*

**REMEDY FOR ONION MAGGOTS.**—A correspondent of the *Boston Cultivator* gives the following as his practice:

As soon as signs of the maggots are discovered, apply boiling water with the addition of a quart of salt to 6 gallons of water, poured through a cullender on to the onions as they stand in rows; hold the cullender in one hand and a bucket of hot water in the other, and walk over the piece, putting on enough to wet the onion and the top of the ground, but not enough to stand in pools on the ground around the onions. If properly applied it will destroy the maggot and not injure the growing plants. It is necessary to apply the remedy as soon as the enemy begins his work; if delayed two or three days the crop is ruined."

**PRUNING APPLE TREES.**—Mr. L. G. Brown, in the *Boston Cultivator*, says:—"Spring, when the buds are swelling and the sap in full flow, is a very bad time. Yet there are many who prune more or less every Spring." He is right. More apple trees are destroyed by such injudicious pruning than by all the canker worms and caterpillars combined. Prune in June, when the sap is comparatively at rest; or in October, soon after the fall of the leaf, and so for a month or two. This will depend much upon the state of the weather. A few bright warm days in succession, even in the first part of February, would be quite likely to cause considerable activity in the sap, and make it unsafe to prune. The rule should be to prune when there is the least flow of sap. This occurs between the first and second growth of the tree, and after the fall of the leaf in October. We are speaking of limbs that have attained a diameter of half an inch. Smaller "suckers" may be cut at any time, though not without some danger of bleeding.—*N. Y. World.*

**PROPAGATING HYACINTUS.**—Hyacinth bulbs are imported from Holland, where large farms are devoted to their propagation. Our correspondent, F. Scholer, of Long Island, states that he can raise bulbs as good as the foreign ones, and nearly as cheaply as onions. Having some bulbs in which the heart, or central bud, had decayed, he planted them in autumn, and found in spring, that numerous small bulbs were formed around each old one, in one case to the number of 34. These when taken up in July were found to be about the size of one's thumb; they were planted again in autumn, and the following summer when they were lifted, were found to be equal in size and quality to the imported ones. Acting on this hint, he afterward removed the central bud from the bulbs by means of a knife, and succeeded in getting a crop of small bulbs. The experiment is easily tried, and we see no reason why, if sufficient pains be taken, good bulbs may not be as easily grown in our own gardens as abroad.—*American Agriculturist.*

## Poetry.

### The Gardener's Soliloquy.

To sow? or not to sow?—that is the question,  
Whether 'tis nobler in the mind to suffer  
The greatest torment of a gardener's life  
In poring yearly through "fat catalogues,"  
Or to take means by popping them, when sent,  
In the waste basket,—to be looked to  
No more; and, by doing so, to say we end  
The thirst for new and special novelties  
That flesh is heir to. 'Tis a consummation  
Devoutly to be wished. To grow?—to sow?  
To grow?—perchance to cram our beds and borders  
With useless rubbish—Aye! there's the rub!  
For to pick out the best of the trade-lists,  
Full of "enobled roots," and "improved seeds"  
Must give us pause. There's the respect  
That raiser—have for their own progeny;  
For who would bear to look o'er all the lists  
Now daily sent to gardeners or employers,  
"Descriptive guides," "Vado mecum," "Little books,"  
For teaching when to sow, transplant, and reap,  
When he himself might the commotion end  
By never reading them? Who would yearly bear  
To sow the good old seeds of former lists?  
But that the thoughts of something after so long time—  
That the "ring-leaders," "gems," and "first crop" peas,  
New broccolis, kauls, French beans, and cauliflowers,  
Might not turn out so profitable or early  
As the well tried old sorts, puzzles the will,  
And makes us rather grow the seeds we have  
Than order others that we know not of.

W. T., in *Gardener's Weekly Magazine.*

### How an Acorn came to be Planted.

The following lines were written by a Scotch horticulturist, to illustrate how curiously seeds are sometimes scattered over the face of the earth. The story in this case is literally true, and what makes the circumstance the more interesting to Scotch botanists, is the fact, that the oak thus strangely introduced into that country, is of a kind different from any hitherto growing there.

In the far off wilds of Catalian woods  
Where the red man lives and dies,  
Where the wild turkey hatches and rears her broods  
Unseen to the white man's eyes.  
There fell to the shot of a gun one day  
To the sportsman a glorious prize,  
A Turkey, whose flight lay over his way,  
A bird of a royal size.  
This turkey was sent to old Scotia's shore,  
As a Christmas treat to a brother;  
And never on Christmas been before,  
Had the Scotchman seen such another.  
And deep in the "crop" of the bird he found,  
(Now here is the path of the story),  
A seed of a tree whose name is a sound  
Of renown in old England's glory.  
The acorn was planted in Mother Earth,  
And soon to new life awoke,  
And fresh from the ground did there issue forth  
A sapling of royal oak.  
Now wise men all, I pray you please  
To mark the curious ways,  
By which the seeds of plants and trees,  
Are scattered in our days.

R. M.

## Miscellaneous.

### First Principles.

BY W. S., OF WORCEN.

The worst of all ignorance is ignorance of the reasons for our own conduct; and whoever aids in preparing the way for mankind to acquire this knowledge, the most readily and the most thoroughly, will not have lived in vain. The mighty impetus in the acquisition of knowledge, obtained by means of the inductive philosophy of Bacon, is only now beginning to be generally appreciated. Perhaps no greater mind than Bacon's ever lived, and few have deserved better of posterity. He was the first to popularize knowledge, the first who employed a clear, vigorous

intellect, and a logical understanding in penetrating the mists of empiricism, and the clouds of mental darkness,—the first to demonstrate that "knowledge," which "is power," was the birthright of every human being,—the first who taught aloud that man can discover truth in no way but by observation, and by imitating the operations of nature,—that truth is born of fact, not of speculation,—that systems of knowledge are to be founded, not upon ancient authority, not upon metaphysical theories, but upon experiments and observations in the real—not the ideal—world around us.

These are axioms of universal application, but to no art or science do they apply more immediately and directly, or more usefully, than to the multifarious operations of the culture of the soil, and to the study of the living wonders of vegetable physiology. The primary object of all study and all observation, should be the knowledge of principles. With proper discipline, the humblest capax may acquire knowledge to an extent seldom realized, or even attempted by the greatest and most favoured. The Baconian principle is simply, that investigation, enquiry, method, understanding, should each and all be made available in aid of the mind, as tools and implements of all sorts are in aid of the hands and the physical powers. In the acquisition of knowledge, and discovery of principles, nothing should be taken for granted; the most rigid circumspection should ever be exercised, and things requiring proof should never be quietly assumed. With all the aids at command, the enquirers should next examine how far new ideas and projects, which continually present themselves, are consistent with nature, and nature's laws,—impartially weigh the reasons for and against approval, and then decide inflexibly, not from prepossession, prejudice, or feeling, but in accordance with the dictates of reason, and common sense. It is not enough to say that such a one's volition is "according to his conscience," or that such and such are a man's "honest opinions," for

"Tis with our judgments as with our watches; none  
Go just alike, yet each believes his own."

An "honest opinion," therefore, is valuable just so far as it is a right one, and no farther. In the language of holy writ, "How forcible are right words!" Moreover, the searcher after truth, before he attempts new discoveries, should know what is already known in the same direction. Should he neglect this, much labour will often be expended in vain. Bacon, in his day, was reported to have made a bonfire of almost his entire library. "These books," he said, "contain no principles, and are, therefore, useless." A journal, as well as a book, should have a principle; a principle rightly understood, is worth a thousand theories—the why and the wherefore of a thing is of more importance than a thousand speculations. The enquirer after knowledge, in whatever part of that boundless domain, should leave nothing to chance; he should observe, examine, try experiment after experiment, and endeavour on a solid foundation, to build up a superstructure for himself. All this consists with perfect fairness to, and charity for other men's opinions, while it is quite within the reach of any ordinary mind.

The empire of knowledge, yet unexplored, is infinite, illimitable. Imagination toils in vain, in the mere conception of the heights and depths that future ages may reveal. There are, for example, botany, natural history, electricity, mineralogy, geology, chemistry, and at least a score of other sciences, on any one of which the mightiest intellect may labor for a long life, and yet have proceeded little beyond the confines! We know and can know but in part; but whatever we attempt let us first try and comprehend the principles. Details will afterwards be all the easier, and our acquisitions the more perfect and enduring.

The mind is like the body in its habits—exercise can strengthen, as neglect and indolence can weaken it—they are both improved by discipline, both ruined by neglect.

**Patterson's Implement Manufactory.**

To the Editor of THE CANADA FARMER:

Sir,—I presume you and many of your readers are aware, that in the neighbourhood of Richmond-hill, there is an extensive establishment for the manufacture of agricultural implements: carried on by one of the Messrs. Patterson. I have had an opportunity recently of visiting that establishment, and having been shown the whole process of manufacturing those machines, I beg to be allowed to make a few remarks with reference to the mode on which the business is conducted.

The materials used are of the best quality that can be procured anywhere, without reference to cost. Steel is now used by Mr. Patterson in many parts of the reapers and mowers where iron was formerly used, and steel being much stronger than iron, the effect is to get the necessary strength with a much reduced weight. Moreover the friction is much less; consequently a less amount of animal power is necessary to work the implement, and at the same time, breakage is a rare occurrence.

The very accurate manner in which the machinery employed in the manufactory works, and by which the joining, boring, &c., is done, enables the employees to prepare every part of the implement with as much precision as a watch-maker prepares the different parts of a watch, before he puts it together; and as neither drinking nor smoking is allowed, and none but thorough good workmen are employed, few, if any mistakes are made, and as every part of an implement is thoroughly tested before being put in its place, the result is a near approach to perfection.

One thing struck me as quite novel in this establishment, there are no apprentices; all the workmen are journeymen of known ability. This, while it adds perhaps to the expense of getting up the implements—secures their excellence, and enables the proprietors to carry out their determination, not to allow an imperfect piece of work to leave their shop.

Still there seems a drawback in not having a set of young men in training, to take the place of the old hands as they drop off; and it is evident that if all similar establishments were to pursue the same practice as to the non-employment of apprentices, the race of workmen would become extinct before long. But as this policy is not in operation in, perhaps, one in ten of such establishments, Mr. Patterson will be able to procure a supply of efficient hands for sometime to come.

There are now about fifty men in the several shops, besides those constantly out making sales, and delivering implements. The men are all employed by the day, no piece work being done; the result is, that there is no inducement to pass an improper piece of work out of hand. The iron ploughs made at this establishment, have been long and favourably known. The steel mould board, is now very generally but not extensively used, and is a great improvement. A great many ploughs are made here, also straw cutters, cultivators, &c. I think Mr. Patterson told me, there were fifteen hundred mowers and reapers in hand, and would be ready for next season's work. There are single reapers, single mowers, and also combined reapers and mowers, all of the most improved patents; but embracing those of several different inventors, and known by different names. When we reflect upon the immense amount of manual labour to be saved by the use of these implements, throughout the country, and that the effect is to enable the farmer to get his crops off when the weather is fine, and with an immense saving of the most severe labour, at a season when severe labour is the most trying, it must be admitted, that the country is largely benefited by the caterprize of those persons who have within the last few years, so largely introduced the manufacture of agricultural implements in Canada. There are many very enterprising men engaged in this business; amongst whom the Messrs. Patterson Brothers are very prominent, and have always been successful competitors at our Exhibitions. Our annual prize lists show, beyond dispute, that they have many able competitors to contend with. It is the interest as well as duty of every farmer, to encourage these establishments.

E. W. THOMSON.

Aikenshaw, March 2, 1865.

NOTE BY ED. C. F.—The above letter has been in type sometime, but the press of other matter has prevented its appearing until now. It is a saddening reflection, that in the interim, the writer has passed away from earthly scenes, and will mingle with them no more!

**The Extent of Canada.**

LEAVING out the territory to the north-west, the opening of which may be looked for ere long, Canada occupies a space stretching in a south-westerly direction from the Island of Anticosti in the Gulf of St. Lawrence, to the south-western extremity of Lake Erie, of about 1400 miles in length; with a breadth varying from 200 to 400 miles. Including water-surface, it is computed to contain an area of 319,821 square miles—242,482 exclusive of water. The number of acres comprised within it is estimated at 160,405,129; 128,659,681 of which are reckoned to Canada East; to Canada West, 31,745,533.

"If an area," it is remarked in a pamphlet published in 1860, by authority, "be traced in Europe, corresponding generally to that occupied by Canada, in America, and the meridian of the most southern part of Canada be supposed to lie upon the meridian of Greenwich, in England, the south of France, at the base of the Pyrenees, will represent the south frontier of Canada; the south-eastern boundary of this area will stretch through France, Switzerland, Bavaria, and Austria, to a point in the south of Poland, and a line drawn northward to Warsaw will delineate the mouth of the Gulf of St. Lawrence. The north-western boundary of this area will extend from the south of France, in a northerly direction, towards and beyond Brest; and a line drawn from near Brest to the British Channel, thence through England, Belgium, and Germany, to Warsaw again, will establish the position of a European area corresponding to Canada in America. The inhabited and highly fertile portion of Canada is represented in this area by those regions which lie in the south, centre, and south-east of France, and in those parts of Switzerland, Bavaria and Austria, included within its boundary. The other portion, although of vast extent, and no so well fitted for extended agricultural operations, is highly valuable on account of its timber and minerals.

"The Province of Canada embraces about 350,000 square miles of territory, independently of its north-western possessions, not yet open for settlement; it is consequently more than one-third larger than France, nearly three times as large as Great Britain and Ireland, and more than three times as large as Prussia. The inhabited or settled portion covers at least 40,000 square miles, and is nearly twice as large as Denmark, three times as large as Switzerland, a third greater than Scotland, and more than a third the size of Prussia; but such is the rapid progress of settlement through immigration, that in ten years' time the settled parts of Canada will be equal in area to Great Britain or Prussia."

According to the Crown Lands Report for 1856, the peninsula of Gaspé alone, which is 175 miles in length, with an extreme breadth of 90 miles, comprises an area, after the deduction of a small portion covered by New Brunswick, of 11,800 superficial miles, equal to that of the European peninsula of Denmark, which it resembles in form. The Tadoussac territory, valued as yet chiefly for its timber trade and its fisheries, is there stated to have a coast of 600 miles in length on the Gulf and River St. Lawrence, with a breadth of 160 miles, and an area of probably 65,000 square miles; more than twice that of Scotland. The country drained by the Saguenay includes an area of 27,600 square miles, an extent equal to the Tyrol and Switzerland taken together. The quantity of land in it capable of cultivation, is estimated at about 3,000,000 acres. The area drained by the St. Maurice is about 21,000 superficial miles; about one-tenth larger than the mainland of Scotland, and containing about as much arable land. "Admirably watered, and intersected by magnificent rivers, with forests of pine alternating with rich tracts of hardwood land, and with that most valuable of all minerals, iron ore, in unlimited quantities, the country wants but the hand of man and the course of a few years to make it equal to the most flourishing parts of Canada." The area of the Ottawa and tracts there-with connected is estimated at 82,000 miles; one-fourth greater than that of the New England States.

In the Great Manitoulin Island, which contains about 3,000,000 acres, upwards of 200,000 acres are expected soon to come into market. On the north sides of Lakes Huron and Superior there remains to be noticed an area of about 48,000 miles; one-half greater than that of the State of Maine.

Regions so vast afford certainly ample room and verge enough, and will do for some time to come. Should they, however, become too straight, we have the North West to fall back upon, one-fifth of which, the Red River and Saskatchewan country, is computed to contain a territory exceeding in extent the empires of France and Austria united.—*Seller's Hand Book.*

**Markets.**

**Toronto Markets.**

"CANADA FARMER" Office, Thursday, May 11, 1865.

We have to report, on the whole, very favourable weather for the last fortnight. There was a good deal of shower and sunshine, accompanied with colder weather than during a corresponding season for a few years past. The trees are later in donning their foliage, and it is only now the full signs of approaching summer are seen. The state of our street market since our last has been almost unchanged, nothing having transpired to be worthy of remark. In Breadstuffs, however, there have been one or two fluctuations, the result of which has been, together with the last news from England, and the state of matters on the other side the lake, to advance prices and render holders firm at higher figures, in expectation of a still higher figure. This is true of flour, fall and spring wheat. There has been so much shipped from here in the early part of the season of the small stock in the country, that now, when the actual light amount on hand is ascertained, what is here is held firm at advanced prices, on account of the scarcity and the expected rise. We will have to import from the Western States to a large extent to feed us until our new crop comes into market. In coarse grains there is a moderate activity, with some few transactions. Provisions are dull, and cured meats are more in demand than formerly, from the high price of beef and butchers' meat generally. A good number of cattle are weekly exported to the American markets from here, for which a very fair price is paid. There cannot be less than an average of 100 a week from this market alone. The price has gone down, however, of late, and it has not yet shown signs of revival. In all other branches matters are quiet and nominal.

Flour Improved, No 1 superfine at \$4 75 to \$4 80 per bush; extra, \$5 00, superior extra, no receipts; fancy, nominal.  
Fall Wheat steady, firm, wanted; no receipts; selling at \$1 12 to \$1 15 per bushel.  
Spring Wheat—In active demand and advanced, at \$1 02 to \$1 03 per bushel.

Barley quiet and unchanged, at 65c to 65c per bushel.  
Oats at 45c to 60c per bushel, from teams and in store.  
Rye 60c per bushel.  
Pease quiet and steady, at 80c to 85c per bushel.  
Hay—Market fairly supplied at \$14 to \$18 per ton.  
Straw in poor supply at \$14 per ton.  
Provisions—Butter—Fresh, wholesale, per lb., 20c to 22c; retail, per lb., 1c to 2c; in tubs, wholesale, per lb., 14c to 16c.  
Eggs—Wholesale, per dozen, 12c to 12½c, retail, per dozen, 12½c to 13c.

Hams—Wholesale, per lb., 12½c to 13c; retail, per lb., 14c to 15c.  
Pork Bacon—Wholesale, per lb., 11c to 12c; retail, per lb., 12c to 14c.

Cheese—Wholesale, per lb., 11c to 12c; retail, per lb., 14c to 15c.  
Lard—Wholesale, 12c to 12½c, per lb.; retail, 14c to 15c.  
Beef, in small supply at \$5 50 to \$6 60 per 100 lbs.; 7c to 7½c per lb., wholesale, 10c to 12½c per lb., retail.  
Cattle \$4 to \$6 each, large number in market.  
Sheep, by the car load, \$5 to \$6 50; each, \$5 to \$7.  
Lamb, \$2 50 to \$3 00; very good bring \$5 00.  
Pork \$6 50 to \$7 25 per 100 lbs, small supply.  
Hides (green) lower; per 100 lbs, \$3 00 to \$3 25; dry hides 6c to 8c per lb, cured and tanned, 4½c to 5c.  
Tallow—rough, 5c per lb.  
Wool, 7c to 8c.

Culfskins (green) 7c to 8c per lb.; dry, 16c.  
Sheepskins (green) \$1 75 to \$2 00 each, dry, 16c to 18c.  
Lambskins 15c to 20c each.  
Coal, 18hight \$9 25, Scranton \$7 75, Bituminous \$7 50 to \$8.  
Wood \$4 50 to \$5 50 per cord.  
Salt \$1 00 to \$1 75 per bushel.  
Water Lime \$1 50 per bushel.  
Potatoes in good supply at 40c to 45c per bushel retail.  
Apples, \$3 to \$4 per bushel, American do., \$4 50 to \$5.  
Ducks, 35c each.  
Chickens, 50c to 55c each.  
Turkeys, 75c to \$1 each, \$1 50 asked for prime birds.  
Old Cuck, \$32 per ton, or \$1 75 per cwt.—Very fair demand.

**London Markets, May 10.**—Fall Wheat, per bushel, \$3 Spring Wheat, 95c to \$1. Barley, per bushel, 65c to 65c. Oats, do, 42c to 44c. Peas, do, 70c to 75c. Hay, \$14 50 to \$16 per ton. Flax straw, \$5 to \$10 per ton, do seed, \$12 to \$14 do. Beef, per 100 lbs, \$7. Fresh Butter, per lb., 16c to 20c; keg do, 10c to 12½. Potatoes, 30c to 40c per bush. Flour (spring), \$2 50. Fall, \$2 75 per 100 lbs. Eggs, per doz., 10c. Green Hides, per 100 lbs, \$3; Dry, do, \$6 to \$7. Sheepskins (fresh), 50c to \$1 50 each. Wool, 35c to 37½c. Dressed Hogs, per 100 lbs, \$7. Timothy Seed, per bushel, \$2 75 to \$3. Clover Seed, do, \$11 to \$12.—*Advertiser.*

**Guelph Markets, May 10.**—Fall Wheat, per bushel, \$1 to \$1 65. Spring Wheat, do, \$1 to \$1 03. Oats per bushel, 52c to 44c. Peas, per bush, 1 70c to 75c. Barley, p r bushel, 65c to 60c. Pork, per 100 lbs, \$6 75. Beef, per 100 lbs \$8 to \$9. Hay, per ton, \$12 to \$16. Butter, per lb., 15c to 17c. Eggs, per dozen, 10c to 12½c.—*Herald.*

**Galt Markets, May 10.**—Flour per 100 lbs, \$2 to \$2 50. Fall Wheat p r bushel, 1 97c to \$1 03. Spring do per bushel, 85c to 83c. Barley do, 65c to 1 2½c. Oats per bush, 1 40c to 43c. Flax Seed per bushel, \$1 to \$1 25. Butter per lb., 14c to 15c. Eggs per dozen, 8c to 9c. Hay p r ton, \$10 to \$12. Potatoes per bush, 25c to 30c. Peas do, 65c to 70c. Beef per 100 lbs, \$3 to \$4. Pork per 100 lbs, \$5 50 to \$6 10. Mutton per lb, 5c to 10c. Cheese per lb, 6c to 8c. Hides per 100 lbs, \$3. Sheepskins, \$1 to \$1 75.—*Reformer.*

**Hamilton Markets, May 10.**—Wheat, per bushel, \$1 to \$1 05. Barley, per bushel, 55c to 62½c. Oats, per bushel, 45c to 50c. Peas, per bushel, 80c to 90c. Corn, per bush, 1 65c to 70c. Clover Seed, per bushel, \$3 to \$3 50. Timothy Seed, per bushel, \$2 50 to \$3. Flax (best fall wheat), per 100 lbs, \$2 75 to \$3. Medium, do., \$2 50 to \$2 75, spring wheat flour, do, \$2 37½ to \$2 50. Apples, per bushel, 62½c to 75c. Potatoes, per bushel 37½c to 45c. Butter (fresh), per lb., 20c to 25c. Eggs (fresh), per doz., 10c to 12c. Beef, per 100 lbs, \$5 to \$6 50. Pork, do, \$6 25 to \$7. Cheese, per lb., 9c to 11c. Hams, sugar cured (wholesale), per lb., 11c to 12c; common, do., 9c to 10c. Bacon (wholesale), do, 8c to 10c. Lard (wholesale), do., 9½c to 10c. Mutton, per lb, 8c. Hay, per ton, \$12 to \$16. Tallow, rough, \$5; rendered, \$7 50. Hides, green (trimmed) \$3 to \$3 50, untrimmed, \$3, dry, \$7.—*Times.*

**Cobourg Markets, May 10.**—Flour, per bush, \$5. Wheat, per bushel 95c. Potatoes, per bushel, 30c. Barley, per bushel, 60c to 65c. Peas, do 75c to 80c. Oats, do 48c to 50c. Hay per ton \$9 to \$10. Hides per cwt. \$2 50. Sheepskins \$5. Beef per cwt. \$5 to \$6 50. Pork do \$6 50. Eggs per dozen 10c. Butter per lb. 17c. Cordwood, \$2 50 to \$3.—*Sun.*



**Oshawa Markets, May 10.**—Flour per barrel, \$5 to \$6 Fall Wheat, per bushel, \$1 to \$1 10. Spring Wheat, per bushel, 50c to \$1. Peas, do, 70c. Oats, do, 37c to 40c. Corn, do, 60c to 70c. Wood, per cord, \$2 to \$2 50. Potatoes per bushel, 27c. Butter per lb, fresh, 15c. Cheese, Canadian per lb, 7c to 10c, ch e e, Am rican per lb, 10c to 12c. Eggs per dozen fresh, 8c. Bacon, per cut, \$10 to \$11. Wood, per 100 lbs, 35c to 40c. Apples, per bushel, 75c to 90c. Pork, per 100 lbs, \$6 to \$8 50. Clover Seed, \$12 Timothy, \$3 to \$3 50.—Vindicator.

**Bellefleur Markets, May 10.**—Fall Wheat, per bushel, 90c to \$1. Spring Wheat, do, \$1 to \$1 10. Barley, do, 60c to 65c. Peas, do, 75c to 80c. Oats, do, 45c to 50c. Corn, do, per barrel, wholesale, \$4 20 to \$4 40. Corn, 65c to 70c. Rye, 60c to 65c. Buckwheat, 55c to 60c. Hay, per ton, \$11 to \$13. Potatoes, per 100 lbs, \$4 50. Potatoes, per bushel, 40c to 50c. Apples, do, 30c to 75c. Pork, per 100 lbs, \$6 to \$7. Beef, do, \$8 to \$5 50. Mutton, per lb, 7c to 8c. Veal, do, 4c to 5c. Butter, do, 17c to 17c. Eggs, per dozen, 9c to 10c. Hides, per cow, \$2 50. Sheepskins, \$1 to \$1 25.—Independent.

**Montreal Markets, May 10.**—Ladlaw, Middleton & Co report as follows:—Flour, receipts, 2,672 bbls, market firm and active; sales strong. Canada sup rine at \$4 90 to \$5, city brands, \$4 80 to \$4 90; No. 2, \$4 60; bags ab out \$2 80; nothing done extra. Wheat, 10,000 bushel Canada spring 10 on private terms. Peas, 4,000 bushel sold at 95c for 66 lbs. Archa, first, pots, \$5 25; inferior, \$5 40; pearls nominal. Pork, prime mess sold at \$17 25. Butter, consd, table sales at 9 1/2c to 13c.

**Buffalo Markets, May 10.**—Flour, steady and in good demand; XX Indiana at \$9, Canada Spring at \$7 12 1/2 to \$7 25, extra State at \$7; Red Winter and white Michigan at \$8 to \$9. Wheat, with a brief demand; White Kentucky at \$2 11; Am r Illinois at \$1 65; Red Winter Ohio at \$1 50; White Michigan at \$1 60. Corn—Market steady and in better demand; white at 90c, and mixed at 85c. Oats dull, with a downward tendency, at 47c; from store held at 45c to 50c. Barley dull; Canada at \$1. Peas, dull and lower; held at \$1 50 to \$1 55. Seeds—Illinois Timothy held at \$1 50 to \$1 60. Wisconsin and Canada at \$5 to \$5 60. No Clover in market. Butter, firm and in good demand; Canada and Western at 20c to 25c; good to choice State, 30c to 35c. Cheese, in moderate demand at 18c to 22c, the latter for very choice Potatoes, nominal at 50c to 75c from store. Green Apples, scarce and in demand at \$6 to \$7 per barrel. Provisions, dull. Heavy mess pork held at \$28 to \$29 50; light mess, \$27 to \$27 50. Extra mess beef held at \$18 50; sugar-cured hams held at 21c, shoulders at 17c. Smoked beef at 18c. Lard at 19c.—Express.

**New York Markets, May 10.**—Flour—Receipts 3,045 barrels; market dull, unsettled and 10c to 25c lower; sales 7,800 barrels at \$6 10 to \$6 50 for superfine State, \$6 65 to \$6 75 for extra State; \$6 85 to \$7 for choice, do; \$6 10 to \$6 50 for superfine Western; \$6 75 to \$7 10 for common to medium extra Western, \$7 60 to \$7 75 for common to good shipping brands extra round hoop Ohio. Canadian flour dull, and 25c lower; sales 200 barrels, at \$6 80 to \$7 10 for common, and \$7 15 to \$8 40 for good to choice extra. Rye flour dull. Wheat—Receipts none; market dull and nominally 3c to 5c lower. Rye dull. Barley dull. Corn—Receipts, 645 bushels; market dull and nominally 3c to 5c lower. Oats dull and 3c to 5c lower, at 45c to 50c. Pork—Western dull and lower; sales 800 barrels; \$25 75 for new mess; \$25 for 1863 and 1864 do; and \$23 25 to \$23 75 for prime. Beef dull. Cut Meats heavy.

Advertisements.

RICE LEWIS & SON, TORONTO,

INVITE the attention of Horticulturists and Agriculturists to their superior stock of

GARDEN REQUISITES,

Amongst others, to four very beautiful patterns

PARK AND GARDEN BORDERING.

A Great Variety Chairs and Seats,

either fitted or extra only, which any amateur can put together.

A LARGE VARIETY OF ORNAMENTAL VASES.

Implements, such as Spades, Shovels, Hoes, Rakes, Reels, Lines, Shears, Scissors, Saylor's and Rodgers' Pruning and Budding Knives, Wheelbarrows.

2 Patterns Best English Lawn Mowers - Cheap. Toronto: May 10th, 1865. v2-10-11

COE'S SUPER-PHOSPHATE OF LIME, FOR TURNIPS.

LET every Farmer who reads this use some of the above article this season, when sowing Turnips. There will be no trouble from the fly where it is used, and a splendid crop will be realized.

Sold by James Fleming & Co., Toronto, and by Merchants in all the principal towns in Canada. v2-10-11.

ITALIAN QUEEN BEES.

HAVING bred them carefully for upwards of four years, I am prepared to furnish Queens of undoubted purity. Purity and safe arrival by express guaranteed.

PRICE, 5 DOLLARS,

H. HOLDEN.

Strickville, C. W., May 1st, 1865.

v2-10-31

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 waiting for the above classes, should signify their wishes (the kind of persons wanted, wages, &c., &c.) and the best mode of reaching the applicants, and I 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. v2-7-61. GOVERNMENT IMMIGRATION OFFICE, Quebec, 1st April, 1865.

STRAWBERRY PLANTS BY MAIL.

I WILL send THOMPSON DE GAND STRAWBERRY PLANTS, in good order, Post paid, to any part of the Province for 30 cents per dozen, or \$1 per hundred.

This is the best foreign variety, and has taken four first premiums in New York. [See "American Agriculturist" for July, 1862, '63, and '64.] Also, a complete treatise on Strawberry culture sent for 12 1/2 cents. Send P. O. Money Order if convenient.

Address, Post paid, G. P. RIXFORD, Bedford, Missisquoi Co., C. E. v2-9-61

NOTICE.



FARMERS and others requiring FARM LABOURERS, MECHANICS, or FEMALE SERVANTS, are invited to Apply at The Emigration Office—14 Front Street,

and those having FARM LANDS for sale, will please forward lists, with prices affixed

JOHN A. DONALDSON, Government Emigration Agent. Toronto, April 15th, 1865. v2-9-61

ROOT SEED SOWER, AND Manure and Plaster Distributor.

THE Subscriber has obtained a patent for the above Machine, which he desires to introduce to the notice of the Farming community. It will sow, and evenly distribute all kinds of root seeds, in any required proportions. It will at the same time distribute manure or plaster, in any required quantity.

It will sow and distribute the seed with or without any manure or plaster. It will distribute, without injury, plaster or ashes over plants when they come through the ground. It will sow double or single—two rows, or one at a time. It can be worked by manual labour, or by horse power. It is the most complete article of the kind, and one of the greatest LABOUR-SAVING INVENTIONS yet brought under public notice.

Patent Rights for Counties and Townships for sale. Applications to be made to

JAMES CLAYTON, Farming Implement Manufacturer, &c. Whitby, April 15th, 1865. v2-9-61

SOMETHING NEW UNDER THE SUN! ALSO IN CANADA.

IMPORTANT TO CHEESE MAKERS. The undersigned is prepared to fill any amount of orders for CHEESE BOXES and SETTERS, at a very low rate. All orders will be strictly attended to. ADAM ALVIER, Ingersoll, March 24, 1864. v2-7-61

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. LEYARD, Surveyor, &c., South-west cor. of King and Yonge-sts., Toronto. Toronto, March 14, 1865. v2-11

THE CELEBRATED "ANGLO-SAXON" WILL stand for Mares this season, commencing May 15th until June 20th, as follows:— On Mondays and Tuesdays, at Hamilton; Wednesdays, at Grimsby; Thursdays, at St. Catharines; Fridays and Saturdays, in Toronto. Terms.—Sling service, \$10; season, \$16; to insure, \$25. Groom's Fees—\$1. The above alteration will give more general satisfaction. v2-10-11 W. WELD.

FARM FOR SALE.

A FARM containing 80 acres of excellent land, being part of Lot 41, in Con. 2, and part of 41 and 42 in Con. 3, Township of Ancaster, about 8 miles from Hamilton, and one from Ancaster, and on the Macadamized Road leading from Hamilton to Brantford. Stone Cottage 60 x 60, Frame Barn 125 x 33, with Cattle Sheds, Stables, and necessary out-buildings; all having recently been thoroughly repaired. A large orchard of excellent fruit trees, and never-failing springs of water. This property is in a respectable and healthy locality, the scenery untrifled, and is known as the

"HAMMERSLEY FARM."

Any gentleman in search of a desirable residence should not lose the earliest opportunity of inspecting this property. Terms liberal.

Apply to MOORE & DAVIS, General Agents, &c., Hamilton. v2-10-31

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. v2-5-61

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 DYRART, CO. PETERBOROUGH.

For information, apply to the Secretary, C. J. BLOMFIELD, Esq., Toronto; or to C. R. STEWART, Esq., P.O. Haliburton, Co., Peterborough. v2-4-61 March 15, 1865.

IMPROVED FARM FOR SALE.

IN the County of Simcoe, with CROPS, STOCK, and IMPLEMENTS, the North 1/2 Lot No. 26, in the 10th Concession of Nottawasaga, 100 acres, more or less; about 80 acres Cleared and Fenced, of which 60 acres are about clear of stumps, and under crop with Wheat, Oats, Barley, Potatoes, and Hay, and the balance in Pasture. A good Stone Dwelling House, 28 x 34, and other out buildings. Also a young Orchard bearing fruit, and a good Mill site for a Carding and Fulling Mill, 7 miles from Collingwood Harbour, 1 1/2 from the Scotch Corners. The above will be sold cheap for Cash, and 7 per cent. of discount allowed; or time will be given for the one-half of the purchase money.

Apply by letter, Post-paid, to PETER BEVERIDGE, On the Premises, Nottawasaga P. O. Nottawasaga, April 16th, 1865. v2-9-61

THE CANADA FARMER is printed and published on the 1st and 15th of each month, by GEORGE BROWN, Proprietor, at his Office, No. 36 and 25 King Street East, Toronto, U. C. where all communications for the paper must be addressed.

Subscription Price \$1 per annum, (Postage Free,) payable in advance. Bound volumes for 1864 may be had for \$1.00. Subscribers may either begin with No. 1, receiving the back Nos. for 1864, or with the first No. for 1865. No subscriptions received for less than a year, and all commence with the first number for the respective years.

Copies 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 ordering more than 125 copies, the Farmers will be sent at FIFTY CENTS.

THE CANADA FARMER presents a first-class medium for Agricultural advertisements. Terms of advertising, 25 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.